Defining Excellence in U.S. Construction Companies

Mark Konchar
Victor Sanvido

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Computer Integrated Construction Research Program
Department of Architectural Engineering
The Pennsylvania State University
University Park, PA 16802
Defining Excellence in U.S. Construction Companies
An evaluation of the best in class practices of U.S. construction companies.

Executive Summary

How do we create enduring high performance companies that continually deliver success? PACE\(^1\) funded this exploratory research project to examine companies that are consistently good performers in the industry. This report illustrates the feasibility of a method to rate these companies based on their continuous successful performance in the marketplace. Collins and Porras (1994) describe such companies as "Built To Last" and outline six key criteria for these companies in their book. Those criteria were used to rate 14 excellent construction companies. The rating method is described in detail so that the reader may use it for evaluating his or her own company.

This research showed that companies with a clear core ideology, audacious goals, a cult-like culture, purposeful evolution, management continuity and mechanisms for self improvement appeared to be the most vibrant. Internally, their employees were fulfilled in their work and extremely excited about being part of something special. A sense of elitism permeated these companies.

What did this careful attention to the core ideology gain these groups? It afforded them the opportunity to grow and evolve, to try new things, take risks, make mistakes, win challenging work, create opportunities and often times beat the competition while achieving success for a client. This report summarizes some of the examples found in 14 excellent companies. They are sorted into best in class and worst in class categories. The reader must remember that all of these companies are performing well in the industry. Therefore worst in class is far better than the worst company in the industry.

Further research needs to be done to more objectively quantify these factors for construction companies and to better define organizational performance measures. This study has shown the feasibility of using these factors to evaluate construction companies.

\(^1\) PACE, The Partnership for Achieving Construction Excellence. The mission of PACE is to establish a working partnership between the construction industry and Penn State to achieve excellence in construction through process innovation and the development of students into leaders that shape its future.
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1.0 INTRODUCTION

How do we ensure that our company will continuously lead the industry? How do we attract the best and brightest in the industry, develop them into our company’s prize assets and retain them? These are challenges for construction executives whose most critical assets are their best employees.

1.1 Basis of Report

This research, funded by PACE, explores the method of systematically creating a lasting organization. It is based on an evaluation of 14 excellent construction companies in the U.S. building construction industry using six criteria identified by Collins and Porras in their book “Built To Last” (1994).

Collins and Porras studied 18 pairs of companies in the U.S. One in each pair was a visionary company, the other a good company. It is interesting to note that the good companies outperformed the stock market (1926-1990) by more than two times while the visionary companies outperformed the stock market by a factor of fifteen. All of these companies were above average and one could assume practiced sound basic business practices. This study focused on those “extraordinary” practices that differentiated outstanding companies from good ones.

1.2 Built To Last Factors

Six factors found consistently in “Built To Last” companies are a core ideology, audacious goals, cult-like culture, purposeful evolution, management continuity and self-improvement.

- A visionary company has a core ideology that guides its business decisions. More than ever, companies need to have a clear understanding of their purpose and core values in order to make work meaningful and thereby attract, retain and motivate outstanding people.

- A visionary company reaches for, attains and sets highly risky, very audacious goals that stimulate progress internally.

- A visionary company has a “cult-like” culture of providing superior customer and employee service. “They effectively indoctrinate, train and develop those front line employees that touch customers most closely, but often are lowest on the organization chart.”

- A visionary company forces continuous purposeful evolution. They promote and reward evolution by engaging and challenging their employees to improve the company by making strategic shifts and evolutionary progress through “out of the box” thinking and outstanding service.

- A visionary company ensures quality management continuity to preserve its core values. The visionary has a plan to proactively recruit, train, retain, reward and develop the management leadership of the company across generations.
• A visionary company invests in continuous self improvement. Self improvement stimulates progress, challenges employees and most importantly, enhances the culture by providing an atmosphere of teamwork, reward, recognition, belongingness and challenge in the workplace.

