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Blind Spots in Corporate Evolution: The 21st Century Organizational Assessment

Christine Capra
St. Catherine University

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Blind Spots in Corporate Evolution:
The 21st Century Organizational Assessment

By

Christine E Capra

A Thesis Submitted in Partial Fulfillment of the requirements for the degree of Master of Arts in Organizational Leadership at St. Catherine University St. Paul, Minnesota

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May 6, 2011

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Signature of Advisor

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Abstract

Continued increases in complexity, interconnectedness and flux due to technology and globalization mean that almost everything is changing. Given such upheaval, key characteristics necessary for business success have evolved dramatically over recent decades and those emerging characteristics will continue to increase in importance. Yet in spite of the thinkers, gurus and media heralding massive and profound change for over two decades, many businesses seem to be slow in embracing the implications for their own organizations, at a time when being slow to change in and of itself would seem to be a core weakness in this new epoch. Why is this? And what can be done to help more businesses “get with the program”?

This research identifies practices that can move an organization effectively into the 21st Century, and pilots an organizational assessment instrument intended to help organizations gain awareness of these practices, identify which characteristics they may still need to develop, and guide them in making changes necessary to success in the 21st Century.
I. Purpose of Proposed Research

Did anyone not get the memo, that business paradigms are changing? Then why does it seem like the organizations we work in still feel so behind-the-times?

In August 2000, Business Week magazine published a special double edition, “The 21st Century Corporation,” focusing on how business paradigms were changing from the 20th Century to the 21st. It examined the evolution of a broad range of corporate characteristics, forecasting profound change.

“We’re not witnessing just a little change in our economy,” says David Ticoll, Chief Executive of Digital 4Sight Systems & Consulting LTD., a business think tank and consulting firm. “This is an epochal change in the history of production,” (p. 86).

…to thrive in this new century, companies are going to need a whole new set of rules. “Attributes that made them [corporations] ideal for the 20th century could cripple them in the 21st.” (p. 78).

Actually, the warning began sounding long before. Similar predictions were made in business books and journals throughout the 1990’s and even earlier. If we are indeed entering a new historical epoch, 2010 is still just the beginning. After all, the Industrial Revolution took from 70-150 years, depending on how you look at it. I think most observers agree, the current shift is comparable in magnitude – if not larger.

And the warning continues - these themes are echoed in Capitalizing on Complexity: Insights from the Global Chief Officer Executive Study, conducted by IBM in 2010. The study summarizes its findings as follows:

1) The world’s private and public sector leaders believe that a rapid escalation of “complexity” is the biggest challenge confronting them. They expect it to continue — indeed, to accelerate — in the coming years.

2) They are equally clear that their enterprises today are not equipped to cope effectively with this complexity in the global environment.
3) Finally, they identify “creativity” as the single most important leadership competency for enterprises seeking a path through this complexity.

It’s not just business. Almost everything is changing, and change itself seems to be the core drumbeat of the shift – no more stability, limited predictability, no more counting on how things have always been. Yet in spite of the thinkers and gurus and media heralding massive and profound change for over two decades, many businesses seem to be very slow in embracing the implications for their own organizations, at a time when being slow to change in and of itself would seem to be a core weakness in this new epoch. I, personally, have yet to work for an organization that does more than layer a bit of new technology and process improvement over an anachronistic 20th Century mindset. And most people I know seem to share that experience. Why is this? And what can be done to help more businesses “get with the program”?

**A slow paradigm shift?**

After spending the past six years engaged in a personal widely-ranging research/reading/experimentation project aimed at understanding how organizations can become more effective in this rapidly-shifting and chaotic environment and what interferes with increasing effectiveness, I’m convinced that the changes needed are more intra- and inter-personal than technical – they’re about how we see ourselves, others, and our organizations. Given that, the answer to the question of “why the slow paradigm shift?” falls into two broad answers. The first is simply not knowing how to adapt. It’s easy (and obvious) to say “be more flexible,” but if the only model leaders have ever experienced is inflexibility, they will be hard put to act on the suggestion. Likewise, harkening back to number three, in the IBM CEO study above, creativity doesn’t just develop because you want it to, it requires nurturing with specific attitudes, opportunities and circumstances. The second reason can broadly be defined as lack of awareness – not knowing what isn’t known.

The *Business Week* Special Edition, “The 21st Century Corporation”, is a good illustration of not knowing how to adapt. The articles in the collection all point to a need for the same things – faster, better, smarter, more creativity, more interconnectedness, more flexibility, more
responsiveness, more targeting. But aside from pointing to the increased adoption of technology and a recognition that all of the needed competitive factors rely heavily on a committed, “empowered”, motivated, highly intelligent and creative workforce, little indication is given in the collection of articles about how to achieve those ends. John Byrne (2000) wrote:

Indeed, if you've worked as a manager for at least a decade, you can forget much of what you've learned so far. Prepare to toss out your business-school case studies and set aside many of the time-honored principles that have guided generations of managers. The vast changes reshaping the world’s business terrain are that far-reaching, that fundamental, and that profound (p.86).

Everyone understands that more, faster, better, and smarter are crucial. But, once you throw out everything you’ve learned so far, what is left? Forgetting everything you know may be necessary, but it’s not a roadmap. And most business leaders are understandably loathe to wander around aimlessly in the dark.

Though they were not mainstream, even in the year 2000 there were theories, backed up by solid research that illuminated how to make the paradigm shift. For the purposes of this Thesis, I call these theories “New Science” approaches. In 2000 they were still cutting edge, mostly academic, not readily accessible in the popular business. Today, those theories are far more widely accessible in popularized formats, leaving behind the theoretical background. None-the-less, knowledge can only be acted upon where there is openness to it. Which leads to my second reason for why businesses are slow to adapt – not knowing they need to.

In the book Know What You Don't Know: How great leaders prevent problems before they happen (2009), Michael A. Roberto addresses the phenomenon of organizational inability to uncover and address potential problems before they spin out of control. While the paradigm shift under consideration is not explicitly about uncovering problems per se, we can consider being slow to adopt practices most effective in the current context to be a problem in and of itself. In my research, I assume that adoption of the 21st Century corporation characteristics is slowed down by a kind of not-knowing that is made up of a combination of varying degrees of simple “not knowing what we don’t know” and denial – not wanting to admit what may be nagging at us.
We all have a strong capacity to defend ourselves against things we don’t want to hear. And unfortunately, as Byrne implied above, the “new rules” are often counter to a leader’s proven experience, leadership styles and preferences. It can be extremely painful for those who have experienced a great deal of success and developed great expertise to go back to being beginners again, to admit to “not knowing”. No one likes to be told to start over again. Given that fact, leaders will tend to look for more superficial initiatives in their efforts to keep up with shifting realities, where they can still rely on what they know and past experience while unknowingly resisting the deeper efforts that require that old Buddhist principle “Beginners Mind.”

One Type of Wake-Up Call

Over the past eight years, I have worked in a range of service or consulting capacities with leaders in many other organizations. This experience has given me glimpses of what organizations struggle with and how they manage change. It suggests to me that a predominance of small to mid-sized organizations spend so much time in survival or crisis mode that they are never able to prioritize “catching up” – or learning how to apply the “new rules” in their own contexts. Times of new learning and experimentation can be costly and generate cynicism due to failed attempts. It’s understandable if business leaders don’t want to jump into the fray.

In fact, there has been so much change and hype about change that many leaders feel overwhelmed by the plethora of flavor-of-the-month options and become cynical that any of them will make a difference. There’s just too much information, it all requires too much energy and soul-searching to act on, and there’s no guarantee that any of it will help.

Additionally, it is in the nature of a paradigm to limit the ability to see outside of itself. The more firmly entrenched one is in one paradigm, the harder it can be to see another. This often keeps leaders and members of an organization at all levels, from recognizing where their own mental habits interfere with the company’s necessary evolution.

My experience tells me that leaders usually know they need to do something, but don’t have the time, resources, and know how. Most importantly, they don’t know where to start, and they don’t want to know that they usually need to start with their own mindsets, their own ways of understanding the organization and their role in it. And in a challenged economy, they often can’t
convince themselves to invest resources in upsetting the apple-cart. They decide to rely on their own instincts (which, since they’re successful leaders, once served them well, but now may well be undermining their intentions) and hope for the best.

One of the roles I’ve played in the past five years was administrating two online organizational assessments for a team of strategic, leadership, and compensation consultants. One was a Strengths, Weaknesses, Opportunities, and Threats (SWOT) assessment which was taken by all employees, executive leadership, and board members of an organization. The other was a Board Governance Assessment, taken by both internal and external board members, which examined aspects of board functioning and effectiveness.

In this role, I have seen many organizations - not knowing how to adapt, in disagreement or in the dark about what changes are needed, and hesitant to take large, costly and disruptive steps into the unknown - embrace the option of conducting a relatively quick, affordable, minimally invasive organization-wide assessment, as a means of tentatively opening the door to change.

Such assessments have served as an introduction that eases, over time, into a significant change effort. It can help put words to issues many feel but can’t articulate and give them clarity and courage around addressing their blind spots. Such assessments can minimize the initial requirement for “Beginner’s Mind” to one or two targeted areas, paving the way for success and further openness to new things.

Assessments certainly can’t ultimately replace the wisdom and insight of an experienced organizational consultant, but they have some benefits that consultants don’t. First, it’s far less costly to get input from the entire organization with an assessment than with interviews, and getting everyone’s personal and direct input is very valuable. Second, the questions are handled the same way for everyone – there is no opportunity for interviewer bias, for vastly differing interview conversations. This standardization of input gives leaders a greater sense that the results are valid. And third, my experience is that leaders love numbers. I have seen that by calculating averages, percentages, ratios, etc., from the data, the results are rarely debated. Leaders may not like the results, but they don’t accuse the messenger of bias. Numbers increase the sense that the feedback is valid. In situations where there is no existing relationship with a
trusted advisor, and/or where cost is an issue, without asking leaders to take a daunting leap of faith, such an assessment can be the necessary ice-breaker.

Even when looked at from the perspective of someone who tends to find more valuable information in text, dialog, story and body language than in numbers, graphs and reams of data, the stories these assessments can tell about what's going on in an organization can be surprisingly revealing. I've seen leaders amazed by the degree of insight they provided.

Yet, while analyzing those assessments, I've wished for more data related to the principles necessary to 21st Century corporate survival. While the tools I had at hand gave clues and served a purpose, they also pointed to a whole new realm of questioning that has yet to be developed. Our SWOT assessment could tell an organization that most constituents considered it slow to change, but it could not determine which of the necessary ingredients of effective rapid adaptability were missing.

All intentional change begins with awareness, and an organizational assessment is a good place to start. But applying the old saw “what gets measured gets done”, if what we measure is more-of-the-same, we'll be modeling another old saw that “the definition of insanity is doing the same thing over and over and expecting different results.” For an assessment to be relevant it must address current learning and proven practices in the present. For it to give insight into what is needed for success in real time, it must measure what is effective in the current environment, not what was at peak effectiveness fifty years ago. My thesis project is a pilot of an Assessment designed to give organizational leaders insight into where to start or proceed to next in their development of effective 21st Century business characteristics. The ultimate aim of the Assessment will be to point out areas that leaders may not even realize are important and give them priorities for focusing their change efforts. The Assessment will be taken by organizational constituents and would be used by business leaders, managers, planners and strategists as a tool to help them gain new perspectives and to enhance the feedback loop informing strategy and change efforts. Ultimately, I want to offer the Assessment to the general business community online, as an affordable, reduced-resistance, mass-marketable tool to impact all business
stakeholders by helping to introduce and facilitate implementation of the principles needed to achieve the characteristics of successful 21st Century corporations.

My purpose in conducting this research was to explore how to effectively apply the Assessment concept to the 21st Century Corporate evolution model articulated in the 2000 Business Week article, and to get real-life insight into the concept's value and usability in facilitating an evolutionary impulse in actual organizations. I wanted learn whether or not this idea can actually serve a purpose.
II. The Conceptual Context

Three main concepts comprise the conceptual context for my research. They are: The evolution of business paradigms from the 20th to the 21st Century; the wide-ranging body of leadership and change theories emerging from what is commonly referred to as “The New Science” which grew out of quantum physics, self-organizing systems and chaos theory; and the issue of addressing the type of “not knowing” referred to earlier.

One generally agreed-upon impetus for evolution in any organism is a change in the external environment dramatic enough to impact the organism’s ability to survive as is. In terms of the business environment, the following themes (my culling of ten years of business headlines) represent a massive change in the external environment:

*Information Overload*

*Whitewater turbulence*

*Disruptive technologies*

*Globalization*

*“Always On” “24/7”*

*Exponential growth in new data and data availability*

*Exponential increases in complexity at every level*

*Dramatically increased rate of environmental, technological, and economic crises and upheaval*

Over the past twenty-plus years, these and other stressors (the downside of the Technology Revolution) have been the topic of an endless parade of headlines, books, radio and television shows and documentaries. We can’t avoid what’s going on. These stressors have created problems for individuals and organizations that have never been faced before, requiring new ways of thinking, organizing, working and interacting at every level. The question becomes – what would these “new ways” look like?
Assessing Blind Spots in Corporate Evolution

Success Characteristics for the 21st Century Corporation

One answer to “what would these ‘new ways’ look like came from the 2000 Business Week article, “21st Century Corporations”, which provided the following framework for thinking about ways corporations needed to, and were, evolving to A) take advantages of the opportunities presented by the Technological Revolution and to B) cope with its accompanying challenges and stressors.

Figure 1 – 21st Century Corporation Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>20th Century</th>
<th>21st Century</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organization</td>
<td>The pyramid</td>
<td>The Web or network</td>
</tr>
<tr>
<td>2. Focus</td>
<td>Internal</td>
<td>External</td>
</tr>
<tr>
<td>3. Style</td>
<td>Structured</td>
<td>Flexible</td>
</tr>
<tr>
<td>4. Source of strength</td>
<td>Stability</td>
<td>Change</td>
</tr>
<tr>
<td>5. Structure</td>
<td>Self-Sufficiency</td>
<td>Interdependencies</td>
</tr>
<tr>
<td>6. Resources</td>
<td>Atoms-physical assets</td>
<td>Bits-information</td>
</tr>
<tr>
<td>7. Operations</td>
<td>Vertical integration</td>
<td>Virtual integration</td>
</tr>
<tr>
<td>8. Products</td>
<td>Mass production</td>
<td>Mass customization</td>
</tr>
<tr>
<td>9. Reach</td>
<td>Domestic</td>
<td>Global</td>
</tr>
<tr>
<td>10. Financials</td>
<td>Quarterly</td>
<td>Real time</td>
</tr>
<tr>
<td>11. Inventories</td>
<td>Months</td>
<td>Hours</td>
</tr>
<tr>
<td>12. Strategy</td>
<td>Top-Down</td>
<td>Bottom-Up</td>
</tr>
<tr>
<td>13. Leadership</td>
<td>Dogmatic</td>
<td>Inspirational</td>
</tr>
<tr>
<td>14. Workers</td>
<td>Employees</td>
<td>Employees and free agents</td>
</tr>
<tr>
<td>15. Job expectations</td>
<td>Security</td>
<td>Personal growth</td>
</tr>
<tr>
<td>16. Motivation</td>
<td>To compete</td>
<td>To build</td>
</tr>
<tr>
<td>17. Investments</td>
<td>Incremental</td>
<td>Revolutionary</td>
</tr>
<tr>
<td>18. Quality</td>
<td>Affordable best</td>
<td>No compromise</td>
</tr>
</tbody>
</table>


A casual glance conforms to our expectations. If you’ve paid any attention to business trends at all lately, you’d read it and say “yes, that looks about right”. Having shown it to a number of business leaders I know, that’s the general response. But scratch the surface and you may begin to wonder – do we really understand what all that means? Do we have any idea how to get there? Would we recognize it if we did get there? Might we easily think we’ve arrived, while in fact we haven’t? Or might we be on the right track, but feel so out of our comfort zones that we’re convinced we’re failing?

The table above was adapted from a special section of Business Week, encompassing 29 separate articles, spanning over 100 pages. This framework was comprehensive and convincing enough to have made its way into a popular business strategy textbook – Formulation, Implementation & Control of Competitive Strategy by Pearce and Robinson (2008). Clearly it had
relevance. At the time, the mainstream business media could point to what should be different, but not shed light on how to become different. Aside from the ever-present doctrine of adopting new technologies and the mantra that future success will bloom from the minds of a brilliant and creative workforce which must be cultivated, nurtured, inspired and retained, there is little in the articles or the textbook that helps us map out and evaluate our progress. We all have Blackberries, so we know we can get quicker turn-around on some information exchanges. But does that mean we make better decisions or have inspired anyone? Or that we have figured out how to break the business-speed sound barrier?

“New Science” Approaches Help Organizations Develop 21\textsuperscript{st} Century Characteristics

As noted before, the above list seems obvious. We immediately and intuitively recognize and affirm the characteristics. And if we examine them more carefully, we begin to understand that the shifts implicated are as world-view shattering as Quantum Theory once was. Let’s take a look at some definitions of Quantum Theory:

“Theory in physics based on the principle that matter and energy have the properties of both particles and waves. . .now used to account for a wide range of physical phenomenon, including. . .the uncertainty principle and the exclusion principle.”

(Freedictionary)

“. . .quantum mechanics theory ordains that the more closely one pins down one measure (such as the position of a particle), the less predictable another measure pertaining to the same particle (such as its momentum) must become.”