1.3 Company Evaluations
A questionnaire and rating system was developed to evaluate how close a company came to achieving the six “Built To Last” factors. This was then used to evaluate 14 pre-selected, very good companies that were willing to be studied.

A one to two day visit was conducted on site with each company. One hundred thirty seven interviews (an average of 10 per company) were conducted with members of each company. Interviewees included entry-level personnel, middle management (superintendents and project managers), senior leaders in operations, marketing, human resources, information technology, chief operating officers, chief executive officers, presidents and chairmen. Structured and unstructured interviews were used to measure the consistency and accuracy of evidence found within each pre-defined category. Detailed research methods can be found in Appendix A.

Table 1 provides scores for 14 companies ranked by category using the methods described in section 2.0. Each company is reported using a reference number (column one). The maximum score possible in this study is 48, the lowest possible is 16. The average score is 41, the best in class is 45 and the lowest is 35.

1.4 Company Performance
An attempt was made to collect company facts and performance measures from each company. (A complete listing of the company facts and performance measures requested of each company can be found in Appendix B). All 14 companies submitted information in this regard. However, even with confidentiality agreements between the university and each participating company, only partial information was submitted. Five companies reported historical ROI figures, 7 companies reported average construction margins while only three companies tracked employee retention rates. Of all the company performance data requested, the EMR was the only variable provided by all 14 companies.

Two explanations are possible. The first was a reluctance to share this information. A second one might be the use of poor methods for scoring corporate success and the inability to rapidly assemble relevant information by companies. By standardizing corporate performance measures, benchmarking and performance comparisons can be facilitated among the group. Given the limited performance data, this exploratory effort was unable to correlate the scores in Table 1 to corporate financial performance.
<table>
<thead>
<tr>
<th>Company Reference Number</th>
<th>Core Ideology</th>
<th>Audacious Goals</th>
<th>Cult-Like Culture</th>
<th>Purposeful Evolution</th>
<th>Management Continuity</th>
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<th>Total Score</th>
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<td>Company Rank</td>
<td>Statements of Ideology</td>
<td>Historical Continuity</td>
<td>Consistency of Actions</td>
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| Maximum Score | 9 | 9 | 9 | 6 | 9 | 6 |
| Average Score  | 7.71 | 6.71 | 7.71 | 5.79 | 6.93 | 5.64 |

Table 1 Defining Excellence in U.S. Construction Companies Composite Scoring
(Note: The basis of the scores is reported in Chapter 3.)
1.5 Reader's Guide

Section one has identified the basis for this research project, described the context of measurement through the “Built To Last” principles and briefly explained summary results. Section two describes a method for the reader to evaluate their individual company by examining the steps presented. Section three illustrates the scoring criteria used to rank the 14 companies participating in this research. Section four highlights several examples from “Built To Last” companies and from the best and worst in class construction examples by category. Section five summarizes this report.

Users of this manual should also consider conducting periodic reviews of their company and reviews of peer companies to calibrate the scoring mechanisms. They should also develop and agree on performance measures and track accordingly to correlate performance. Readers interested in exploring this further should contact the authors at: Penn State University, Department of Architectural Engineering, 104 Engineering Unit A, University Park, PA 16802, (814)-865-2869.
2.0 Evaluating Your Company

This section describes the method used to evaluate companies in the study. You can evaluate each of the six “Built To Last” factors for your company as follows.

2.1 Review Company Material

Collect critical facts and performance measures from your company. These include information in four areas. **Company business facts** include information on the products and services offered, target markets and growth areas. **Company performance indicators** include annual volume, return on investment, volume of repeat business and safety ratios. **Operating methods** include design and construction margins, centralized services and the use of technology to manage the delivery process. **Personnel facts** comprise retention rates, training programs and recruiting procedures. Finally, it is useful to examine other miscellaneous information such as key subcontractor and client alliances. Use this information to understand unique differences between your company and the marketplace.

It is important to clearly understand how a company measures its own performance. Does your company evaluate return on project employees, return on investment, profitability, volume or other performance measures? Understanding the guidelines by which management gauges success or failure gives the researcher insights into the reasons surrounding many of the decisions made throughout the history of the company. For instance, if your company has a goal to increase volume, then evidence to achieve growth should be clear. Whereas, if your company wants to increase profitability with less risk in volume, then evidence pointing to the selectivity in jobs and higher margins should become clear.

2.2 Interview Company Employees

Choose 10 or more people inside the company to interview. This group should include a cross section of the company - individuals selected from senior management, support positions, operations, entry-level employees and field personnel.

Draft pre-defined questions within each “Built To Last” category to structure the interviews with each employee. A structured interview forces the evaluator to be more consistent in their approach, which better controls the consistency of interview responses. Furthermore, questions and examples that highlight each topic area help both the researcher and respondent better understand the context of the interview and create a more productive dialogue of company specific evidence and stories about the company. A sample questionnaire used to evaluate and record interview responses is included in Appendix C.
2.3 Collect Evidence
Using the interview forms in Appendix C, record specific evidence in each “Built To Last” category based on interview responses. Evidence can be in the form of examples, stories about the company or printed matter. Use the evidence collected throughout all company interviews to evaluate the company’s performance in each category. Based on the level of evidence and the consistency of responses received from interviewees to structured interview questions, rate the factor being evaluated as high, medium or low. Specific examples of the scoring criteria used in this study are included in section 3.0.

2.4 Rate Your Company
Use the examples and statements in section three to evaluate your company in each of the six categories. Ask the same questions of all interviewees, regardless of position or status within the organization. Rate each subcategory, (a, b, and c where there are three subcategories and a and b for two categories) based on the evidence available. High evidence is scored 3, medium evidence, a 2, and low evidence, a 1. Calculate the overall index by adding the company’s ratings in each subcategory.

2.5 Use Examples To Improve
Review the many examples taken from construction companies discussed in section four of this report to better understand the varying levels of evidence reported within each category. Section four describes several instances where best and worst in class construction companies have used the “Built To Last” principles. The reader is encouraged to reflect on the examples offered to gain a better understanding of the methods used for ranking a company and to improve their own company.
3.0 Scoring Criteria

This section describes the criteria used to rank companies in this study. They can be used to rank your company based on evidence you find. Review the statements below and compare these to your company’s situation. Then rate your company.

3.1 Core Ideology

The core ideology identifies “What are your core beliefs?” Core ideology was separated into three areas:

Statements of ideology

Why do you exist as a company? What is your purpose? What are your core values?

High: Significant evidence that purpose and core values exist in the company. Evidence that employees are familiar with the core ideology, used it as a source of guidance, wrote or spoke about it clearly more than a few times. Evidence that ideology was widely communicated.

Medium: Some evidence that the company stated a purpose and had created core values. Some evidence that members of the company understood and used the core ideology as a source of guidance. Evidence the ideology was communicated, but less than those receiving a “High.”

Low: No evidence that the company stated a core ideology or made any attempt to declare one.

Historical continuity of ideology

Has the core ideology been consistently strong over time?

High: Significant evidence that the stated ideology above had not changed over time and had been used throughout the company’s history to guide and inspire.

Medium: Evidence that the stated ideology had changed since the inception of the company or that the employees interviewed were unsure or inconsistent in their responses to historical ideological questions.

Low: Little or no evidence of any continuity of an ideology throughout the history of the company.

Consistency of actions

What are some examples of using these beliefs or how has the company been guided by its core ideology?

High: Significant evidence that the company’s ideology has been more than words or print. Several examples of how the company historically returned to its core ideology as a guide to make significant decisions regarding strategic planning, employees or day to day operations.

Medium: Some evidence that the company’s ideology has been more than words or that it is used to guide the company in its actions but to a lesser degree than those receiving a “High.”