(Wikipedia)

“The main base of quantum theory is that particles \textit{behavior may be described in terms of likelihood only}.” (italics mine)

(stars5.netfirms.com/glossa.htm)
While Quantum Theory was a profound disturbance of our understanding of the Universe, most people could go about their lives oblivious to its implications. It only seemed relevant at the atomic level – a description of particles and waves, not of human beings in their daily lives. The radical (and even to physicists, shocking) new concepts impacted science, but business and the rest of us non-scientists had nearly a one-hundred year reprieve from having to face its implications. Even so, the physics that grew out of those early-20th Century discoveries profoundly impacted what we call technology, enabling the Technological Revolution we are currently experiencing. Indeed:

When physicists such as Planck, Bohr, de Broglie, Heisenberg, Schrödinger, Dirac, and Einstein formulated quantum mechanics from 1900 to 1930, they were trying to understand the fundamental laws of the universe, not invent something of great economic importance. But it turns out they did. . . The electronic digital computer, the transistor, the laser, and even the World Wide Web were all invented by physicists. These inventions make up the foundation of modern technology.

(Bindloss, 2003, Quantum Mechanics and the Electron section, para. 2)

Over time, those discoveries began to inform other fields of study as well, ultimately impacting our understanding of systems in general and the behavior of life at all levels. Eventually, the insight gained from the sciences of quantum physics, systems theory, and chaos theory began to be applied to human systems, where a central understanding is the idea of the self-organizing system.¹ One of the pioneers of this new approach to understanding human organizations was Meg Wheatley, whose book “Leadership and the New Science: Discovering order in a chaotic world”, first published in 1991, contributed to the groundwork of an entirely new way of understanding organizational leadership.

¹ Self-organization is the process where a structure or pattern appears in a system without a central authority or external element imposing it through planning. This globally coherent pattern appears from the local interaction of the elements that make up the system, thus the organization is achieved in a way that is parallel (all the elements act at the same time) and distributed (no element is a coordinator). Wikipedia
At the most generalized level, the New Science approach to human systems is often contrasted to the Newtonian conception of reality. In the Newtonian paradigm, systems are akin to machines, while in the New Science systems are understood more as living organisms. With the idea in mind that the changes we are experiencing grew out of Physics and the New Science, let’s look at another conceptual framework of how our worldview is changing as a result of the “New Science”. This one comes from *Rewiring the Corporate Brain: Using the New Science to Rethink How We Structure and Lead Organizations*, written in 1997 by Danah Zohar, a business consultant and Oxford Lecturer.

![Figure 2 – Zohar's Quantum Framework](image)

<table>
<thead>
<tr>
<th><strong>Newtonian Paradigm</strong></th>
<th><strong>Quantum [New Science] Paradigm</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple</td>
<td>Complex</td>
</tr>
<tr>
<td>Law-Abiding</td>
<td>Chaotic</td>
</tr>
<tr>
<td>Ultimately Controllable</td>
<td>Uncertain</td>
</tr>
<tr>
<td>Atomism</td>
<td>Holism</td>
</tr>
<tr>
<td>Emphasis on separate working parts</td>
<td>Emphasis on relationship</td>
</tr>
<tr>
<td>Fragmentation</td>
<td>Integration</td>
</tr>
<tr>
<td>Reductive</td>
<td>Emergent</td>
</tr>
<tr>
<td>Isolated and Controlled</td>
<td>Contextual and Self-Organizing</td>
</tr>
<tr>
<td>The parts completely define the whole</td>
<td>The whole is greater than the sum of its parts</td>
</tr>
<tr>
<td>Top-down management</td>
<td>Bottom-up leadership</td>
</tr>
<tr>
<td>Reactive</td>
<td>Imaginative and Experimental</td>
</tr>
<tr>
<td>Predictability</td>
<td>Rapid change; unpredictability</td>
</tr>
<tr>
<td>Hierarchy</td>
<td>Nonhierarchical networks</td>
</tr>
<tr>
<td>Division of labor or function fragmentation</td>
<td>Multi-functional and holistic (integrated) effort</td>
</tr>
<tr>
<td>Power emanates from top or center</td>
<td>Power emanates from many interacting centers</td>
</tr>
<tr>
<td>Single viewpoint</td>
<td>Many viewpoints; many ways of getting things done</td>
</tr>
<tr>
<td>Competition</td>
<td>Cooperation</td>
</tr>
<tr>
<td>Inflexible structures; heavy on bureaucratic control</td>
<td>Responsive and flexible structures; hands off supervision</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Meaningful service and relationships</td>
</tr>
<tr>
<td>Top-down (reactive) operation</td>
<td>Bottom-up (experimental) operation</td>
</tr>
</tbody>
</table>

Adapted from Zohar 1997
Now let’s take another look at the *BusinessWeek 21st Century Corporation*

Characteristics Framework, and compare it to the Zohar Quantum Framework:

**Figure 3 – 21C Framework**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>20th Century</th>
<th>21st Century</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organization</td>
<td>The pyramid</td>
<td>The Web or network</td>
</tr>
<tr>
<td>2. Focus</td>
<td>Internal</td>
<td>External</td>
</tr>
<tr>
<td>3. Style</td>
<td>Structured</td>
<td>Flexible</td>
</tr>
<tr>
<td>4. Source of strength</td>
<td>Stability</td>
<td>Change</td>
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<td>5. Structure</td>
<td>Self-Sufficiency</td>
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</tr>
<tr>
<td>6. Resources</td>
<td>Atoms-physical assets</td>
<td>Bits-information</td>
</tr>
<tr>
<td>7. Operations</td>
<td>Vertical integration</td>
<td>Virtual integration</td>
</tr>
<tr>
<td>8. Products</td>
<td>Mass production</td>
<td>Mass customization</td>
</tr>
<tr>
<td>9. Reach</td>
<td>Domestic</td>
<td>Global</td>
</tr>
<tr>
<td>10. Financials</td>
<td>Quarterly</td>
<td>Real time</td>
</tr>
<tr>
<td>11. Inventories</td>
<td>Months</td>
<td>Hours</td>
</tr>
<tr>
<td>12. Strategy</td>
<td>Top-Down</td>
<td>Bottom-Up</td>
</tr>
<tr>
<td>13. Leadership</td>
<td>Dogmatic</td>
<td>Inspirational</td>
</tr>
<tr>
<td>14. Workers</td>
<td>Employees</td>
<td>Employees and free agents</td>
</tr>
<tr>
<td>15. Job expectations</td>
<td>Security</td>
<td>Personal growth</td>
</tr>
<tr>
<td>16. Motivation</td>
<td>To compete</td>
<td>To build</td>
</tr>
<tr>
<td>17. Investments</td>
<td>Incremental</td>
<td>Revolutionary</td>
</tr>
<tr>
<td>18. Quality</td>
<td>Affordable best</td>
<td>No compromise</td>
</tr>
</tbody>
</table>


While there isn’t an exact one-to-one parallel relationship between the two frameworks, there are numerous overlaps, similarities, and resonances. Looked at from this perspective, it begins to make sense that the New Science has had a strong influence on Organizational Development thinking over the past few decades. In fact, New Science has spawned and informed a range of organizational change theories: Action Learning, Learning Organizations, Theory U, Five Disciplines, Organizational Chaos Theory, Systems Thinking, Human Systems Dynamics, Bohmian Dialog, etc., as well as large group participation methodologies: Open Space Technology, World Café, Future Search, etc., and leadership theories such as Servant Leadership, Transformational Leadership and Adaptive Leadership.

**Components of a “New Science” Approach**

Returning to the 21st Century Corporation article for a moment, we may begin to understand why it contained so little guidance relative to mapping out and assessing progress in an organization’s evolution. Academics were still discovering and illuminating how the principles found in the sciences could be applied to organizations. Most of the mainstream business
literature that incorporates those discoveries has been published after 2000. These concepts are still relatively new beyond the academy and among organizational consultants.

In my personal efforts to understand and adopt the new paradigms, I have read dozens of current books and articles, most of which implicate portions of the New Science teachings, and many of which spell out those principles explicitly. There are many variations on the theme, all resonant with one another. Examining them all is beyond the scope of this thesis, though a wide representation of them can be found in the References section of this thesis. What follows is but one good example of an outline of features. Zohar’s framework calls it “The Quantum Organization”, which, given all the overlap of the tables above, could easily describe more specifically what a 21st Century Corporation should strive for.

Zohar’s “The Quantum Organization framework:

1. **Holistic** – Infrastructures would encourage and build on relationships between leaders and employees, between employees and their colleagues, between divisions and functional groups, between structures themselves.

2. **Flexible and responsive, at the edge** – Infrastructures should be like a blend of waves and particles.

3. **Bottom-up, self-organizing, and emergent** – Infrastructures must nourish human and personal creativity, enhance inner mobility and personal responsibility, facilitate free flow of information and ideas. Some decision-making must be relocated among front-line workers and managers. There must be spaces in the organization without boundaries and without fear.

4. **Thrive on diversity** – Infrastructures would mix levels of responsibility, adapt to assorted educational, professional, and functional backgrounds, decentralize power and decision-making. It would create a climate of dialog.

5. **Recognizes that the question influences the results** – It would create infrastructures where different questions can be asked, different goals considered, different products or functions imagined. Roles would be less fixed, employees would be encouraged to experiment.
6. **Playful** – It would have infrastructures that encourage play and reward structures that recognize the value of taking risks.

7. "**Deeply green**" – It would be deeply ecological, recognizing and responding to its impact on the natural and human systems it is part of.

8. **Vision centered and value driven** – It would recognize that people try to seek meaning, always reaching for new possibilities.

### A Distillation of the New Science Theories

As mentioned, a main concept implicated in all of the New Science thinking is that of self-organizing systems. An easy mistake, when first introduced to this concept, is to believe that what the theory calls for is simple surrender – that if we give up command and control, then the system will be free to organize itself and order will naturally emerge. From a leadership perspective, that would be an overwhelming (and likely disastrous) leap of faith - rejecting the concept out of hand would be a reasonable response. From a practical perspective, such simple surrender would, in most instances, invite failure. A self-organizing system does not develop out of the simple absence of control. It has requirements.

In order to help me focus my own thinking about what is needed in organizations, I like to use the conditions for self-organization provided by Olson and Eoyang in *Facilitating Organization Change: Lessons from complexity science*. They are:

1. **A Container - Boundaries and clear identity.** The ability to clearly distinguish what the system is and what it is not. The boundaries must be permeable, but without them, there is nothing for the system to organize around. Identity is the “strange attractor” of human systems, the center that holds. The boundary/identity ingredient includes such things as: mission, vision, values, norms. As Wheatly says:

   “...the primary task of being a leader is to make sure that the organization knows itself. That is, the leaders task is to call people together often, so that everyone gains clarity about what they're doing. ...In organizations that know who they are, and mean what they announce, people are free to create and contribute. A plurality of affective solutions emerges, each
expressing a deeper coherence, an understanding of what this organization is trying to become. (2007, p.68-69)

2. **Significant Differences.** In a thriving human system, you need a broad range of differences relative to power, expertise, gender, race, education, styles, ways of understanding, etc.. Wheatly again:

Where there is diversity in an organization, innovative solutions are created all the time, just because different people do things differently. When the environment changes and demands a different approach, we can count on the fact that somebody is already practicing that new solution. Almost always, in a diverse organization, the solution an organization needs is already being practiced somewhere in that system. *If leaders fail to encourage diverse ways of doing things, they destroy the system’s capacity to adapt* (italics mine). Organizations need people experimenting with many different ways, just in case. And when the environment demands change, we can look inside the organizations to find the solutions that have already been prepared for us by our colleagues. (2007, p.78)

But it must be stressed, the differences have to be openly explored and encouraged. As Olson and Eoyang say “Difference alone does not generate change. . .Team members may be completely aware of their differences, but be unwilling to engage with one another to learn from their various perspectives” (2001, p. 16) Group think cannot be allowed to reign.

3. **Transforming Exchanges** – A primary exchange is information, but it includes all types of connections across all the organization’s differences. Back to Wheatley:

Information is one of the primary conditions that spawns the [self-organization] we see. If it moves through a system freely, individuals learn and change and their discoveries can be integrated by the system. The system becomes both resilient and flexible. But if information is restricted, held tightly in certain regions, the system can neither learn from it nor respond. (1998. 82)
Inherent in the principle of “Transforming Exchanges” is the distinction between dialog and debate. For an exchange to be “transforming”, there has to be openness. Here is Zohar’s (1997), contrasting of the two:

**Debate Vs. Dialog**

- Knowing vs. Finding Out
- Answers vs. Questions
- Winning or Losing vs. Sharing
- Unequal vs. Equal
- Power vs. Respect or Reverence
- Proving a Point (defending a position) vs. Listening (exploring new possibilities)

The method of communication habitually used is so fundamental to how we see our world, it would be an extremely challenging blind spot. And indeed, the self-organizing blocking mindset that keeps “debate” as the predominant organizational communication method is the same mindset that keeps “not knowing” from becoming conscious. The debate stance is not designed to find out what it doesn’t know. The practice of “Dialog” is a crucial element of “Transformative Exchanges”.

These three conditions: “The Container”, “Significant Differences”, and “Transformative Exchanges”, along with the element of “Dialog” form the basis of the questions included in the Assessment questionnaire developed for this research, which will be addressed in more detail in the Developing the Assessment section below.

**The “New Science” Challenges Everyone’s Thinking**

For a moment, let’s agree that the “New Science” is an underlying impetus for the evolution in worldview being discussed and that it also provides a meaningful metaphor for making sense of how to increase effectiveness within such an evolution. If we also agree that it’s a dramatic paradigm shift, requiring an entirely new understanding of reality, we can have some sympathy for business leaders struggling to adapt to the new environment. In fact, the pioneers of the science themselves struggled with it as well, in spite if their superior understanding of the
underlying concepts. Let’s take a look at a small sample of quotes about Quantum Theory attributed to the very scientists closest to the topic:

- “Those who are not shocked when they first come across quantum theory cannot possibly have understood it.” Niels Bohr.
- “If you are not completely confused by quantum mechanics, you do not understand it.” John Wheeler.
- “It is safe to say that nobody understands quantum mechanics.” Richard Feynman.
- “Quantum mechanics is magic.” Daniel Greenberger.
- “Everything we call real is made of things that cannot be regarded as real.” Niels Bohr.
- “If [quantum theory] is correct, it signifies the end of physics as a science.” Albert Einstein.
- “I do not like [quantum mechanics], and I am sorry I ever had anything to do with it.” Erwin Schrödinger.
- “Quantum mechanics makes absolutely no sense.” Roger Penrose.

If that’s how they responded, we can only commiserate with organizations challenged to “get with the program” – to figure out how to implement changes, and evaluate progress if the New Science is the path to that progress. As Byrne (2000) said in earlier quote – it’s time to forget what we’ve learned in business school and set aside time-honored principles. As Einstein pointed out “we can’t solve problems by using the same kind of thinking we used when we created them.”

Looking back at Zohar’s framework – many of the features in the “Quantum” column - such as chaos, uncertainty, variety, experimentation and risk taking – are exactly the things a 20th Century leader would be trained to exert energy and effort to bring “under control”. Other features – such as relationships, networks, bottom-up leadership and operations, innovation – are talked about in the business world, but still tend to be more “talk” than “walk”. This evolution asks leaders to embrace things they’ve been habituated to devalue and distrust, and to let go of things they’ve considered essential. As Daniel Pink put it in *A Whole New Mind*, “...we are entering a new age. It is an age animated by a different form of thinking and a new approach to life...” (2006 p.2). Zohar says:
Most transformation programs satisfy themselves with shifting the same old furniture about in the same old room. Some seek to throw some of the furniture away. But real transformation requires that we redesign the room itself. Perhaps even blow up the old room. It requires that we change the thinking behind our thinking – literally, that we learn to rewire our corporate brains (1997 p. v).

Whether we like it and are adequate to the task or not, the reprieve is over. The shocking implications of the “New Science” are so much a part of our lives that ignoring its impacts and opportunities is no longer a viable option.

**How Do We Cope With the “Not Knowing”?**

“It isn’t that they can’t see the solution. It’s that they can’t see the problem.”

(Chesterton, 2008, p. 141)

“Denial is the unconscious calculus that if an unpleasant reality were true, it would be too terrible, so therefore it cannot be true”.

(Tedlow, 2010, p. 2).

While the hurdles of newness and lack of the knowledge and skills needed to accomplish the changes mandated by the new world we live in contribute to the slow evolution experienced by many organizations, another factor must also be playing a role – not even knowing that it’s time to change, not knowing there are more effective means. Returning to that list of physicist’s quotes above, it’s clear that denial goes with the territory. Whatever the context, the New Science seems to call upon people to count on things that are inherently upsetting to the Newtonian mind.

Much of “New Science” leadership and organizational change requires self-knowledge, getting beyond “group think,” questioning assumptions, and having a clear picture of reality. These thinking habits are crucial elements that enable a group to develop those characteristics in the 21C Framework. They are also the ingredients which, when lacking, contribute to now knowing what we don’t know.
The topic of denial has a long history in the study of psychology and addiction. More recently it has moved into areas like Economics, Political Science and beyond, business among them. In fact, in 2010, one of the contributors of that 2000 *Business Week* article that gave us the 21st Century Framework, Richard S. Tedlow, Professor of Business Administration at the Harvard Business School and a specialist in the history of business, published a book entitled *Denial: Why business leaders fail to look facts in the face - and what to do about it.* Tedlow says:

“. . .denial permeates every facet of life. Business is no exception. In fact, denial may be the biggest and potentially most ruinous problem that businesses face, from start-ups to mature, powerful organizations.” (p. 2)

The central themes of not knowing what we don’t know and denial found in the books by Tedlow and Roberto both point to a need for honest feedback. In Systems Theory, strong and immediate feedback loops are a crucial element in self-organizing and resilience. Feedback is an integral part of the new evolutionary paradigm. We conduct business in a world that is changing at an overwhelming rate, creating the need for entirely new ways of thinking. Denial is a normal and common reaction, and even without it, it is impossible to know everything we don’t know. Frequent and honest feedback is an essential component of the new thinking, as well as one important ingredient in the antidote to denial.

I want to facilitate feedback explicitly related to New Science practices by developing a low-cost, widely accessible tool that organizations can use to begin to shed light on where they stand, collectively, relative to the 21st Century characteristics; their ability to grasp the implications of the New Science; and those uncomfortable “group think” assumptions they’d rather not question.

“Not everything that is faced can be changed, but nothing can be changed until it is faced.”

*James Baldwin*
Developing a Wake-Up Call

While some high-profile organizations are adapting and thriving with the new realities, far more are not. Given how crucial it is that organizations adapt to the current environment, why is it so hard to “blow-up the room?” Why do organizations continue to spend time and energy on superficial fixes that fail to help them meet the challenges of the new century? Much research has been done in many fields into resistance to change. One common thread is the need for feedback. Without a clear picture of current reality – not the reality in one powerful person’s mind or the pseudo reality of unexamined group think – there is little possibility that change efforts will be sustained or will have a helpful impact.

My goal is that the Assessment developed through my research will serve as a significant feedback instrument, facilitating a clear understanding of current reality by breaking through group think, revealing the gap between the espoused theory and the theory in use (Chris Argyris, 2010), and pointing out stuck paradigms.

Margaret Wheatley, in her article with Myron Kellner-Rogers What Do We Measure and Why? Questions about the uses of measurement (1990) cautions against the idea that measurements can create desired behaviors and highlights the difference between measurement and feedback. Her construction of effective feedback is broader than the Assessment I am developing – it would include all constituents in the development of the feedback tool from the start, and it would evolve as the organization evolved, among other differences. Margaret Wheatley is one of my heroes. Her work epitomizes what is necessary for 21st Century organizations of all types. I agree completely with her broader approach to feedback, and her cautions around measurement. My Assessment approach is but a half-way step in her direction. It’s a half-way step because it’s my belief that many businesses, especially small, entrepreneur/founder-led businesses simply aren’t ready to take a full step. Those that are, and I hope that population is growing, would have no use for my Assessment. But those that are not are the businesses I am hoping to help.

I am especially concerned about small and mid-sized businesses, since these are where most employment comes from, they are core drivers of local economies, they don’t tend to have
internal planning and change specialists, they are used to “going it alone”, they generally have limited budgets, and being smaller – they have the capacity to change quickly if they choose to.

Providing this kind of feedback to organizations is a perfect fit with the University of St Catherine’s MAOL Program *Three E’s Model of Leadership* developed by its founder White-Newman (1993). Among organizations that complete it and choose to act on the resulting information, it would help increase effectiveness – New Science approaches have proven to be far more effective in the faster and more complex 21st Century. The Quantum approach implicitly impacts the ethical environment of an organization, increasing participation, truthfulness, human connection and recognition of a broader set of stakeholders. And lastly, as leaders learn that once the needed principles have been put into place they can trust their organizations to react appropriately with less direct effort, and that accountability for success is shared by everyone, they can relax their exhausting command and control approach. Endurance is built into the paradigm, as it calls for letting go, trusting, self-examination, taking time to reflect. As leaders become partners in their organizations, instead of drivers of their organizations, they may find more joy and personal sustenance in their work than they ever had before.

Warren Bennis said “A new leader has to be able to change an organization that is dreamless, soulless and visionless ... someone's got to make a wake-up call.” The Assessment will not, on its own, create the change organizations need, but as an ice-breaker half-step, it is far more effective than nothing. My hope is that it can help serve as Bennis' “wake-up call”.
III. Research Question and Assessment Development

My research question asks the following:

1) What evidence is there that the posited evolution is actually happening? Where are organizations currently, relative to both the 21st C Framework and the New Science Principles?

2) What is the relationship between an organization’s evolution across the 21st C framework and the degree to which an organization has adopted “New Science” organizational principles?

3) How well does the online Assessment developed reveal areas for improvement in individual organizations?

Exceptions to the 21st Century Framework

With the world changing so rapidly, ten years seems like a very long time ago. Many of the illustrations and examples in that article seem quaint today, like the extensive “Gee Wiz!” descriptions of how technology will enable executives to do deals from supermarket aisles, or wildly hopeful, like corporations located inside of their own branded airports, where corporate campus and global public transit intermingle. At the time it was written, much of the world was at the height of a massive technology and economic bubble. The worldview envisioned was one of ever-increasing global prosperity, which unfortunately is not the world we operate in today, nor is anyone predicting we will return to such a world in the foreseeable future. Given today’s realities, some of the shifts in characteristics predicted in the 21st Century Framework are no longer appropriate. Others just don’t require the kind of mind-boggling paradigm shifts that are crucial for the future – they’ve been introduced and generally adopted already. My Assessment focuses on the characteristics that are still important in our new and foreseeable economic reality, areas that challenge the old “Newtonian” paradigm most profoundly, and areas most likely to represent dangerous organizational blind spots. Those that remained were left out of the Assessment. The outdated characteristics removed were:

- “Investments” - moving from “incremental” to “revolutionary” is still relevant in that more than ever we look for revolutionary results from our investments, but with significantly less cash flowing through the system, much investment at all is
uncommon and likely to be incremental. This is more about individual organizational capacity and strategy, and less an overall move from one approach to the other.

- **“Quality”** - moving from "affordable best" to "no compromise" is another characteristic from the framework that seems outdated. In a year where Harvard Business Review Bloggers Radjou et. al. write in their post *Leadership in the Age of Scarcity* (2010), that “. . .the Western world is inexorably shifting from the Age of Abundance to the Age of Scarcity”, and advocate an approach they call “More for Less for More” (2010). “No compromise” in quality is certainly still one valid strategy, but as a universally-applicable best practice approach to quality it may be a dream from a past era.

The less-than-radical-paradigm-shift characteristics removed were:

- **“Financials”** – I think most intelligent business leaders can easily grasp the value of real-time financial reporting. If they’re not doing it, it’s not a blind spot, it’s due to something else.

- **“Reach”** – Most businesses have considered how globalization fits into their business models. In 2010, the globalization strategy is now understood to introduce new challenges that may outweigh the benefits, and it’s never been the universally-applicable “one size fits all” approach it may have seemed in 2000.

- **“Inventories”** – Like financials, strong arguments have been convincing people for a long time of the benefits of Lean and Just in Time logistics. If businesses haven’t adopted those practices, it’s less about blind spots and more about something else. It’s also information that’s easy to find out, it doesn’t require organization-wide feedback in the form of a “blind spot” Assessment.

- **“Products”** – Again, this is an area where today’s economy and each organization’s specific business model is probably the most appropriate deciding
factor. The “More for Less for More” concept challenges a blanket prescription for a movement from mass production to mass customization.

In spite of the differences between 2000 and 2010, most of the framework still fits remarkably well, supporting the idea that most components of the framework are fundamental signs of the irreversible revolution in which we are in the midst. They’re not fads or short-term trends – they really are an evolutionary shift, as permanently and profoundly impactful as the industrial age.

Removing from the framework the parts that are no longer current, or are obvious and already in general use, the remaining parts were the core concern of my research project. For the remainder of this document, references to the framework will mean the following modified set of 12 Characteristics:

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We can consider the removed characteristics equivalent to “moving the furniture” in the Zohar quote above. The furniture has been moved, some has been thrown out, but the room remains the same. Referring back to the differences between 2000 and 2010, I believe that the remaining 12 Characteristics increase in relevance each year. The “scarcity”, increasing
complexity and interconnectedness and upheaval we face means they are no longer factors for the “cutting edge” to “get ahead”. They are elements of survival to even stay in the game.

**Overlapping Frameworks**

In developing the assessment questionnaire, I used the following structure: each of the retained characteristics represented one topic, and the assessment contained one page per topic.

In order to assess the relationship between the 21st Century Framework and the New Science principles, I needed to ask questions about both frameworks. For the structure needed to combine the two frameworks, each page lists the Characteristic at the top and the two dimensions of the topic representing a 20th Century Corporation and a 21st Century Corporation. Then a question asking participants to rank their organization on a scale of one through ten, with one being a 20th Century Corporation and ten being a 21st Century Corporation version of the characteristic in question.

Because the 21st Century Framework Characteristics are potentially more subject to wishful responses, and because they complicate participants expectations somewhat, they would not remain in the final assessment used for organizations beyond the pilot-testing period. But they are necessary at this point to establish a relationship.

After the Characteristic ranking question, there follow four to five questions that attempt to get at the three conditions for self-organizing systems addressed on page 19., the Container, Significant Differences, and Transforming Exchanges. These three concepts were applied to the characteristic in question for construction of the questions.

Lastly, there was an open-ended text field which asked participants to comment about their organization relative to the characteristic or practices in question on that page, or on the assessment itself. Each of the twelve sections followed this pattern.
IV. Methodology

To begin to answer my research questions, I piloted the Assessment using the following methodology:

- Developed Assessment questions that wove together the 21st Century Corporation Characteristics and the New Science approaches and created an online questionnaire.

- Recruited twelve individuals from for-profit organizations employing at least 30 people, who have leadership roles with broad responsibilities and oversight of an organizational function (generally VP and above). I gathered data from each of three small, three mid-sized, and three large corporations, across a range of industries. The Assessment is intended for a very broad business audience, so a range of sizes and industries was important.

- These twelve key business individuals were asked to complete a special “pilot version” of the Assessment that included the following:
  
  - The full Assessment consisting twelve sections, one per each of the 12 21st Century Corporation Characteristics.
  
  - Each Assessment section contained:
    
    1. A definition of the dual 21C Characteristic terms to help clarify what I was trying to measure and help ensure understanding.
    
    2. One simple scale question about the characteristic in question for that section (i.e. “Q1. on a scale of 1-10, where is your organization if 1 = A Pyramid and 10 = A Web or Network). This was intended to provide a baseline for understanding where the individuals intuitively felt their organizations were in their evolution. It also served as one means of triangulating response data, during the pilot.
    
    3. Four to seven “standard Assessment questions”, taken from the New Science principles as they apply to the 21C framework characteristic in question. These are the questions that were tested for their relevance as the core of the final post-pilot Assessment.
4. One open-ended follow-up “meta-question” about the questions above in each section (i.e. What Practices are missing from the questions above, which would help indicate where your organization stands relative to the two Characteristics examined on this page? It also asked for any other comments). This meta-question was used to evaluate and improve usability of the Assessment, and to better understand the correlation (or lack thereof) between the Assessment responses with the original 12 simple questions.

From the Assessment pilot responses, I analyzed the following relationships between scores:

- Relationships between the simple-framework questions and the standard Assessment questions for each respondent, to ascertain whether the “New Science” questions adequately address the 21stC framework, and to see if the “New Science” questions alter participants perceptions of their organizations as they take the Assessment.

- Relationships between standard Assessment question responses and meta-question responses. Again, this helps understand the effectiveness of the “New Science” questions, their applicability to the 21C framework, and the impact the questions have on perceptions.

Assistance in recruiting participants for my project came from MAOL instructors who have organizational consulting clients. I recruited, via email, from the MAOL student and alumni body. And I contacted business leaders I knew from previous jobs.

The following texts Informed my methodology:

- *Organizational Assessment: Perspectives on the measurement of organizational behavior and the quality of work life*, Lawler (1980).
By using this triple level approach to the assessment questions in the pilot, I learned how effectively the principles of the New Science correlate to and predict evolution along the 21st Century framework; how usable the Assessment is in its current form, as well as ways to improve it; and began to get a sense of how useful the Assessment may be in helping for-profit organizations shed light on their own evolutionary blind spots and stuck-points.

Validity

As a past practitioner of organizational assessment administration and use, I have a clear bias based on personal experience, that a good assessment can be pivotal in helping an organization identify needed changes. Additionally, the fact that I have spent the past six years submersed in the New Science organizational and leadership literature hardly speaks to any personal neutrality on my part around the topic. Lastly, I have experienced a great deal of personal frustration in organizations with huge blind spots of the kind my research seeks to help uncover. These three facts reveal a researcher who is passionate about the topic and who must take great care in ensuring that her passion does not bias her research.

To counteract my obvious biases, I used the validity tests for improving the validity of my research conclusions, taken from Maxwell’s *Qualitative Research Design: An interactive approach* (2005):

**Rich Data** – My research data includes an extensive literature review, and a robust set of data from a diverse group of individuals.

**Triangulation** – I gathered data from individuals with different roles in their organizations, and ensured that responses came from a variety of organizational sizes and industries. This ensures a diverse range of individuals.
**Respondent Validation** – by including definitions of the “Characteristics” terminology, and soliciting open-ended feedback in each section of the pilot assessment.

**Comparison** – I compared the simple “Characteristics” questions against the New Science questions and against the open-ended feedback questions.

**Quasi-Statistics** – The Assessment questions have an inherent numerical (ordinal) quality that can be used to assess validity, as well as categorical information that can be quantified (frequency of reports that a question was confusing, etc.).

**Searching for Discrepant Evidence and Negative Cases** – I scrutinized the data from many perspectives to find information that doesn’t fit, outliers, etc..

In addition, I chose not to conduct interviews or focus groups, in part in order to ensure that all data is retained independent of the filter of my beliefs. I know only one of the individuals volunteering to participate. The privacy of an online assessment reduces the possibility of the researcher’s presence impacting responses.

When drafting the assessment questionnaire, I used guidelines from *Scale Development: Theory and applications*, DeVellis (2003) to avoid “leading” questions.

While I am passionate about the topic of paradigm shift in organizations, I am even more concerned that the Assessment ultimately produced will have value and usefulness for business in general. Therefore, it was of very important to me to build in as much objectivity as realistically possible.
V. Presentation of Results and Discussion

Overview

The Assessment data provides four main approaches for analysis and drawing conclusions:

1. First are the numerical question scores. All questions were designed so that the responses fit in one simple continuum representing 20th Century Characteristics/Newtonian Practices on the left end or zero percent side of the continuum, and 21st Century Characteristics/Quantum Practices or one hundred percent on the right side. Therefore, throughout this discussion, a low score on any factor reflects low evolution towards 21st Century Characteristics and a high score reflects a high degree of progress in that evolution. All response options have been standardized to have a value of 0% to 100%. These scores can be aggregated per response to give an overall picture of where the organization sits on the continuum, as well as broken down by Characteristics and other variables to see which areas are changing faster than others.

2. The second approach is the relationship between “Characteristics” scores and “Practices” scores.
   - Each of the 21st Century Characteristics used in the Assessment constitutes a “section”:
     - Each section contains a description of the two faces of the characteristic in question. For example, in the 21st Century Characteristic “Organization”, the 20th Century face of it is “the pyramid”, while the 21st Century face is “the web or network”, so the section starts with a brief definition of what is meant by “pyramid” and by “network” (see Appendix B for the Assessment Questionnaire).
     - Next comes a question asking the participant to rank their organization on a scale of one to ten, with one meaning they feel their organization is organized as a pyramid and ten meaning they feel their organization is
organized as a web. There is one such “Characteristic” score for each of the 12 sections.

- After each “Characteristic” ranking question are four or five questions that articulate New Science “Practices” relevant to the characteristic in question, asking how much the Practices are in use in their organization, based on personal experience.

- In the discussion that follows, I refer to “Characteristics” and “Practices” as “dimensions” – as when comparing one dimension to the other. “Practice” dimension response options “Don’t Know” or “Not Applicable” have no numerical value and do not impact the aggregate scores.

- The “Practice” dimension questions, both individually and aggregated within each section, can be compared to the “Characteristic” ranking dimension to shed light on the relationship between the concept of the 21st Century Characteristics and the overlay of “New Science” Practices.

3. The third approach comes from the comment responses. Each section ends with a comment box in which participants were invited to comment on the Assessment or their organization generally, and were asked to suggest practices they felt were missing that support the characteristic in question.

- These comments, being open-ended, went in a few directions.
  
  - One direction was for the respondent to list practices or elements they thought should be added to the questionnaire.
  
  - Another was to explain their responses to questions in the section, amplifying their numerical responses.
  
  - Yet another direction was to explain their organization’s progress relative to the Practices in the section, for example, that they have a plan in place to implement a practice. Or that they’ve been working on adopting a practice but it still is not the norm.
  
  - Lastly, they commented on the Assessment itself.
All of these comments offer insights into the participant’s experience within their organizations, as well as their experience of the Assessment.

Evidence of Evolution

Relative to the research question ‘What evidence is there that the posited evolution is actually happening?’, we’d begin by looking at the aggregate data distribution. If the shift is not really happening in the real world – and if the Characteristics used to describe 20th Century organizations are an accurate reflection of most businesses in the past century - we’d expect to see the majority of responses clustered at the low end of the continuum. If the shift were an accurate description of what organizations will be like in the nascent century, and that transition were universal and complete, the data would cluster around the high end of the continuum. Likewise if the shift were not an evolution at all, but the so-called 21st Century Characteristics had always been present, we’d also see responses clumped at the high end. Instead, what we see is data spread fairly evenly along the continuum as shown in Figure 6 below, suggesting that organizations are indeed moving towards 21st Century Characteristics, some being further ahead than others.

Figure 6 – Continuum of Response Totals

One might argue that the spread of responses above does not represent an evolution, as in progress from one state to a more highly evolved (i.e. better adapted) state. One might say that the 21st Century Characteristics are not “better” than the 20th Century Characteristics, but are simply one type of organization among others - stylistic preferences - none of which are progressing from one state to another. But comments provided contradict that likelihood. Much of the commentary involved discussions of how and why the organization had not adopted the
practices in question. With one possible exception, none of the comments countered the underlying assumption that the practices were effective and that organizations would want to adopt them. Within these discussions elements were defined as lacking, and in places concern was expressed. Overall, the comments don’t read like the 21st Century Characteristics or Practices are seen as simply a stylistic choice. They read like the evolution is desirable to the respondents.