Low: Little or no evidence of any guidance by the ideology or the inability of interviewees to describe examples or situations where the core values or purpose matched the company’s actions in specific situations.
3.2 Audacious Goals

This section focuses on two main questions. “What long term goal is the company pursuing?” “What is the alignment with the core ideology?” Evidence for audacious goals was separated into three areas:

**Use of audacious goals to stimulate progress**

_What audacious goals are currently set for the company? Do employees understand the goals?_

High: Significant evidence through examples that the company uses very audacious goals to stimulate progress.

Medium: Some evidence that the company uses these types of goals to stimulate progress but to a lesser degree or less frequently than those receiving a “High.”

Low: Little or no evidence that the company made serious use of audacious goals in its history.

**Audacity of goals**

_Are the goals understood, highly risky, bold or are they so audacious they cause internal doubt?_

High: Significant evidence or reason to believe that the goals were highly audacious. Evidence and examples of goals that were extremely difficult to achieve based on the circumstances when they were set or that they were highly risky.

Medium: Evidence of the same but significantly less risky or difficult to achieve than those that received a “High.”

Low: Little or no evidence that goals were highly audacious, risky or aggressive.

**Historical pattern of goals**

_What goals have been attained in the past? What goals are in the pipeline for the future?_

High: Evidence that the company had a consistent historical pattern of audacious goals or set them again and again as a way to propel the company forward. Evidence of goals (through examples) that were highly visible and transcended generations of leadership.

Medium: Less evidence of a repetitive nature of goal setting to stimulate progress. Some evidence of goals being used but only in the recent past.

Low: Little or no evidence of a historical pattern of audacious goals in the company’s history.
3.3 Cult-Like Culture

Culture describes the atmosphere of a company. Cult-like cultures were measured three ways:

Indoctrination

*How does your company orient new employees to the culture and to the core ideology?*

**High:** Significant evidence that the company has a history of formal and/or tangible employee indoctrination processes. Evidence of programs that teach cultural, technical, behavioral and ideological content. High evidence that employees can point to specific programs/training in each area.

**Medium:** Some evidence that the company has a history of formal and tangible employee indoctrination processes around the core ideology, but to a lesser degree than those that received a “High.”

**Low:** Little or no evidence that the company has a history of formal and/or tangible employee indoctrination processes.

Tightness of fit

*How does your company impose a tightness of fit, handle mistakes and encourage lessons learned?*

**High:** Significant evidence that the company makes a point to impose a tightness of fit (people either fit well in the company or they are removed). Evidence that the company strictly enforces alignment with the core ideology. Evidence through examples of how tightness of fit is imposed.

**Medium:** Some evidence that the company has historically imposed tightness of fit, but less prominent than those that received a “High.”

**Low:** Little or no evidence that the company has historically imposed a tightness of fit. For example, evidence that the company has ignored core ideology compliance, e.g., not terminating an individual who violates the company’s ideology.

Elitism

*Does the culture fuel the company? Is your company a special, elite place to work?*

**High:** Significant evidence that the company has historically reinforced a sense of belonging to something special and superior. Evidence that the company has created an extreme sense of pride in the workplace and instilled a team concept that is identifiable and exists throughout the organization.

**Medium:** Less evidence that the company has historically reinforced a sense of belonging to something special.

**Low:** Little or no evidence that the company has reinforced a sense of belonging to something special and superior.
3.4 Purposeful Evolution

Purposeful evolution describes the methods used to improve and grow the company over time. Evolution was divided in two areas:

Use of steps to improve and grow

*What strategic shifts has the company made resulting from new ideas, experimentation or variation?*

**High:** Significant evidence that the company has made strategic shifts, moves or created opportunities through the use of purposeful evolution.

**Medium:** Some evidence that the company has a history of using small steps through trial and error as a way to promote evolutionary progress but to a lesser degree that those receiving a “High.”

**Low:** Little or no evidence that the company has a history of trying new things or concepts as a way to move the company forward or create opportunity.

Operational autonomy of people to stimulate progress

*How do you provide operational autonomy and promote the freedom for risk taking in your company?*

**High:** Significant evidence that the company has used operational autonomy as a way to promote individual initiative. Evidence of broad boundaries of responsibility at various levels and allowing people the freedom to operate independently. Evidence that employees have broad personal discretion to get the job done as long as it is in alignment with the core ideology.

**Medium:** Some evidence that the company uses decentralized organizational structures and job designs to promote operational autonomy and freedom but to a lesser degree than those receiving a “High.”

**Low:** Little or no evidence that the company has made a conscious effort to use operational autonomy as a means of promoting evolution. Evidence that the company is not decentralized or that the organizational structure does not promote individual initiative and experimentation.
3.5 Management Continuity

Management continuity identifies the replacements for key leaders and their development such that the company has developed in house people to replace every key manager at any time. Management continuity is measured in three areas:

**Internal vs. external leaders**

*How many senior staff and chief executives have been brought into the company from the outside?*

**High:** Significant evidence that the company has a history of selecting senior leaders and chief executives only from inside the organization.

**Medium:** Evidence that the company primarily selects senior leaders and chief executives from the inside, but had one or two deviations throughout its history.

**Low:** Evidence that the company has selected external leaders more than two times in fifty years.

**Formal management development**

*How do you select and develop the next generation of management?*

**High:** Significant evidence that the company has made a conscious effort to develop and implement formal management development programs. Evidence of efforts to create management training in house or through the use of external professional consultants. Evidence of programs to create unique, challenging career tracks for “high potential” employees that expose them to top management issues and thinking.

**Medium:** Some evidence that the company has made a conscious effort to create mechanisms of management development but to a lesser degree than those receiving a “High.”

**Low:** Little or no evidence that the company has paid careful attention to the future development of its leadership by creating management development programs.

**Careful succession planning**

*Can you explain your succession plan? Who will lead the company in the event of an emergency?*

**High:** Significant evidence that the company has a history of careful succession planning and formal methods to select a chief executive. Identify people, management teams or a plan. Evidence of a “train your replacement” attitude and the identification of “no. 2” individuals. Evidence of an emergency succession plan for leadership.

**Medium:** Some evidence of careful succession planning and formal selection procedures, but less evident than those receiving a “High.”

**Low:** Little or no evidence that the company has taken any steps to create a formal succession plan or put in place a strategy to do so in the future.
3.6 Self Improvement

Self improvement identifies “What are you doing to invest in the future while doing well today?” Self improvement was measured in two areas:

**Investment in long term growth**

*Is your company a market leader; the first to adopt a new idea or process; innovative and progressive?*

**High:** Significant evidence that the company makes a conscious and significant contribution to the development of people, technology and systems for the future. Evidence of both financial and time investments to grow, develop or participate in university research relationships.

**Medium:** Some evidence that the company has a history of reinvesting earnings for long term growth and improvement.

**Low:** Evidence that the company has neglected investments for long term growth and improvement.

**Mechanisms to stimulate progress**

*What mechanisms do you use to motivate people or create a healthy discomfort in your company?*

**High:** Significant evidence that the company creates internal mechanisms to create a sense of challenge or discomfort amongst its employees. Evidence of mechanisms such as competition, performance appraisals and extreme autonomy that promote change and progress internally before the external environment demands it.

**Medium:** Some evidence that the company challenges its employees to improve through tangible mechanisms of discomfort, rewards/ incentives and penalties.

**Low:** Little or no evidence that the company has a history of using mechanisms to stimulate progress before the external environment demands change and improvement.