One might still argue that this tendency in the commentary could be due to the respondent’s disinclination to contradict the underlying assumptions inherent in the Assessment itself. The question here is not whether the 21st Century Characteristics and the New Science Practices are important and effective. As stated earlier, there is ample research supporting the position that they are. The question is more about how desirable the respondents feel the practices are. Practices being seen as desirable would support the “evolution” theory, as opposed to the stylistic difference theory, as people tend to move towards what they desire. Comments seem to support the interpretation that the Characteristics and Practices are desirable, but without asking the question more explicitly in future research, that part is inconclusive.

What is more conclusive is simply the frequency of statements about the intent or plan to adopt principles (suggesting movement in that direction), as well as the concern expressed about the lack of some of them. Here is a comment (sent in an email afterwards) from the person with the lowest score, “as you will see, I was rather negative, but I couldn’t be any more positive than I was. This is a company with many deficiencies”. From my perspective, that certainly doesn’t sound like a neutral stylistic difference.

The next part of the research question, “Where are organizations currently, relative to both the 21st Century Framework and the New Science Principles?”, seems to be answered in the evidence above – they are moving. Within this sample group, the average aggregate Characteristic dimension score was 53%, and the average aggregate Practices dimension score was 68%. The relationship between the two dimensions will be addressed further on.

Some sample organizations are seen by their respondents as far along the path, having adopted many of the New Science Practices, and displaying a high degree of 21st Century Framework Characteristics. Some are very low in both dimensions, and feeling uncomfortable in
that place. And the bulk are somewhere in between, further ahead in some dimensions, expressing a clear intent to move ahead in others, and lagging in yet other dimensions. Among this Assessment’s respondents, even those at the forefront (the top cumulative score for both Characteristics and Practices was 83%) are still in flux, for example this comment from the 83% person “. . .we just formed a Diversity Council with volunteer employees who are eager to support and exploit diversity. I have great confidence in its success”.

The data gathered was spread across a range of company sizes, from those with 45 employees to those with 70,000. These were separated into groups to see how the evolution was progressing relative to size. Companies with less than 200 employees are considered “small” for the purposes of this research. 200-1,000 is considered “medium” and having more than 2,500 employees is “large”. Each group represents a total of 4 respondents. Evidence for evolution was spread across the sizes. Among the response sets, those scoring their organization’s with the three highest cumulative Characteristics’ scores are labeled “High Evolution”, those with the three lowest cumulative Characteristics scores are labeled “Low Evolution”. The remaining six response sets are labeled “Mixed Evolution”. Figure 7 shows the number of companies of each size that fall into each category. Interestingly, only small and large companies had very low scores, while only small and medium companies had very high scores. Large companies had low and mixed scores. While more data needs to be gathered to verify this, it would seem that consistent progress towards the 21st C framework is slowest in very large organizations, where the challenge of altering the thinking of vast numbers of people could be expected to be the most daunting. Small companies seem from the current data, to be more of a mixed bag relative to their evolution. Of course more data is needed for confirmation, but that seems to make sense. Smaller companies can change rapidly if they choose to, having closer connections between all aspects of the organization, and fewer people to bring along. At the same time, smaller businesses are more impacted by the personality of the person at the top, leading to greater variation in intent to change. A strong command and control leader in a small organization is less likely to be mitigated and influenced by other leadership styles than in a large organization.
The next part of my research question was “what is the relationship between an organization’s evolution across the 21st Century framework and the degree to which an organization has adopted the “New Science” organizational principles?” The dataset is too small for sophisticated statistics, but a relationship between the two is graphically visible. The chart in figure 8 shows the average score for all the Characteristics and all the Practices given by each respondent (respondents ID numbers 2-13, across the horizontal axis). The chart shows that in general, the two dimensions move together.
While there is a limiting condition inherent in the sample taken (that the responses are all taken from high-level executives) which will be addressed shortly, and far more data needs to be collected to bear this observation out, there does seem to be a strong relationship between the two frameworks and relative to the evolutionary process. “High evolvers” score relatively higher on all facets of the Assessment, and “low evolvers” score relatively lower on all facets.

While the patterns vary somewhat, this relationship can also be seen when breaking the data down by section as well, an example of which – Characteristic One, “Organization” (Pyramid vs. Network) is given in figure 9. See Appendix D for the complete set of 12 section charts comparing the relationship between the dimensions.
Figure 9 – Characteristic 1: Score per Response

Averages can be somewhat deceiving, as they don’t show the range of responses. The following charts help to illustrate the relationship between the dimensions in another way. Figure 10 shows the cumulative scores, across both dimensions of the three “high evolution” respondents, relative to the average of all respondent’s scores. The graph shows that while there is variation among sections and between the two dimensions (Characteristics and Practices), the high evolvers scores rarely dipped below the average (and the top, #11, never did). This holds true if we use median as the measure of central tendency as well.
Figure 11 shows the reverse tendency – the “low evolvers” rarely scored above the average (or the median – not shown), and the lowest never did. Though interestingly, the lower set breaches the average line twice as many times as the higher set (4 vs. 8), suggesting that an effort at progress is beginning even at the lower end.
When I originally conceived of doing this Assessment, I expected to ultimately find that in general, scores for Characteristics would tend to be higher than scores for Practices. This expectation grew out of my concept of “not knowing” articulated earlier, in the conceptual context section, and hearkens back to Chris Argyris’ (2010) concept of espoused theory vs. theory in practice. I expected his claim - that few people are aware that the impulses they follow when taking action are not the same as the action they espouse - would fit well in this context. My reasoning was as follows: in Marshall Goldsmith’s video *The Gift of Feedback* (2011) he talks about a study where people were asked to rate their own communication ability, where a very high proportion rated themselves “above average” (a statistical impossibility). Such studies point to a phenomenon of rating ourselves higher on hard-to-evaluate, desirable qualities (“espoused theory”) than can be objectively true. The difficulty in the example given above is that most people won’t know what behaviors are involved in good communication if they have not explicitly learned them, thus they can’t assess what “average” might look like, and can’t know whether their own...
abilities are above or below that point. The measure is inherently self-referential without an external objective benchmark. Regardless of their training or lack thereof, their communication habits work well enough for them, so they rate themselves above average.

I expected the Assessment pilot to show a similar tendency – the 21st C Characteristics being the hard-to-evaluate desirable qualities, and the New Science Practices being the potentially unknown skill sets that, without explicit exposure to them, one is left with only subjective self-reference and historical precedent. I expected that if there was a demonstrable relationship between the dimensions in the data, that relationship would reveal a “don’t know what we don’t know” dynamic to the Practices. But in fact, the reverse proved out - in this sample, as can be seen in figures 8 and 9 previously. The Practices trended to higher scores than did the Characteristics. The data thus may call into question the idea that this Assessment helps to reveal “blind spots”.

Several explanations for this phenomenon suggest themselves:

1. “Not knowing” is not causing slow evolution. Organizational leaders know what Practices contribute to the Characteristics, but either choose not to implement them or feel they can’t implement them.

2. Evolution is held back by not believing, as opposed to not knowing – leaders are aware of the Practices, but believe they wouldn’t be effective.

3. Practices are missing from the Assessment, relative to Characteristics – participants scored high on the Practices represented, but there are others crucial to the development of the Characteristics which were left out of the Assessment.

4. The relationship between Characteristics and Practices is skewed in this sample by selecting only executive leadership to take part – an ultimate strength of the Assessment will be to gather a broad range of perspectives. The experience of executive leaders may be closer to the desirable Practices than it is for the rest of the organization.
5. The relationship is skewed by this sample’s participants coming entirely from the MAOL program alumnae and clients of MAOL Faculty. This population may well have a more “evolved” perspective than the general executive population.

None of the above possibilities can be addressed conclusively from this pilot. All of them will be important possibilities to seek more understanding of when designing future related research.

Simply repeating the Assessment pilot with some number of entire organizations (as opposed to a single executive per organization), and ensuring that the majority of the sample population have no affiliation with the MAOL program would eliminate potential causes four and five.

If such a pilot still showed included higher Practices scores than Characteristics, that would indicate further scrutiny of potential cause three. In that case, the data would need to be analyzed statistically to see which sections are impacted, and would clearly require further understanding of what is needed for development of the Characteristics in question. Those factors would have to be added to the Assessment questionnaire, to be piloted again.

The steps recommended above should provide enough data to establish the usefulness of the Assessment overall, for the business community. They would also reveal if potential causes one and two above are also factors. If it seemed necessary at such a future date, causes one and two could be addressed in the final Assessment design by adding questions regarding the desirability and perceived effectiveness of the Practices. Having a clear picture of what the entire organization believes would impact future success may help leaders make more informed decisions. On the other hand, there may be other, more effective approaches to addressing those causes, should they exist.
Assessment Effectiveness

How well does the 21st Century Organizational Assessment reveal areas for improvement in individual organizations? To address that question, we’ll start by taking a look at a few samples. The samples chosen for figure 12 were selected purely for their differences in pattern from one to the other. Some zig where others zag. As a group, each response pattern was different, I could have used them all, but for the sake of simplicity, I’m narrowing this discussion to just four samples. I’ve also included only the averages of the Practices, excluding Characteristics and overall totals. Overall totals are left out for the sake of visual simplicity, they don’t add insight to the patterns. Characteristics are left out because the Practices are the dimension that can be acted on. We’d be back at the introduction to this research project if we said, for example, “you need to increase your flexibility” – the question is still “how?”.

One caveat to keep in mind when looking at these patterns is that this Assessment would be administered differently in practice than it was in this pilot. It would be given to one organization at a time, and be taken by everyone in the organization (or at least, everyone in a major division). Therefore the scores examined would be the averages for each set of Practices given by the
entire population. It is assumed that if any one of the responses below reflected the average of that participant's entire organization, as opposed to just one person, it would look different. The “Group Average” however (the black line on the charts below and previously), would be the average of all the organizations that had taken the Assessment to date. The entire database would serve as the benchmark for an organization to compare itself to. In any event, the range in line patterns here suggests that whichever group of data is examined, each organization will have different strengths and weaknesses relative to the overall framework. The point here is that, assuming further data gathering reveals a consistent relationship between the Characteristics as well as between the Practices within each Characteristic section, that looking at such a graph, comparing one’s own organization to an average of all organizations, as well as comparing averages across different cross sections within an organization (i.e. Board, Executives, Middle Management, Rank & File could be one way to slice it. Across divisions, regions or departments could be another) would reveal a relatively unique pattern of strong areas to be congratulated and weaker areas to be addressed. Over time, repeating the Assessment would also give the organization a benchmark against which to monitor its own evolution going forward.

Looking at figure 12 we can easily ascertain which Practices need attention. For example, # 2 would do well to look more closely at their Practices relative to Focus and Leadership, since they scored the lowest. They could also compare their scores with the Group Averages, and see that while “Organization” “Strategy” and “Workers” are not their lowest scores, they are the furthest below the group average, also making those areas of poor competitiveness. When examining these five potential areas to address, they should then look at the individual Practices in each of those five areas to see which unique Practices scored relatively lower and higher. Then from that examination, they’d want to look for patterns among the lower scores throughout the five areas in question – there may be patterns across those Characteristics. For example, in each area there may be too little variation in perspective, not enough diversity of opinion, viewpoint, style – weakening the condition of “Significant Differences”, which was one of the three necessary elements of self-organizing systems, discussed above in the section titled...
“Distillation of The New Science Theories”. In such a case, the organization would want to address ways of increasing a diversity of view, especially across the weaker Characteristics.

Perhaps the theme across the lowest Practices in the Characteristics in question is a lack of clear boundaries and identity, another of the three necessary elements of self-organizing systems. In that case, clarity of mission, vision and values would be called for, especially as applied to the weaker Characteristics.

**Applying the Assessment to One Organization**

Let’s take one specific response, number six, and dig deeper to illustrate. This response is only one person’s, that of a Vice President in a small corporation, and we must remember that as such this single perspective may not reflect the whole. However, for the sake of illustration we’ll imagine that the scores shown were actually cumulative scores given from a wide population at that particular company, and thus give us a full and realistic picture of the state of the organization.

Figure 13 – Response #6 Practice Averages Vs. Group
As we saw previously in figure 12, response six is one of the “high evolvers”, scoring among the top three of all respondents. In general, they are doing quite well, with a cumulative Practices score of 80% which is very high among this group (recall that the top was 83%). They have much to feel good about. And if they want to maintain their lead and continue to evolve further, the Assessment can be useful. Although number six’s Practices almost always scored above the average, figure 13 shows us there are two sections where it dips below (Organization: #6=80%, Avg.=83%, and Leadership: #6=76%, Avg.=80%)², and there are three areas where it equals the average (Structure: 64%, Operations: 55%, and Motivation: 64%). No areas score poorly, especially when the respondent group average is taken into consideration, however the areas just listed are rather lackluster relative to the superior performance of the other characteristics. These are the characteristics³ we will examine in more depth to seek out patterns that may enlighten us and point organization number six to future area to work on.

² For the discussion that follows, note that underlined words indicate the Characteristic in question. Italics indicate exact wording of the question representing a practice. And the numbering system, followed by non-italicized text (such as - 1A: Access to up to date…) indicates the corresponding graph label which is a paraphrase of the full question text.
³ Note also that for this example, we are only looking at the cumulative or individual Practices scores, as opposed to Characteristics scores. So if referencing Operations for example, I mean the average scores of the Practices in that section, not the ranking given for that Characteristic.
Starting with the Characteristics that dip below the average we find in figure 14 Organization that the question “I have many formal and informal relationships across the organization – with leaders and colleagues across divisions, functions, professional levels, styles and areas of expertise” (paraphrased as 1C: Myriad relationships, in the graph above) has the biggest gap and “I have up-to-date access to all information that could impact my area of responsibility” (1A: Access to up to date information, above), is also slightly lower than average.

In figure 15 Leadership, we see that 9A: I am proud of this organization and what it stands for, is a bit lower than the average, and 9D: [our] Leaders are good role models.” Is also a hair under. Again, these are not dramatic differences relative to the average, but they are significantly lower than the other areas for response six.
Figure 15– Response #6 Leadership Practices Scores vs. Group

Figure 16, Structure shows a relatively wide gap for the question “We function with the awareness that our success is intimately connected to the health of the communities and environment of which we are simply one part” (5A: Success connected to health of communities and environment, in the chart) and “We have the technology, skills and knowledge of one another to identify, engage and liberate the complex network of strengths and passions that exist in our people, regardless of where they fit into the organization.” (5D: Have tools to ID & utilize everyone’s strengths”) shows another wide gap.
In figure 17, Operations we see a sizable gap at “We take advantage of new technologies that enable us to be increasingly interconnected across the organization, such as knowledge management wikis, internal social networks, open-access project management tools, web-conferencing and file sharing, etc.” (7A: Use tech for interconnectedness (wikis, networks, PM tools, web-conf. . ., below)
And finally, in figure 18 Motivation, we see very slight dips at “We recognize that sometimes the best way of staying competitive is by finding and developing collaborative relationships wherever possible.” (12A: We compete by developing collaborative relationships) and “We develop business literacy at all levels, ensuring that everyone has the knowledge to make good business decisions” (12E: Develop business literacy at all levels).

So far we have identified all the Characteristics where response number six’s average of all the Practices included in that characteristic were below the study’s group average. I will summarize and draw conclusions from them shortly. But before that, we’ll include two more practices where the averaged score for all the practices from response six did not dip below the average of the rest of the respondents, but these two single practices did, one of them by a fairly significant amount. In Workers (figure 19), the question “We do not retain people who aren’t invested in the organization’s future” (10B: Don’t retain un-invested people) had a gap big enough to be the third biggest of all the gaps, making that single practice important. The other practice we’ll add to our analysis is shown in figure 20 Job Expectations, “The organization offers training
"and support in learning new ways of managing conflict or dissent and embracing differences”
(11B: Training in managing conflict and embracing differences).

Figure 19– Response #6 Workers Practices Scores vs. Group

![Workers - Practice Scores](image)

Figure 20– Response #6 Job Expectations Practices Scores vs. Group

![Job Expectations - Practice Scores](image)
Having now identified every single instance of a response number six practice dipping below the study group’s average, let’s look them all together. The table in figure 21 below shows all the questions (paraphrased) that dipped below average in response number six, along with the percentage points it was below, and the associated characteristic.

Figure 21– Response #6 Practice Questions Below Group Average

<table>
<thead>
<tr>
<th>Item #</th>
<th>Gap (vs. Avg)</th>
<th>Practice</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>-27</td>
<td>1C: Myriad Relationships</td>
<td>Organization</td>
</tr>
<tr>
<td>2.</td>
<td>-23</td>
<td>5A: Success is connected to health of communities and env.</td>
<td>Structure</td>
</tr>
<tr>
<td>3.</td>
<td>-22</td>
<td>10B: Don’t retain un-invested people</td>
<td>Workers</td>
</tr>
<tr>
<td>4.</td>
<td>-20</td>
<td>5D: Have tools to ID &amp; utilize everyone’s strengths</td>
<td>Structure</td>
</tr>
<tr>
<td>5.</td>
<td>-17</td>
<td>7A: Use tech for interconnectedness (Wiki’s, etc.)</td>
<td>Operations</td>
</tr>
<tr>
<td>6.</td>
<td>-7</td>
<td>12A: We compete by developing collaborative relationships</td>
<td>Motivation</td>
</tr>
<tr>
<td>7.</td>
<td>-3</td>
<td>9A: Pride in organization and mission</td>
<td>Leadership</td>
</tr>
<tr>
<td>8.</td>
<td>-3</td>
<td>12E: Develop business literacy at all levels</td>
<td>Motivation</td>
</tr>
<tr>
<td>9.</td>
<td>-2</td>
<td>1A: Access to up to date information</td>
<td>Organization</td>
</tr>
<tr>
<td>10.</td>
<td>-2</td>
<td>9D: Leaders are good role models</td>
<td>Leadership</td>
</tr>
<tr>
<td>11.</td>
<td>-2</td>
<td>11B: Training in managing conflict and embracing differences</td>
<td>Job Expectations</td>
</tr>
</tbody>
</table>

Focusing on the top half of this list, we can see that relationships (both knowing one another, and knowing about one another – their strengths & experience) and connections (to the community and environment, and internal relationships) are key (Items #1, #2, and #3). We also see that tools that foster accessible information (#5) and connections (#4 and #5) have large gaps, and clearly related to the top items. Item #3 sticks out, seemingly separate from the complex of issues just noted – which we’ll return to.
If we look at the Characteristics in question and go back to the definitions along each continuum, we see that the lower-than-average items relate to development of more of a network structure (as opposed to pyramidal), becoming more interdependent (vs. self-sufficient, both organizationally and individually), and employees feeling more like free agents (personal investment in the organization). While the practices listed have differences between them (they’re not all about the same topic) they all have a resonance with the third “condition for self-organization” referenced above: Transforming Exchanges. This organization has done very well in many ways. What it needs now are more meaningful connections, meaningful information-sharing, meaningful knowledge about the system. Looking at the above table brings to mind a comment by Margaret Wheatley when asked in an interview how she defines a good leader today:

The definition that I like best right now is by Mort Meyerson from Perot Industries. . . As CEO, he said, he realized everything he knew about leadership was wrong. Then he came up with these new definitions in which he said: the first task of a leader is to make sure the organization knows itself. We need to think of the leader as a mirror, or as a supporter of the processes by which we know our competencies and we know what interpretations of our history we’re willing to enter into. We need to make sure we know our customers, we know one another, and we know why we’re in this business or in this public sector organization. (London, 2011)

What jumps out for me is that adopting the use of the two tools indicated in items #4 and #5, and really embracing their use, putting control of them into the hands of the all the employees, could make a significant positive impact on all aspects of the organization. It would take care of other items in figure 21, both directly and possibly indirectly, including the lack of pride and investment in the organization that some people seem to feel (items #3 and #7). These tools could also be one foundation for developing business literacy at all levels (#8) as well.

The other suggestion I’d make to this organization, in looking at their data, would be to make an effort to strengthen everyone’s conflict-management and difference-embracing skills. While this Practice is not significantly lower than the average of all those who took the
assessment, the group average itself is relatively low-scoring among all Practices, being in the lowest 35% of individual Practice scores. And this one Practice can have a significant impact on all others, potentially undermining the benefit of the other initiatives taken.

In summary, if this were the assessment of the entire organization and it was my client, I’d advise:

1. Adopting technologies for organization-wide, up-to-date information sharing:
   a. Including:
      i. Easily searchable, current business information from all areas, accessible by everyone in the system:
      ii. Meaningful information about all the members of the system:
   b. With an intentional effort at increasing information transparency.

2. Implementing a program of increasing conflict management and cultural competence skills.

This example shows that in any case, even a relatively highly-evolved organization, the data, especially if coming from all internal perspectives, gives a wealth of insight, allowing for a robust analysis and understanding of each particular organization’s systemic vulnerabilities.

The hope is that over time in actual practice, the researcher would gather enough data from a number of organizations in a range of industries that the “Group Average” (the benchmark black line on earlier graphs) could be broken down into “Industry Averages”, enabling organizations, consultants, and researchers to compare Practices and trends within industries as well as across the broad base of corporations.

**Assessment Design Impacts**

One purpose of a pilot study is to uncover problems in the design and implementation of proposed further research methods. In this instance, aside from the unexpectedly higher scores in the Practices dimension, and the already foreseen need to gather data from entire organizational populations, the pilot process has uncovered minimal problems. The median response time for completing the Assessment was 42 minutes, which may seem too long a period of time to ask organizational members to contribute to assessing the health of their system. On
the other hand, those who spent the most time taking the assessment contributed a significant amount of commentary, which is optional. And aspects of this pilot which were designed to help understand the overlap of frameworks (21C and New Science) could be removed in a final version.

Participants were given my phone number and email before taking the Assessment, and were encouraged to contact me if they had any questions or problems. It has been my experience administering previous Assessments, that if an instruction or question is confusing, people will let me know. In this instance, no-one contacted me, suggesting the process went smoothly. Open-ended comment spaces also solicited feedback about the Assessment’s functionality. There was only one comment suggesting improvement in the process:

I was conflicted when answering the questions because we have a corporation and individual plants. Our strategies and actions can sometime be in conflict or we may not always be part of the bigger picture decisions. I think it would have been clearer if I would have asked the question up front if I should answer the questions just how it is at the plant or as a company.

This issue was actually addressed in the Assessment instructions, but in future Assessments, I’d address it on every page via a link or some other mechanism.

One outcome that I would aspire to, if pursuing this Assessment as an in-practice service to organizations, is that just by reading and contemplating the questions, participants would begin to think more deeply about organizational Practices – prior to analysis and recommendations. That the process itself would trigger organizational self-reflection. A couple of comments in this small pilot hint at the likelihood of that happening. One comment: “. . .these questions make me wonder if we should have a leadership competency around ‘collaboration’? It’s intrinsic in our organization, but not called out as a skill that is valuable.” indicates questioning about making (already existing) values (Identity/Boundaries) ever more explicit in strengthening the system. The other comment was:

We don’t have the practice of ‘technology, skills and knowledge of one another to identify, engage. . .[and liberate the complex network of strengths and passions that exist in our
people, regardless of where they fit into the organization.]’ What technology would you use to do this?

This implies the participant was introduced, via the questionnaire, to a new practice that could greatly enhance organization-wide information access (Meaningful Exchanges), again strengthening the health of the system. These hints of exposure to new ideas and increased clarity are exactly the ultimate purpose the Assessment is intended to serve. Seeing them, along with previously described evidence, in this pilot suggests that the Assessment, once finalized, would be an effective tool for helping move businesses into the 21st Century.

On Use of the Comments

This pilot produced an abundance of open-ended commentary. As mentioned previously, the comments addressed many overarching topics.

1. Respondents listed Practices or elements they thought should be added to the questionnaire;
2. They used the comment space to explain responses to questions in the section, amplifying their numerical responses;
3. They explained their organization’s progress relative to the Practices in the section, for example, that they have a plan in place to implement a practice. Or that they’ve been working on adopting a practice but it still is not the norm;
4. They commented on the Assessment itself.

For the purposes of this research, the purpose of the comment space was to gather feedback on the effectiveness of the Assessment tool itself. If the Assessment were being given to an organization for evaluating the system, the comments related to the system itself would be invaluable. For this reason, not all of the comments are significant to this project. Commentary related solely to the organization itself (#2 above), unless indicating planned movement or concern about lack of movement (#3) were not used in the analysis. Comments about the Assessment itself (#4) have been noted elsewhere in this analysis where relevant.

Comments about Practices that should be added to the Assessment (#1) present a conceptual tangle that would need to be unraveled in the design of the next iteration of the
Assessment, but that unraveling is beyond the scope and intent of this research. One underlying cause of the tangle, that could have been prevented in the original design was the single comment space in each section of the Assessment. This makes it very difficult to tell, in many cases, if respondents comments were suggested Practices to add to the questionnaire, or if they were related items they felt were missing in their organizations. If future versions of the Assessment include comment space for feedback about the Assessment itself, it would be wise to include two comment spaces, one clearly intended for further commentary about the organization, the other clearly intended for feedback about the Assessment itself.

Another cause for the conceptual tangle presented by the commentary is the inherent overlap of two frameworks used in constructing the Assessment, with that being overlaid on top of each respondent's current conceptual framework about corporations. Many suggested Practices were listed in one section as missing, when they showed up as questions in a subsequent section. Identifying the Characteristic in question at top of each section sets up certain expectations that were not always met (and were perhaps not intended to be met).

Another common dynamic was the suggestion of narrowly specific Practices which are covered more broadly in questions designed to get at the three necessary ingredients of a self-organizing system (Boundaries/Identity – Diversity – Meaningful Exchanges/Information). An example of this would be ‘performance management’. A performance management process is widely considered important to a high-functioning business. But in fact, performance management processes vary greatly in their effectiveness, and are mostly useful as a softer tool for command and control. In fact the New Science theories would probably question the concept of performance management itself, the theory being that if you provide necessary elements of a healthy system, the system itself will manage its overall health. The time and effort spent on focusing on & attempting to control individual elements, if the whole is not strong, is a wasteful diversion. And in any case, what has been proven to be more important in individual performance is intrinsic rewards (questions about which are peppered throughout the Assessment questionnaire). And most performance management systems are merely finely-tuned extrinsic reward programs.
This sort of conceptual tangle is one of the things the Assessment should circumvent. The insertion of “proven techniques” by respondents would be wholly expected in asking for input about the questionnaire, and that input needs to be scrutinized for clues to ways of improving the Assessment. One example of how such scrutiny would improve the Assessment comes from the following comment about information sharing throughout the organization.

Our organization shares information freely with all levels thus creating an environment where employees are aware that we are dealing with the chaos and involve many in the decision process. Interestingly enough I find some employees would prefer not to know all the details because it is information overload, other employees thrive on knowing the details.

This comment makes me suspect that while this organization is being very open in sharing information, there is room to improve the accessibility and meaningfulness of the organization. If the organization is not managed in a way that is centrally accessible with robust searchability, the “exchange” is less than meaningful. Wikipedia is a wonderful example – anyone can add to the database, the entire readership can help maintain its accuracy, and it is highly accessibly organized and searchable. I’ve worked in places where all information is “open”, but you’d have to work there for years in order to know what exists and where to find it. The purpose of an open accessible information system is to enable everyone to have rapid access to whatever information is important to their ability to accomplish their ends when the need it, without others becoming bottlenecks. If people are experiencing information overload, it is because someone else is deciding what information they need, and providing it unfiltered.

Having scrutinized this comment relative to New Science thinking, I now see that all questions about information-sharing need to be refined to reflect ease of accessibility and filtering out of information as well as simply making it public. This is the sort of examination all comments would warrant in the design of the next iteration of the Assessment. However, as suggested earlier, such analysis is beyond the scope of this current project.
VI. Summary, Recommendations, Conclusions

This pilot of the Assessment leads to several conclusions:

- There is clear evidence that organizations are moving in the direction articulated in the 21C Framework.
- Organizations are moving at differing rates, some further ahead than others.
- The overall organization, presentation and functionality of the Assessment is clear and accessible.
- Organizational Assessment results will reflect each organization’s unique profile relative to evolution within the 21C Framework.
- Organizational Assessment results provide specific insights and recommendations for steps the organization can take to continue evolving along the 21C continuum, regardless of where they start from.
- The Assessment itself prompts valuable reflection about the organization, just by asking the questions it does.
- The Assessment exposes participants to new ideas.
- More data is needed to confirm or refute the corresponding relationship between the 21C Framework (Characteristics) and the New Science Framework (Practices), but this study implies that there is a strong connection.
- Further data is needed, coming from a broader range of organizational participants (esp. from the lower levels), and data from multiple perspectives within each study organization is needed.
- If Comments are going to be used in further versions of the Assessment, there should be a method for distinguishing comments regarding the Assessment and its content from comments regarding Practices at the organization in question.
- Users who have multiple organizational perspectives (i.e. those intimate with both corporate and divisional/regional cultures) need increased reminders and clarification regarding which perspective to use in answering questions.
I don’t think anyone seriously engaged in the business universe in these beginning years of the 21st Century would argue that times have not changed, and are still changing. Nor would they argue that there is any chance of returning to the “old days”. Increasing complexity, global interconnectedness, and a fragile economy have pushed many organizations into survival mode.

There seems to be a common belief that the 21st Century Framework Characteristics are the elements that will make the difference in the struggle to survive. Everyone agrees that things like flexibility and rapid change are essential. Mainstream business literature abounds with articles about how to implement at least one or another of the Characteristics. I’d challenge the reader to look at the latest literature and find anything that does not, when boiled down to its essence, address at least one of the characteristics in original framework (figure 22).

Figure 22 – 21st Century Framework

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>20th Century</th>
<th>21st Century</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organization</td>
<td>The pyramid</td>
<td>The Web or network</td>
</tr>
<tr>
<td>2. Focus</td>
<td>Internal</td>
<td>External</td>
</tr>
<tr>
<td>3. Style</td>
<td>Structured</td>
<td>Flexible</td>
</tr>
<tr>
<td>4. Source of strength</td>
<td>Stability</td>
<td>Change</td>
</tr>
<tr>
<td>5. Structure</td>
<td>Self-Sufficiency</td>
<td>Interdependencies</td>
</tr>
<tr>
<td>6. Resources</td>
<td>Atoms-physical assets</td>
<td>Bits-information</td>
</tr>
<tr>
<td>7. Operations</td>
<td>Vertical integration</td>
<td>Virtual integration</td>
</tr>
<tr>
<td>8. Products</td>
<td>Mass production</td>
<td>Mass customization</td>
</tr>
<tr>
<td>9. Reach</td>
<td>Domestic</td>
<td>Global</td>
</tr>
<tr>
<td>10. Financials</td>
<td>Quarterly</td>
<td>Real time</td>
</tr>
<tr>
<td>11. Inventories</td>
<td>Months</td>
<td>Hours</td>
</tr>
<tr>
<td>12. Strategy</td>
<td>Top-Down</td>
<td>Bottom-Up</td>
</tr>
<tr>
<td>13. Leadership</td>
<td>Dogmatic</td>
<td>Inspirational</td>
</tr>
<tr>
<td>14. Workers</td>
<td>Employees</td>
<td>Employees and free agents</td>
</tr>
<tr>
<td>15. Job expectations</td>
<td>Security</td>
<td>Personal growth</td>
</tr>
<tr>
<td>16. Motivation</td>
<td>To compete</td>
<td>To build</td>
</tr>
<tr>
<td>17. Investments</td>
<td>Incremental</td>
<td>Revolutionary</td>
</tr>
<tr>
<td>18. Quality</td>
<td>Affordable best</td>
<td>No compromise</td>
</tr>
</tbody>
</table>

However, most of the literature is mostly piecemeal – addressing one topic (or related group), while excluding the rest, and much of it is too specifically prescriptive, leaving the advice open to dismissal because “that isn’t relevant here” or “that wouldn’t work here”.

One key tenet of the New Science is that each system has to find its own solutions. There is no effective one-size-fits-all approach to anything.

The New Science has an ample and expanding body of evidence supporting it, but to the degree that the New Science approaches impact mainstream business literature (and I don’t see
much), I think they’re usually scoffed off as too “new age”, as mumbo-jumbo, squishy psycho-
spiritual feel-good optional stuff to be applied once the real survival issues have been addressed.

I believe that leaders are desperately trying harder and harder in the hopes of achieving
the desirable Characteristics, but doing essentially the same things to get there. Like leaders who
now understand that they need to “inspire” the troops, not just command them, but whose
attempts at being inspirational are often taken for just more “rah rah” baloney. They want to
inspire, but don’t know how because they don’t understand what elements need to be present in
order to support sustained and sincere organization-wide inspiration. Their efforts end up either
discouraging them from ever trying that again, creating even more cynicism in “the troops”, or
both.

What seems to be missing is the connection between the New Science principles and the
21st Century Framework, that says “yes, those Characteristics can save you, and these (counter-
intuitive, squishy, scary) Practices are how you can successfully adopt those Characteristics.”

New Science practitioners and advocates have not been around long enough yet to have
made a broad and convincing case to the mainstream that their principles are the crucial means to
those survival Characteristics being sought. The evidence is there, but as a holistic framework, the
principles still belong mostly to organizational consultants and theorists and only the most leading-
edge forward-thinking business, non-profit, and governmental organizations.

My research project was intended to test my theory that one could help the business
community understand that these principles should be taken seriously as effective approaches to
their survival problems – not through another book or journal article that focuses (in the abstract,
or in theory) on one small aspect or another, but through an instrument that presents a complete
framework connecting the useful Practices with the desired Characteristics. The instrument would
also prompt serious communal organizational introspection relative to how they’re attempting to
move forward, and if (and how) there is a need to redirect their efforts. My hope that an affordable,
online, broadly-marketed instrument would help with that endeavor seems to be supported to the
degree possible from the pilot test.
The evolution posited in the 21st Century Framework does indeed seem to be underway, though it is far from complete. The New Science Practices do seem to contribute to that evolution, providing the “how” to the outcome. The relationship between the two dimensions of Characteristics and Practices as constructed in the Assessment is strong enough warrant further data-gathering using this tool in order to enable a deeper analysis of the strength of the relationship.

The Assessment tool itself seems to be a cost-effective, easily-administered, and user-friendly method of gathering a robust set of evidence that an organization can use to determine how to move forward.

In taking this concept to the next stage, I recommend the following steps:

1. Refine the questionnaire, based on respondent commentary, as discussed in various sections above;
2. Add another open-ended comment field, with the purpose of each field clearly articulated;
3. Gather sufficient data from some number of whole organization populations, or at minimum, from a mix that accurately represents the proportions of an organization’s actual population;
4. Assess again the relationship of Characteristic scoring to Practices scoring and make conclusions about the issue addressed in the section above “The Issue of Not Knowing”.

My research sought to shed light on the following questions:

1) What evidence is there that the posited evolution is actually happening? Where are organizations currently, relative to both the 21st C Framework and the New Science Principles?
2) What is the relationship between an organization’s evolution across the 21st C framework and the degree to which an organization has adopted “New Science” organizational principles?
3) How well does the online Assessment developed reveal areas for improvement in individual organizations?

While this thesis project leaves some questions only partially answered and raises new questions, it answers many of the original questions and affirms the potential value of the tool proposed. Further development of an Assessment designed to help measure organizational evolution relative to the 21st Century Corporation Framework and the New Science principles certainly is warranted as a valuable service to organizations.
References


Appendix A -- IRB Application Form

Institutional Review Board (IRB)

Materials Related
To the Use of Human Participants
In Research

SCU Request Form
Confidentiality Check List
Sample Consent Form

ORLD 8901 & 8902
Fall 2010
SCU REQUEST FOR THE APPROVAL
FOR THE USE OF HUMAN SUBJECTS IN RESEARCH
2010-2011 APPLICATION FORM

APPLICATION DATA

Date of application: 12/04/2010

Indicate type of review: ___Exempt ____Expedited ____Full

For all exempt reviews, indicate which of the following categories apply:

_____ 1. Normal Educational Practices
_____ 2. Educational Tests
_____ 3. Survey/Interview Procedures
_____ 4. Observation
_____ 5. Secondary Use of Data
_____ 6. Evaluation of Federal Research/Programs
_____ 7. Taste Tests

APPLICANT DATA

Investigator name(s): Christine Capra
(Please list all co-investigators)

Project Title: Blind Spots in Corporate Evolution: The 21st Century Organizational Assessment

Advisor: Jacqueline Byrd

Program: MAOL

Dates of Project: 1/1/2011-1/1/2012

Has this research been reviewed by another IRB? ____Yes ___X__No
(If yes, please provide a copy of the letter of approval, or indicate the status of your application)

Will this research be reviewed by another IRB? ____Yes ___X__No
(If yes, please indicate your plans for review)
ABSTRACT

In a paragraph or two, carefully describe your research project. Include your research question and, step by step, detail the procedures you will follow. Also, if it applies to your project, you must attach a copy of your thesis proposal, your protocol, your questionnaire, etc.

My research question asks, how effectively can an online assessment help small and mid-sized businesses uncover the changes they may need to make in order to remain strong in the 21st Century? This question breaks down into three parts:
1) What is the relationship between an organization’s evolution across the 21st Century framework and the degree to which an organization has adopted “New Science” organizational principles;
2) How effectively would a standardized assessment, designed to measure adoption of the “New Science” principles, taken by most of the population of an organization, help organizational leaders understand where they are in their evolution to a 21st Century Corporation, and;
3) How would the process itself – taking the time to think about the organizational principles in relation to their organization – impact the thinking of those who take the assessment?

To answer my research question, my work will entail piloting the proposed assessment using the following methodology:

- Develop assessment questions that weave together the 21st Century Corporation characteristics and the New Science approaches and create an online questionnaire.
- Recruit a “key individual” from each of three small, three mid-sized, and three large corporations, across a range of industries. “Key individuals” would be people within the organization who are in leadership roles, in a position to have a good sense of how things operate at the top. The assessment will ultimately be intended for a very broad business audience, so as long as we have a range of sizes and industries, as well as a range of positions of the individuals, the main criteria will be their willingness to take part in the research.
- These nine key business individuals would be asked to complete a special “pilot version” of the assessment that includes the following:
  - The full assessment consisting twelve sections, one per each of the 12 21st Century Corporation characteristics.
  - Each assessment section will contain:
    5. A definition of the dual 21C Characteristic terms – this will help clarify what we’re trying to measure and help ensure understanding.
    6. One simple scale question about the characteristic in question for that section (i.e. “Q1. on a scale of 1-10, where is your organization if 1 = A Pyramid and 10 = A Web or Network). This will provide a baseline for understanding where the individuals intuitively feel their organizations are in their evolution. It will also serve as one means of triangulating response data, during the pilot.
    7. Four to seven “standard assessment questions”, taken from the New Science principles as they apply to the 21C framework characteristic in question. These are the questions that will be tested for their relevance as the core of the final post-pilot assessment.
    8. Two to four open-ended follow-up “meta-questions” about the questions above in each section. (i.e. which of the questions in this section made sense to you? Which seemed out of place and why? What factors would you add in order to better reveal where an organization is relative to the characteristics defined above? What does this section make you think about relative to your organization?) These meta-questions will be used to evaluate and improve usability of the assessment, and to better understand the correlation (or lack thereof) between the assessment responses with the original 12 simple questions.
If possible, I will also have one business (most or all employees) take the same pilot assessment.

After gathering the data from assessments I will analyze:

- Relationships between the simple-framework questions and the standard assessment questions for each respondent, to ascertain whether the “New Science” questions adequately address the 21stC framework, and to see if the “New Science” questions alter participants perceptions of their organizations as they take the assessment.

- Relationships between standard assessment question responses and meta-question responses. Again, this will help understand the effectiveness of the “New Science” questions, their applicability to the 21C framework, and the impact the questions have on perceptions.

- The data for the whole business (if there is one). Consistency or lack thereof among the responses of all the individuals within the same company should give me clues as to the way individuals perceive the questions and how effective the questions are at understanding the company’s evolutionary stage.

I will ask for assistance in recruiting participants for my project from among the MAOL instructors who have organizational consulting clients. I will recruit, via email, from the MAOL student body. And I will contact some business leaders I know from previous jobs.

Informing my methodology will be the following texts:

- Organizational Assessment: Perspectives on the measurement of organizational behavior and the quality of work life, Lawler (1980).
- Handbook of Workplace Assessment, Pfeiffer (2010)

By using this triple level approach to the assessment questions in the pilot, I hope to learn how effectively the principles of the New Science correlate to and predict evolution along the 21st Century framework; how usable the assessment is in its current form, as well as ways to improve it; and begin to get a sense of how useful the assessment may be in helping for-profit organizations shed light on their own evolutionary blind spots and stuck-points.

SUBJECTS AND RECRUITMENT

Age Range of Subjects:
Number: TBD Male  TBD Female  9-40 Total

Describe how you will recruit your subjects: be specific. Attach a copy of any advertisement, flyer, letter, or statement that you will use to recruit subjects.

I will ask for assistance in recruiting participants for my project from among the MAOL instructors who have organizational consulting clients. I will recruit, via email, from the MAOL student & alumni body. And I will contact some business leaders I know from previous jobs.

Email text for clients of organizational consultants:

As (consultant’s name) discussed with you recently on the phone, you have been invited to participate in the research project being conducted by the St. Catherine University Master of Organizational Leadership (MAOL) student Christine Capra. This research will examine how organizations are adapting to organizational paradigm shifts of the 21st century and how effectively that paradigm shift can be measured within individual organizations.
The objective is to be able to provide organizations with an assessment opportunity that will reflect organizational adoption of principles thought crucial to organizational survival in the 21st century. Your participation would involve participating in a pilot of the proposed assessment, and responding to some meta-questions about the assessment. The entire process will be conducted online and should take from 30 – 45 minutes. To ensure complete confidentiality, you will have your own login and password to access the assessment. You will be asked to provide contact information, in case the researcher has follow-up questions for you, but once the data has been analyzed, your name and contact information will not be associated with your responses in any way.

Your participation is very valuable to this important research. Upon completion of the project, you will be provided with a one page summary of the research findings, as well as a summary of your own responses for comparison to the rest of the research participants.

To access the assessment, click here. Your contact information will be requested, and then you will be given access to your questionnaire.

Thank you,

Christine Capra
(Consultant's name, title & company)

MAOL student & alumni body email text:

St. Catherine University MAOL student Christine Capra invites you to participate in her thesis research project. This research will examine how organizations are adapting to organizational paradigm shifts of the 21st century and how effectively that paradigm shift can be measured within individual organizations.

The objective is to be able to provide organizations with an assessment opportunity that will reflect organizational adoption of principles thought crucial to organizational survival in the 21st century. Your participation would involve participating in a pilot of the proposed assessment, and responding to some meta-questions about the assessment. The entire process will be conducted online and should take from 30 – 45 minutes. To ensure complete confidentiality, you will have your own login and password to access the assessment. You will be asked to provide contact information, in case the researcher has follow-up questions for you, but once the data has been analyzed, your name and contact information will not be associated with your responses in any way.

Your participation is very valuable to this important research. Upon completion of the project, you will be provided with a one page summary of the research findings, as well as a summary of your own responses for comparison to the rest of the research participants.

To access the assessment, click here. Your contact information will be requested, and then you will be given access to your questionnaire.

Thank you,

Christine Capra

Will the subjects be offered inducements for participation? If yes, explain.

Each will receive a one page executive summary of the overall research findings, as well as a report of their own assessment scores.

Please clearly identify any special populations or classes of subjects that you will include and provide a rationale for using them.

None
RISKS AND BENEFITS OF PARTICIPATION

Check all that apply. Does the research involve:

___ Use of private records (medical or educational records)
__X_ Possible invasion of privacy of the subjects and/or their family
___ Manipulation of psychological or social variables
___ Probing for personal or sensitive information in surveys or interviews
___ Use of deception
___ Presentation of materials which subjects might consider offensive, threatening or degrading
___ Risk of physical injury to subjects
___ Other risks

If any of these are checked, describe the precautions taken to minimize the risks.
Participants will be informed that if they do not feel comfortable responding to any particular question, they may skip it.

List any anticipated direct benefits to your subjects. If none, state that here and in the consent form.
They may find ways to improve their organizations.

Justify the statement that the potential benefits of this research study outweigh any probable risks.
Risks are minimal, while there could be significant benefit to improving the functioning of the organization and empowering the individuals within the organization.

CONFIDENTIALITY OF DATA

How will you maintain confidentiality of the information obtained from your subjects?
Individual records will be shared with no-one except myself and my thesis advisor. Once any necessary follow-up questions are asked (in the case of confusing or ambiguous data), all personally identifying information will be removed from the data set and any publicly-shared documentation.

Where will the data be kept, how long will it be kept, and who will have access to it?
The data will be gathered via a secure internet platform. From there it will be saved to my personal laptop computer which I rarely take out of my home office and which is password protected. The response data will be kept indefinitely, but individual responses will be anonymously coded to protect individual identities.
Will data identifying subjects be made available to anyone other than you or your advisor? Who?
No - No-one

Will the data become a part of the medical or school record? If yes, explain.
No

INFORMED CONSENT

How will you gain consent? State what you will say to the subjects to explain your research. Attach consent form or text of oral statement. (Note: if you propose to work with children ages 7-18 and you are gaining consent from their parents, you must also develop and attach an age-appropriate assent form.)

Consent form follows at end of this document.

When will you obtain consent (that day?, several days before the project?, a week before?)?
The consent form will be included as the first page the assessment. Further access to the assessment will be provided once the consent field is checked off.

How will you assess that the subject understands what he/she has been asked to do?
There will be a check box indicating yes/no in the assessment. It will come after the consent section, the contact info input section, and the instructions. Further access will be restricted until the “I understand” box is checked off.

ASSURANCES AND SIGNATURES

The signatures below certify that:

- The information furnished concerning the procedures to be taken for the protection of human subjects is correct.
- The investigator, to the best of his/her knowledge, is complying with Federal regulations governing human subjects in research.
- The investigator will seek and obtain prior written approval from the Committee for any substantive modification in the proposal, including, but not limited to changes in cooperating investigators, procedures and subject population.
- The investigator will promptly report in writing to the Committee any unexpected or otherwise significant adverse events that occur in the course of the study.
- The investigator will promptly report in writing to the Committee and to the subjects any significant findings which develop during
the course of the study which may affect the risks and benefits to the subjects who participate in the study.

- The research will not be initiated until the Committee provides written approval.
- The term of approval will be for one year. To extend the study beyond that term, a new application must be submitted.
- The research, once approved, is subject to continuing review and approval by the Committee.
- The researcher will comply with all requests from the IRB to report on the status of the study and will maintain records of the research according to IRB guidelines.
- If these conditions are not met, approval of this research may be suspended.

Note: Approval of your final proposal indicates that your advisor and instructor have signed off on the IRB at the departmental level. Therefore you do not need the following signatures on this form unless you need to send it on to the university review board.

As primary investigator, I understand and will follow the above conditions.

___________________________________________________________
Signature of Investigator     Date

As Advisor or Sponsor, I assume responsibility for ensuring that the investigator complies with University and federal regulations regarding the use of Human Subjects in research.

___________________________________________________________
Signature of Advisor or Sponsor    Date

(Student investigators must have an advisor. Staff and non-SCU applicants must have a departmental sponsor)

As Program Director, I acknowledge that this research is in keeping with the standards set by our program and assure that the investigator has met all program requirements for review and approval of this research.

___________________________________________________________
Signature of Program Director     Date
IRB Consent Form Checklist

Excerpted from Federal Policy for the Protection of Human Subjects as published in the Federal Register Tuesday, June 18, 1991 and including 45 CFR 46.116:

No investigator may involve a human being as a subject in research covered by these criteria unless the investigator has obtained the legally effective informed consent of the subject or the subject's legally authorized representative. An investigator shall seek such consent only under circumstances that provide the prospective subject or the representative sufficient opportunity to consider whether or not to participate and that minimize the possibility of coercion or undue influence. The information that the researcher prepares in a consent form must use language that is understandable to the subject or the representative. No informed consent may include any language which indicates that the subject has waived or implies waiver of any legal rights, releases or appears to release the investigator, the sponsor or the institution or its agents from liability for negligence.

Follow the format in the sample consent form and use the following checklist to ensure that all elements of informed consent are included:

___ A statement that the study involves research.
___ For student research, a statement that the study is being undertaken by students under the supervision of a faculty member. The name of the department should be indicated as well as the name of the faculty member.
___ An explanation of the purposes of the research.
___ The duration of the subject's participation.
___ The number of subjects involved in the research.
___ A step by step description of the procedures to be used.
___ A description of the expected or foreseeable risks or discomforts to the subject.
___ A description of any benefits to the subject or to others which may reasonably be expected from the research.
___ A disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the subject.
___ A description of the measures that the researcher will follow to assure confidentiality of records that identify each subject by name and/or identification number.
___ An explanation of how to contact the researcher and the sponsor for questions about the study.
___ If physical contact is involved, an explanation of whom to contact regarding the research, the subject's rights, and research-related injury.
___ A statement that the subject is free to choose to participate in the study, and that by refusing to participate, the subject will not be penalized or lose any benefits to which the subject may otherwise be entitled.
___ A statement that clearly indicates that the subject may discontinue participation at any time, even after the consent form is signed, without any loss of benefits.
___ A statement indicating that the subject will be offered a copy of the form to keep.
___ A line for the signature of the subject followed by the date (do not make an "x" to show where to sign)
___ A line for the signature of the investigator followed by the date of the signing
Information and Consent Form

Blind Spots in Corporate Evolution:  
The 21st Century Organizational Assessment

Introduction:
You are invited to participate in a research study investigating the evolution of businesses from 20th Century business paradigms to 21st Century paradigms.

This study is being conducted by Christine Capra, a graduate student at St. Catherine University under the supervision of Jacqueline Byrd, a faculty member in the Master of Arts in Organizational Leadership Program. You were selected as a possible participant in this research because of your role as a business leader. Please read this form and ask questions before you agree to be in the study.

Background Information:
The purpose of this study is to determine how well a standardized online assessment can help small and mid-sized businesses uncover the changes they may need to make in order to remain strong in the 21st Century. Approximately 9-40 people are expected to participate in this research.

Procedures:
If you decide to participate, you will be asked to complete an online pilot version of the questionnaire of approximately ½ hour, and be available for brief follow-up questions via telephone in the case of confusing or ambiguous responses.

Risks and Benefits of being in the study:
The study has minimal risks, however you may encounter questions about your organization that you find uncomfortable. The benefits to participation are that you may discover important ways of helping to increase your organization’s effectiveness and strength.

Compensation:
If you participate, you will receive a one page executive summary of the overall research findings, as well as a summary of the assessment scores for your own organization.

Confidentiality:
Any information obtained in connection with this research study that can be identified with you will be disclosed only with your permission; your results will be kept confidential. In any written reports or publications, no one will be identified or identifiable and only group data will be presented.
I will keep the electronic research results in my personal password-protected laptop computer, and paper results will be stored in my personal home office. My advisor will have access to the records while I work on this project. I will finish analyzing the data by 1/1/2012. I will then destroy all original reports and identifying information that can be linked back to you.

**Voluntary nature of the study:**
Participation in this research study is voluntary. Your decision whether or not to participate will not affect your future relations with St. Catherine University in any way. If you decide to participate, you are free to stop at any time without affecting these relationships.

**Contacts and questions:**
If you have any questions, please feel free to contact me, Christine Capra at 612-735-5614. You may ask questions now, or if you have any additional questions later, the faculty advisor, Jacqueline Byrd, 763-476-5815, will be happy to answer them. If you have other questions or concerns regarding the study and would like to talk to someone other than the researcher(s), you may also contact the faculty advisor.

You may keep a copy of this form for your records.

**Statement of Consent:**
You are making a decision whether or not to participate.

☐ I consent to participate in the study.

Checking off the box above, and filling in the date and your contact information on the following page indicate that you have read this information and your questions have been answered. Even after signing this form, please know that you may withdraw from the study at any time.
Appendix B - - Assessment Questionnaire

Information and Consent Form

Corporate Evolution
A 21st Century Organizational Assessment

Introduction:
You are invited to participate in a research study investigating the evolution of businesses from 20th Century business paradigms to 21st Century paradigms. This study is being conducted by Christine Capra, a graduate student at St. Catherine University under the supervision of Jacqueline Byrd, Ph.D., a faculty member in the Master of Arts in Organizational Leadership Program. You were selected as a possible participant in this research because of your role as a business leader. Please read this form and ask questions before you agree to be in the study.

Background Information:
The purpose of this study is to determine how well a standardized online assessment can help small and mid-sized businesses uncover the changes they may need to make in order to remain strong in the 21st Century. Approximately 9-40 people are expected to participate in this research.

Procedures:
If you decide to participate, you will be asked to complete an online pilot version of the questionnaire of approximately ½ hour, and be available for brief follow-up questions via telephone in the case of confusing or ambiguous responses.

Risks and Benefits of being in the study:
The study has minimal risks, however you may encounter questions about your organization that you find uncomfortable. The benefits to participation are that you may discover important ways of helping to increase your organization’s effectiveness and strength.

Compensation:
If you participate, you will receive a one page executive summary of the overall research findings, as well as a summary of the assessment scores for your own organization.

Confidentiality:
Any information obtained in connection with this research study that can be identified with you will be disclosed only with your permission; your results will be kept confidential. In any written reports or publications, no one will be identified or identifiable and only group data will be presented. I will keep the electronic research results in my personal password-protected laptop computer, and paper results will be stored in my personal home office. My advisor will not have access to your specific responses, only I will see them. I will finish analyzing the data by 1/1/2012. I will then destroy all original reports and identifying information that can be linked back to you.

Voluntary nature of the study:
Participation in this research study is voluntary. Your decision whether or not to participate will not affect your future relations with St. Catherine University in any way. If you decide to participate, you are free to stop at any time without affecting these relationships.

Contacts and questions:
If you have any questions, please feel free to contact me, Christine Capra at 612-735-5614. You may ask questions now, or if you have any additional questions later, the faculty advisor, Dr. Jacqueline Byrd, 763-476-5815, will be happy to answer them. If you have other questions or concerns regarding the study and would like to talk to someone other than the researcher(s), you may also contact the faculty advisor. You may keep a copy of this form for your records.

Statement of Consent:
You are making a decision whether or not to participate.
□ I consent to participate in the study.
Checking off the box above, and filling in the date and your contact information following indicate that you have read this information and your questions have been answered. Even after signing this form, please know that you may withdraw from the study at any time.
Please answer the following questions from the perspective of your unit or function eg...where most of your time is spent (not from the perspective of the overall organization, unless at the senior executive level)

Response Options

1. Opposite of my experience of this organization  
   (Opposite of my experience)
2. Slightly like my experience of this organization  
   (Slightly my experience)
3. Somewhat like my experience of this organization  
   (Somewhat my experience)
4. Very much like my experience of this organization  
   (Very much my experience)
5. This is absolutely my experience of our organization  
   (Absolutely like us)

NA. This question does not apply in my situation  
   (Not Applicable-NA)

DN. This question does apply in our situation, but I do not know the answer  
   (Don't Know-DN)
1) **Organization** — **The pyramid** — **The Web or network**

- **Pyramid** – An organization with a broad base that supports a narrow top. Power, authority, planning, rewards and information are controlled at the top.

- **Network** – A non-hierarchical system of interconnected nodes (such as teams or individuals), where all nodes have access to the information and authority necessary to make decisions that impact their work within the network. Each node is responsible for its own contribution to the whole organization.

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

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<tr>
<th></th>
<th>Pyramid</th>
<th>Network</th>
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</table>

1. I have up-to-date access to all information that could impact my area of responsibility.
   
   1 2 3 4 5 NA DN

2. Decisions made include information and collaboration as necessary from the areas outside of my department that may be impacted by or may impact the outcomes.
   
   1 2 3 4 5 NA DN

3. I have many formal and informal relationships across the organization – with leaders and colleagues across divisions, functions, professional levels, styles and areas of expertise.
   
   1 2 3 4 5 NA DN

4. I do not need to take most problems I face to my boss. I get information, collaborate and problem-solve with whom-ever is closest to the issue, wherever they are in the organization.
   
   1 2 3 4 5 NA DN

---

- **What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?**
2) **Focus**  

- **Internal** – An organization that defines strategy, designs products/services and understands its industry based on existing internal experience and expertise. Does not routinely scan for external forces that may impact all aspects of the organization.

- **External** – An organization that routinely scans external forces when defining strategy, designing products/services and understanding its industry. Fosters strong relationships with stakeholder constituencies outside of the organization, constantly seeks out new information from them and seeks to understand its impact on them.

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On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

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<tr>
<td>Internal</td>
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<td>External</td>
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1. When making decisions, we attempt to involve and consider all of the stakeholders that could contribute or be impacted by the outcomes, including: shareholders, customers/clients, employees, contractors, vendors, local governments, local communities, national governments, the environment.

   1 2 3 4 5 NA DN

2. Our customers/clients are our partners in co-creating the products and services that most meet their needs, help us thrive, and benefit our stakeholders.

   1 2 3 4 5 NA DN

3. I play an important role in keeping an eye on the external environment, detecting early warning signs and looking out for trends early that could become opportunities.

   1 2 3 4 5 NA DN

4. We foster formal and informal relationships with others in our industry, others who serve the same market as we do, and those involved in policy, etc. impacting our industry and our market.

   1 2 3 4 5 NA DN

5. Our strategies and plans are constantly re-examined relative to the external environment (technological, economic, political, regulatory, demographics, marketing trends, etc.).

   1 2 3 4 5 NA DN

---

– What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?

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3) **Style**

- **Structured** – An organization with clearly-defined, well-established, stable structure and processes that are not changed frequently.
- **Flexible** – An organization designed to adapt based on experience, altering its structure and processes as necessary to improve functioning, and foster innovation and flexibility.

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

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<td><strong>Structured</strong></td>
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<td><strong>Flexible</strong></td>
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1. “Mistakes” are seen as an opportunity for discovery, not as a mark against people.
   
   | 1 | 2 | 3 | 4 | 5 | NA | DN |

2. We look at strategy definition and refinement as an ongoing process, responsive to a constant flow of new information from inside and outside of the organization.
   
   | 1 | 2 | 3 | 4 | 5 | NA | DN |

3. We accept that a certain degree of chaos and ambiguity are an inevitable part of organizational life.
   
   | 1 | 2 | 3 | 4 | 5 | NA | DN |

4. I am not afraid to take the risks necessary to innovate.
   
   | 1 | 2 | 3 | 4 | 5 | NA | DN |

5. Radical thinking is encouraged.
   
   | 1 | 2 | 3 | 4 | 5 | NA | DN |

— What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?
4) **Source of Strength** | **Stability** | **Change**

- **Stability** – An organization that relies on the tried and true. Seeks to establish certainty, control, familiarity, and reliability. It aims to reduce or eliminate ambiguity and chaos.

- **Change** – An organization that relies on its ability to deal creatively with chaos, is comfortable with ambiguity, knows how to react quickly to new information.

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

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1. We expect to change our structure, processes, deliverables, and plans frequently in order to thrive in this early period of the technology revolution.

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2. We intentionally encourage everyone to change roles, take on new challenges, and develop their strengths wherever possible.

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3. Understanding that organizational resilience depends upon diversity, we strive to cultivate diversity across a number of variables (i.e. race, gender, age, thinking styles, values, skill sets, religions, cultures, personality types, economic backgrounds, etc.).

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4. Decision making is not unduly slowed down by layers of bureaucracy.

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5. We understand that just because something has worked in the past, that doesn’t mean it will continue to do so in the future.

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What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?
5) **Structure**  

- **Self-Sufficiency** – The organization does not engage in strategic partnerships nor outsource many of its functions, preferring to manage needs internally. The internal culture is competitive.

- **Interdependencies** – The organization partners with others and outsources as much as possible, contributing its strengths to other entities, while they help to compensate for the things it does not excel in. The internal culture is cooperative. All success is a win for everyone.

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

<table>
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<tr>
<th>Self-Sufficiency</th>
<th>Interdependencies</th>
</tr>
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<td>1 2 3 4 5 NA DN</td>
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1. **We function with the awareness that our success is intimately connected to the health of the communities and environment of which we are simply one part.**

   1 2 3 4 5 NA DN

2. **By embracing our differences, we can freely contribute our unique strengths to one another and the organization, helping to ensure mutual success.**

   1 2 3 4 5 NA DN

3. **We make a conscious effort to counteract “group think”, because sameness (real or apparent) does not facilitate effective interdependencies.**

   1 2 3 4 5 NA DN

4. **We have the technology, skills and knowledge of one another to identify, engage and liberate the complex network of strengths and passions that exist in our people, regardless of where they fit into the organization.**

   1 2 3 4 5 NA DN

5. **A sense of personal connection to one another is important to our success.**

   1 2 3 4 5 NA DN

---

What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?
6) Resources  Atoms-physical assets  Bits-information

➢ **Atoms-Physical Assets** – Infrastructure, inventory, and cash are the organization’s most important resources.

➢ **Bits-Information** – The ability to manage, access, and extract knowledge, insight and wisdom from information is the organization’s most important resource. Motivated, innovative, intelligent and collaborative people are considered key to developing and maintaining this resource.

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

- Atoms-Physical Assets
- Bits-Information

1. **New ideas and creativity are actively and effectively supported and nourished in our organization.**
   - 1 2 3 4 5 NA DN

2. **We successfully attract, retain and inspire the “best and the brightest”.**
   - 1 2 3 4 5 NA DN

3. **We act out of the conviction that the most important asset we have is the courage, intelligence, commitment and creativity of our people.**
   - 1 2 3 4 5 NA DN

4. **We constantly examine our underlying assumptions in order to increase the reliability of our data, our wisdom and our collaborative skills.**
   - 1 2 3 4 5 NA DN

5. **We understand that growth in revenues can only be built by developing the people who can execute and sustain that growth.**
   - 1 2 3 4 5 NA DN

---

What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?
7) **Operations** — **Vertical integration** — **Virtual integration**

- **Vertical Integration** — Authority and control of process flows down and information flows up and down in narrow channels through the organization. Collaboration and information do not flow across departments, regions, etc.

- **Virtual Integration** — Authority, collaboration and information flow in all directions, most decision-making resides within the function or project, as opposed to up above.

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

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</table>

1. *We take advantage of new technologies that enable us to be increasingly interconnected across the organization, such as knowledge management wikis, internal social networks, open-access project management tools, web-conferencing and file sharing, etc.*

   1  2  3  4  5  NA  DN

2. *We routinely adopt new technologies meant to ensure that our workers are relieved of rote work that could be better accomplished with automation, so that they can focus more on innovation and creativity.*

   1  2  3  4  5  NA  DN

3. *We strive to remove structural and technical barriers to reduce friction in task flows.*

   1  2  3  4  5  NA  DN

4. *We have the technology and skills to manage a complex network of external relationships (suppliers, customers, regulators, etc.)*

   1  2  3  4  5  NA  DN

---

*What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?*
8) **Strategy**  |  **Top-Down**  |  **Bottom-Up**

- **Top-Down** – The organization defines strategy, designs products/services and understands its industry based on the experience and expertise of those at the top, without input from middle- or lower-level personnel.

- **Bottom-Up** – The organization seeks and acts upon input from all levels when defining strategy, designing products/services and understanding its industry.

---

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

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<td><strong>Bottom-Up</strong></td>
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1. **Our strategic planning process includes gathering input from everyone in the organization.**
   - 1 2 3 4 5 NA DN

2. **If I had important information that could impact our strategic thinking, that information would be taken into account.**
   - 1 2 3 4 5 NA DN

3. **We are all expected and taught to think strategically about our work and the future of our organization.**
   - 1 2 3 4 5 NA DN

4. **Decisions that impact my area of responsibility, where my input should be considered, are never handed down from above without my involvement in the decision-making process.**
   - 1 2 3 4 5 NA DN

---

What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?
9) **Leadership**

- **Dogmatic** – Command and control leadership. Those at the top know best. Compliance is expected.
- **Inspirational** – Leadership designed to engage the intelligence and creativity in each of its members. Relationships matter. Empowerment and initiative are expected.

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

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<tr>
<th></th>
<th>Dogmatic</th>
<th>Inspirational</th>
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</table>

1. *I am proud of this organization and what it stands for.*
   
   1 2 3 4 5 NA DN

2. *Our organization’s mission, objectives & values are congruent, they support one another, and we live by them daily.*
   
   1 2 3 4 5 NA DN

3. *I feel inspired by our leadership.*
   
   1 2 3 4 5 NA DN

4. *There are leaders in this organization whom I consider good role models.*
   
   1 2 3 4 5 NA DN

5. *Our leaders surround themselves with people who think very differently from themselves.*
   
   1 2 3 4 5 NA DN

---

What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?
10) **Workers**  

- **Employees**– An “employee” puts in his/her time, and meets the job description in exchange for income.

- **Employees and Free Agents** – A “free agent” is in business for him- or her-self. S/he decides which projects to take on, and how to complete them. Free agents have greater ownership of outcomes, and expect more specific rewards for their efforts, in addition to income.

---

On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:

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<td>Employees</td>
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<td>Employees and Free Agents</td>
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</table>

1. *I feel like a business partner and collaborator with a strong sense of ownership, whose input is valued.*

   1 2 3 4 5 NA DN

2. *We do not retain people who aren’t invested in the organization’s future.*

   1 2 3 4 5 NA DN

3. *I have a lot of fun or sense of personal fulfillment at work, even when working hard.*

   1 2 3 4 5 NA DN

4. *I choose projects that interest me and make crucial decisions that impact my outcomes.*

   1 2 3 4 5 NA DN

5. *Intrinsic rewards – such as challenge, being valued, personal relationships, opportunities for growth and development, sense of community, ability to make an impact, belief in our mission – play a greater role in my staying with this company than does how much I am paid.*

   1 2 3 4 5 NA DN

---

*What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?*
11) **Job expectations**  

- **Security** – People expect loyalty from the organization, exchanging their efforts for the guarantee of an income far into the future.

- **Personal Growth** – People expect their ability to make an income into the future to come from the skills, qualifications and experience they develop in the workplace, making them increasingly attractive hires for other organizations. They do not expect to stay with one company forever, and their length of stay is dependent upon how quickly and effectively they are growing professionally.

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<tr>
<th>Security</th>
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<th>3</th>
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<th>DN</th>
<th>Personal Growth</th>
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<td>1. My job offers ample challenges to keep me engaged, and opportunities for professional development.</td>
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<td>2. The organization offers training and support in learning new ways of managing conflict or dissent and embracing differences.</td>
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<td>3. My strengths are called upon, even when it means taking me in a new direction.</td>
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<td>4. I frequently contribute ideas that impact our success.</td>
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<td>NA</td>
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- What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?
12) **Motivation**

- **To Compete** – Success is recognized by benchmarking against the competition. Business metaphors come from sports and war.

- **To Build** – Success is measured by the quality and effectiveness with which the organizationsecures its own sustainability. Business metaphors come from architecture/engineering, systems thinking, and agriculture/ecology.

---

**On a scale of 1-10, where would you estimate your organization is relative to the two characteristics:**

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<td><strong>To Compete</strong></td>
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1. **We recognize that sometimes the best way of staying competitive is by finding and developing collaborative relationships wherever possible.**

   1 2 3 4 5 NA DN

2. **Our competitors can sometimes become our collaborators when it fosters a win/win/win for us, them, customers/clients and other stakeholders.**

   1 2 3 4 5 NA DN

3. **We are developing and nurturing resilient internal and external networks that will sustain us as the world continues to experience rapid change and increased complexity.**

   1 2 3 4 5 NA DN

4. **We strive to develop a team of brilliant, high-performance collaborators & implementers.**

   1 2 3 4 5 NA DN

5. **We develop business literacy at all levels, ensuring that everyone has the knowledge to make good business decisions.**

   1 2 3 4 5 NA DN

---

What practices are missing from the questions above, which would help indicate where your organization stands relative to the two characteristics examined on this page?
What suggestions do you have for improving this assessment?

Thank you for participating in this research project.
Once the research has been concluded, you will receive a summary of the findings.
## Appendix C - Assessment Responses

<table>
<thead>
<tr>
<th>ID#</th>
<th>1A: Pyramid Network</th>
<th>1B: Myriad relationships</th>
<th>1C: Collaboration beyond Dept</th>
<th>1D: Don't take problems to boss</th>
<th>2A: Internal Focus</th>
<th>2C: I help scan the external environment</th>
<th>2D: Strategies monitored relative to environment</th>
<th>2E: Relationships with influencers, market policymakers</th>
<th>3A: Mistakes are an opportunity, not a mark against people</th>
<th>3B: Strategy is an ongoing process, responsive to new information</th>
<th>3C: Chaos and ambiguity are not to be feared</th>
<th>3D: I am not afraid to take risks</th>
<th>3E: Radical thinking is encouraged</th>
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<td>4A. Responsive change in order to thrive</td>
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<td>4B. Encourage change of roles/new challenges/developing strengths</td>
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<td>4C. Org resilience depends upon diversity, strive to cultivate</td>
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<td>4D. Decisions not slowed down by bureaucracy</td>
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<td>4E. Working in the past, doesn’t mean it will continue to</td>
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<td>5: Self-Sufficiency/ Interdependencies</td>
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<td>5A. Success connected to health of communities and environment</td>
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<td>5B. Embrace differences/ contribute unique strengths to ensure mutual success</td>
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<td>5C. Discourage “group think”, autonomy don’t make effective interdependencies</td>
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<td>5D. Have tools to ID &amp; utilize everyone’s strengths</td>
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<td>5E. Personal connection is important</td>
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<td>6: Atoms-Physical Assets/ Bits-Information</td>
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<td>6A. New ideas/creativity actively nourished</td>
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<td>6B. Attract, retain and inspire the “best and the brightest”</td>
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<td>6C. Our most valuable asset: people’s courage, intelligence, commitment/creativity</td>
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<td>6D. Question assumptions to increase data reliability/ wisdom/ collaborative skills</td>
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<td>6E. Revenue growth built by people who can execute/ sustain it</td>
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<td>ID#</td>
<td>7. Virtual Integration - Opta</td>
<td>7A. Use tech for interconnectivity (tools, web, cloud)</td>
<td>7B. Use tech - reduce role work increase innovativeness</td>
<td>7C. Strive to remove structural and cultural barriers to reduce friction</td>
<td>7D. Technology/skills to manage network of external relationships</td>
<td>8. Top/Bottom-Strategy</td>
<td>8A. Strategic planning includes everyone’s input</td>
<td>8B. My information is taken into account</td>
<td>8C. All taught to think strategically</td>
<td>8D. Decisions impacting me get my input</td>
<td>9. Dogmatic/Inspirational - Leadership</td>
<td>9A. Pride in organization and mission</td>
<td>9B. Integrity of mission, objectives &amp; values in action</td>
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Assessing Blind Spots in Corporate Evolution - Appendix C 3
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<tr>
<th>ID#</th>
<th>Employees / EE’s &amp; Free Agents - Workers</th>
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<tbody>
<tr>
<td>10A</td>
<td>I feel like a partner / collaborator / owner</td>
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<td>10B</td>
<td>Don’t maintain uninvited people</td>
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<tr>
<td>10C</td>
<td>Fun / personal fulfillment at work</td>
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<tr>
<td>10D</td>
<td>I feel like a partner / collaborator / owner</td>
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<tr>
<td>10E</td>
<td>I'm here for the intrinsic rewards</td>
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<td>11</td>
<td>Security / Personal Growth - Job Expectations</td>
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<tr>
<td>11A</td>
<td>Ample challenges / opportunities for development</td>
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<tr>
<td>11B</td>
<td>Training in managing differences</td>
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<tr>
<td>11C</td>
<td>Use my strengths, even if it's a new direction</td>
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<tr>
<td>11D</td>
<td>I contribute ideas that impact our success</td>
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<td>12</td>
<td>Compete / Build - Motivation</td>
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<tr>
<td>12A</td>
<td>We compete by developing relationships</td>
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<tr>
<td>12B</td>
<td>Collaborate with competitors when it's a win-win</td>
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<tr>
<td>12C</td>
<td>Developing resilient networks</td>
</tr>
<tr>
<td>12D</td>
<td>Developing collaborative relationships</td>
</tr>
<tr>
<td>12E</td>
<td>Develop business literacy at all levels</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ID#</th>
<th>Employees / EE’s &amp; Free Agents - Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10A</td>
<td>I feel like a partner / collaborator / owner</td>
</tr>
<tr>
<td>10B</td>
<td>Don’t maintain uninvited people</td>
</tr>
<tr>
<td>10C</td>
<td>Fun / personal fulfillment at work</td>
</tr>
<tr>
<td>10D</td>
<td>I feel like a partner / collaborator / owner</td>
</tr>
<tr>
<td>10E</td>
<td>I'm here for the intrinsic rewards</td>
</tr>
<tr>
<td>11</td>
<td>Security / Personal Growth - Job Expectations</td>
</tr>
<tr>
<td>11A</td>
<td>Ample challenges / opportunities for development</td>
</tr>
<tr>
<td>11B</td>
<td>Training in managing differences</td>
</tr>
<tr>
<td>11C</td>
<td>Use my strengths, even if it's a new direction</td>
</tr>
<tr>
<td>11D</td>
<td>I contribute ideas that impact our success</td>
</tr>
<tr>
<td>12</td>
<td>Compete / Build - Motivation</td>
</tr>
<tr>
<td>12A</td>
<td>We compete by developing relationships</td>
</tr>
<tr>
<td>12B</td>
<td>Collaborate with competitors when it's a win-win</td>
</tr>
<tr>
<td>12C</td>
<td>Developing resilient networks</td>
</tr>
<tr>
<td>12D</td>
<td>Developing collaborative relationships</td>
</tr>
<tr>
<td>12E</td>
<td>Develop business literacy at all levels</td>
</tr>
</tbody>
</table>
Appendix D - Charts

Displayed in order from lowest average scores to highest

Response Set #2 Relative to Average

Response Set #13 Relative to Average
Respondent #9 selected “NA” for all practices in Characteristic 2, thus there is a break in the line.
## Appendix E - Assessment Comments

### Comments – Sorted by Characteristic

<table>
<thead>
<tr>
<th>ID#</th>
<th>1: Comments - Organization: Pyramid/Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Existence of an overall corporate plan/mission that is shared with the organization. Clear delineation of management/board/ownership responsibilities and a consistent governance model.</td>
</tr>
<tr>
<td>4</td>
<td>We are still feeling the remnants of the previous leaders' practices for this family owned company. That generation were 'command and control' leaders. There is also a curious fragmentation between functional groups between locations. For example, purchasing staff don't collaborate across the organization—they only focus on their location's needs.</td>
</tr>
<tr>
<td>5</td>
<td>A key initiative in my organization is to establish clear accountabilities and improve communication across departments. Most recently focusing on how to escalate issues in a constructive, collaborative manner through effective communications.</td>
</tr>
<tr>
<td>7</td>
<td>You can have a pyramid and still a highly matrix organization within it.</td>
</tr>
<tr>
<td>9</td>
<td>Streamlined processes at the plant. We are all busy and have overloaded schedules. So it is easy to try and quickly address an issue to move on to the next without taking the time to incorporate all of the different viewpoints or areas that could and/or should have input. We are also part of a corporation, that makes things a little more complex. We do not always know at the plant level the projects that are upcoming until they are released to us. This is another area that we are working on to improve as well.</td>
</tr>
<tr>
<td>10</td>
<td>None. We intentionally have a very collaborative organization.</td>
</tr>
<tr>
<td>12</td>
<td>None that I can think of</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ID#</th>
<th>2: Comments – Focus: Internal/External</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Routine and open exposure to industry trends and customer needs. Objective self assessment of strengths/weaknesses/opportunities. Third party review of practices/procedures. Willingness to embrace change and adopt best practices</td>
</tr>
<tr>
<td>4</td>
<td>There is no formal strategic planning process or a customer feedback mechanism in place.</td>
</tr>
<tr>
<td>5</td>
<td>This company has historically been internally focused. This is an area that we need to strengthen and improve on in the future. We need to be more active in our national association and increase our knowledge and awareness of our competitors. We have had a turnover of the entire senior management team within the last two years and are in a rebuilding process.</td>
</tr>
<tr>
<td>9</td>
<td>We are not involved with the above situations at the plant level. Our corporate office would move involved.</td>
</tr>
</tbody>
</table>
There are some stakeholder groups that we do not consult when we're putting together our strategies, but who are important to our success. We have informal contact with them, but not formal process of consultation.

Nothing I can think of

ID# 3: Comments - Style: Structured/Flexible

Acceptance of non-conventional methods. Willingness to change. Receptivity to suggestions and input from others regardless of position or status in the company.

We are not making as much progress as we could with regard to improving business processes that are full of waste and open to mistakes.

We were a static small business that hadn't grown much in the last several years. There is significant opportunity for growth but the organization was not ready for the growth. In the last couple years we have been working on adapting to change and discovering that we can be successful in a change environment. There is a lot of learning going on within the organization.

We are a very conservative company. We are flexible with resources and generating ideas however we also have very formal documentation in order to keep our processes in control for quality and government requirements. We are continuously striving for improvement through lean manufacturing and this allows our employees to bring new ideas forward.

Employees understand that change is a way of life at our company; nevertheless, there is still a process we must go through to initiate change, and acceptance by employees isn't automatic. However, that transition takes less time than it did 5 or 10 years ago. We also encourage risk with a business improvement and innovation program that rewards employees for their ideas. One employee idea was turned into a $280 million addition to one of our power plants that improved efficiency and reduced emissions significantly. This is our most visible example of putting an employee's idea into action thus far.

Refinement or change in practices can be implemented at any level of the organization.

ID# 4: Comments – Source of Strength: Stability/Change

Absence of a strategic structure/mission to know what the company stands for---why do we exist and who do we really serve. There is only an implied mission...nothing explicit for associates to identify with and believe in. We have no leadership in human resources which is a concern.

The negative risk of failure still overshadows the potential for breakthrough ideas. They do not analyze their past failures to turn them into 'constructive failures' for use in future decision making. They prefer to not mention past mistakes--very unfortunate in my opinion.

We have been improving our diversity relative to gender but that is all at this point. This is an area that we can improve. We are fortunate to have little bureaucracy and plan to keep it that way. It makes us more nimble and responsive when opportunities come along.

Our action plans definitely are flexible to meet challenges that occur. Our structure and deliverables are very stable. Our goals- customer service, delivery, quality, safety and
customer value does not waiver. How we achieve those through plans are variable. I think the top level strategy and goals should not be a moving target, it creates uncertainty and instability within a company. That flexibility at the higher level strategies could also jeopardize longer term goals for the sake of short term issues.

10 We're an electric utility, and we don't like a lot of "chaos" because that could mean our electrical system isn't operating reliably. When the economic downturn began in late 2008, it took about 14 months for our company to be able to slow its trajectory, shed costs/programs, and head in a different direction. Part of the reason for that was the resistance people had to believing things wouldn't go back to "normal" in the short-term. We're there now.

As for diversity, we just formed a Diversity Council with volunteer employees who are eager to support and exploit diversity. I have great confidence in its success.

11 Our organization shares information freely with all levels thus creating an environment where employees are aware that we are dealing with the chaos and involve many in the decision process. Interestingly enough I find some employees would prefer not to know all the details because it is information overload, other employees thrive on knowing the details.

**ID# 5: Comments – Structure: Self-Sufficiency/Interdependencies**

2 Organizational identity. Social interaction among affiliates. Absence of team building

4 We do not engage outside organizations other than vendors and customers. I do belong to a professional continuous improvement group. The COO has been very active in a housing based charity for a number of years.

5 In our organization there are a lot of friendships outside work and within the office. This has positives and negatives. It a non-political environment but on the other hand people are reluctant to hold each other accountable which I attribute to not wanting to harm friendships. We are making a concerted effort to train and educate employees that you can have candid discussions and still maintain personal friendships.

9 We are made up of a global network of plants. We are embarking on a large project to standardize processes throughout the globe. One piece we struggle with is how to leverage the capabilities and capacity at other plants. It is a large undertaking. The current status today is that we operate rather autonomously.

10 We don't have the practice of "technology, skills and knowledge of one another to identify, engage, etc." What technology would you use to do this?

11 Our pay structure is very socialistic. Each job has a base pay based on skill level and experience. 401K and bonuses are all paid out equally to all level of employees as a percentage of base pay. This has promoted a culture of teamwork and collaborations to perform for our clients.

**ID# 6: Comments – Operations: Vertical/Virtual Integration**

4 They recently laid off the HR Director and have no plans to replace that person. We do not have a Talent Management strategy and have relied on the generosity of the employees to accept no pay increases for four years. I am afraid that when the market turns, some of our best and brightest will leave the company.
This company has not historically invested in its people. In the last 18 months, we have made a concerted effort to train and educate our staff and managers to ensure they are equipped and prepared to grow with the organization. Because we only recently started this initiative, I think we have a ways to go.

Again we are part of a corporation. At the plant level, we very much believe all of the above to be true and try to promote that thinking. We are definitely limited by the guidelines of the corporation. The corporation is highly driven by shareholder value. We struggle with the power and value of developing resources and retaining them. We are just starting to see the impact of this mindset with good people leaving the company.

Because we’re a regulated industry with a defined service territory, our growth is dependent on economic development in the communities we serve, more than the development of any individuals in the organization. That said, the best and brightest individuals here are the ones who figure out how to best optimize our assets even when [electrical] growth is stagnant.

Objective self assessment and exposure to industry best practices.

We have a number of productivity tools available to employees, however, they choose to not use them fully. We have recently implemented a sales analytics tool that opens up a whole new world with regard to understanding our customers and our sales staff.

This is critical to our growth and future success. We transitioned to a new software in 2008 that nearly crippled the company because it was so poorly executed. The current solutions don't make work easier for employees or clients. Right now it puts us at a competitive disadvantage.

At the plant, we manage a lot of the above manually through spreadsheets and graphs. Since we are a very conservative corporate we receive very little in capital spend for upgrading equipment or installing automation.

We’re organized by functional divisions that can be somewhat soloed if we’re not careful. Ten years ago, our employee survey showed that not enough information was flowing between divisions, so we’ve made a concerted effort to improve that through cross-functional teams, joint leadership meetings and other collaborations. We've attempted to use technology/social media to connect employees (e.g., Yammer) but it hasn't been successful. We do have a robust intranet site, but it took several years to do that. About 1/3 of our employees work in power plants and don't have access to a computer at work on a daily basis, so using social media at work also excludes employees.

Better understanding and respect for hierarchy and the role of managers and supervisors. Shared decision making techniques.

We do not have a formal strategy statement nor do we do strategic planning. We don't even have joint budget planning discussions--very fragmented and top down.

We need to involve more of the team in the strategy of the organization. This is an area of improvement for the future.
9 At the plant level - items that we can control - we use an integrated approach to determine strategy. From the corporation side, we receive the strategy with little input. At times the plant and corporate strategies are different.

10 We have a very inclusive strategic planning process, especially with employees. Not only does all leadership have an opportunity for input on the strategic imperatives, we have a process called Connect the Dots, where a team of 10 hand-picked employees learn about the draft strategies from the CEO, then interview 10 other employees in the organization to see if we have the capabilities, resources, and desire to pursue the strategy. All this information is then shared in a day-long session with senior executives. We have never NOT changed our draft strategies because of the feedback we received. This also has done wonders for line-of-sight of employees, an area that our employee survey once showed was weak for us. It’s now one of our strongest areas.

ID# 9: Comments – Leadership: Dogmatic/Inspirational

2 Role of management and leadership. We have abundant management throughout the company and barely any leadership demonstrated from the top. No shared authority or free exchange of ideas.

4 Leadership is uncertain of how to lead in these very harsh economic times.

5 This is a stronger area for the company. We made a conscious effort to strengthen the management team over the last 18 months.

9 My answers are all over on this one. We have strong leadership, mission, objectives and values. We are a very successful company. I feel the leadership at the plant is very much focused on leadership, the leadership at the corporate level is focused on management. Their style is different than my style.

10 We recognize there are formal and informal leaders in our organization, too. Employees can be influenced by a number of different people, so we don’t ignore those informal leaders. We have robust leadership training and leadership competencies. I consider our bench strength to be deep.

ID# 10: Comments – Workers: Employees/Employees and Free Agents

2 Very limited recognition and reward system for good work. Limited public exposure of those who excel or do outstanding work. No traditions to aspire to for the rank and file employees.

5 There is passion and loyalty in this organization among most, if not, all employees. I personally feel very connected to this organization. There is a lot of good to this company and I am proud to be leading this organization.

9 At the plant there is a difference between how much flexibility one has with duties based on if they are a production worker or a salaried worker. Even though our production employees have less say in what tasks they will perform, they are very much involved in how they impact our plant’s performance and we communicate their impact and results with them daily so that they feel involved.

10 Our employee surveys have shown over and over again that our employees value working here for reasons other than pay and benefits (though they like those, too).
ID# 11: Comments – Job Expectations: Security/Personal Growth

4 While in the past, the company promised employment to those who were loyal and worked hard, the past five years has forced them to lay off good people with good skills so no one feels secure anymore. But I also see staff who should be improving their skill sets ignore the opportunities and just continue to believe that they can do the same thing day in and day out without professional development.

5 I am first-time CEO so there are many opportunities and challenges. It is an exciting time in my career. I am trying to make similar opportunities available for all employees so they are current and marketable with their skills.

9 We are a plant in a small town. People want to continue learning and to be challenged. However, because of where we are located there are not a lot of opportunities to move to another company unless one wants to commute. So I believe people want the development and challenges but not with the intent to move on to another company. More to keep their own personal interest and motivation going.

10 Missing may be questions about performance management and career development programs. We have very low turnover in our organization, and one way to hold on to high potentials, is to offer career development and talent management/succession planning programs. It develops the employees while giving them confidence there is a future for them in the organization. At the same time, it polishes the skills you want them to have today--all the things you mentioned above.

11 This was a hard question to answer because we have employees who are here for the security and some for the experience and growth opportunities either here or somewhere else in the future. We are fine with both type of mentalities as long as there is a high level of performance to the organization while they are here.

ID# 12: Comments – Motivation: To Compete/To Build

4 No plan to create and build on a vision of who we want to be in the marketplace. Solely focused on making money or not spending money.

5 We are in the beginning stages of these efforts but definitely on the path. We are working to educate department on P&L management. We have many cross-functional teams that allow employees to lead and/or participate in areas outside their functional area.

9 At the plant I am not familiar with our external connections or plans.

10 We strive to educate all our employees on the business and keep them informed on trends in the business [this is one of our CEOs perpetual goals from our Board]. However, these questions make me wonder if we should have a leadership competency around “collaboration?” It’s intrinsic in our organization, but not called out as a skill that is valuable.
<table>
<thead>
<tr>
<th>ID#</th>
<th>Overall Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Not a suggestion, but it is interesting as our business is going through an extensive initiative around a corporate culture change/build. And, in the end, there has to be some flexibility for the specific time/action and relevancy.</td>
</tr>
<tr>
<td>9</td>
<td>I was conflicted when answering the questions because we have a corporation and individual plants. Our strategies and actions can sometime be in conflict or we may not always be part of the bigger picture decisions. I think it would have been clearer if I would have asked the question up front if I should answer the questions just how it is at the plant or as a company.</td>
</tr>
<tr>
<td>10</td>
<td>Nothing--it was very interesting.</td>
</tr>
</tbody>
</table>