3.7 Summary

This section has described the criteria used to evaluate a company score in each of the six “Built To Last” categories. The next section provides examples found in best and worst in class companies.
4.0 BUILT TO LAST EXAMPLES

The sections that follow define each “Built To Last” category, and provide brief examples of best and worst in class characteristics. Company rankings are based on evidence found within each category. A ranking of three indicates high evidence of the attribute, two indicates moderate evidence, and a ranking of one implies little or no evidence.

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<th>Category</th>
<th>Maximum Score</th>
<th>High Score</th>
<th>Average Score</th>
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Table 2 Composite scores by “Built To Last” category.

Table 2 summarizes the study results and reports high, average and low scores in each “Built To Last” category. The maximum possible score in this study is 48 (the sum of category maximum scores). The minimum score is 16 (the sum of the category minimum scores). The scoring of each company overall and by subcategory indicates where the company stands en route to a maximum achievable score. Columns six and seven above indicate the number of companies above or below the average category score. Detailed scores for individual companies and each subcategory are listed in each of the following sections.

4.1 Core Ideology

"The values that companies hold are impacting their ability to hire the best people and sell their products."

- Richard Barrett
Author, Liberating the Corporate Soul

In their book on visionary companies, Collins and Porras explain, “profitability is a necessary condition for existence and a means to more important ends, but it is not the end in itself. Profit is like oxygen, food, water, and blood for the body; they are not the point of life, but without them, there is no life.”
A core ideology is about more than profit. Without it, there is no structure to achieving profits. Core ideology in a visionary company is the set of basic precepts that plant a fixed stake in the ground for a company. These do not sway, nor do they change with the movement of the external environment or fluctuations in markets. Comprising the company’s purpose and core values, these most basic doctrines are usually ingrained into the fabric of the company’s culture and offer a source of guidance in daily operations. The primary role of purpose is to guide and inspire. Core values are a focused set of guiding principles, by which people live and work.

Core ideology was ranked by measuring evidence in three component parts. The first measure was the **existence of an ideology statement** - a clearly defined purpose and a set of core values. Typically printed in some fashion, these parts are established and clearly understood by employees. The second, **historical continuity** with that core ideology, indicates a company’s consistency and alignment with its purpose and core values, over time. The third measure is **evidence of actions** that are consistent with or reinforce the core ideology. Frequently, actions represent examples of how the company uses the ideology to guide its day to day operations, interactions with team members or the service provided to customers. Evidence representing the existence of such a core ideology within each company was rated as high, medium or low in each of the three areas.

### 4.1.1 Best in Class

The construction industry is a highly passionate, people-driven business. Stakes are high and companies succeed and fail based on the performance of their people and the teamwork generated amongst the project teams they engage. Because of this characteristic, it was not surprising to find that 12 of 14 companies showed high evidence of a core ideology existing inside the company. (see column marked a in Table 3) However, only five of these companies had the historical consistency of the ideology (b) while 11 companies had evidence of using the ideology or backed it up with actions that supported its existence (c).

For example, one of these companies will only pursue projects that require technically innovative, value adding activities/ solutions while maintaining a highly ethical

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Table 3 - Core Ideology Scores
nature in the way they treat their teammates. Since their inception 36 years ago, they have resurrected
"salvage" jobs, those unattractive to other builders, by creating an innovative, efficient way to solve the
problem and serve the client. Over time they have also made the "right" decisions regarding their work,
as substantiated by a litigation free history. Another company exists to build great things. They do this
through the facilities and relationships they create. They believe finishing a job within budget means the
original budget and they will service the client through a relationship, even if it means sacrificing fee on
an owner initiated change. These examples of integrity and service help define the core values of the
company, established early in the company’s history to guide its endeavors.

Another good example points to how a national building company, rooted in its core values of honesty,
integrity and customer satisfaction used them to help make difficult decisions and ultimately service the
client. This particular company turned down a project even though they were the owner’s first choice
and had a past relationship. They told the owner that they didn’t have the personnel available to engage
such a project. They didn’t want to risk putting unproven people, hired specifically for the job, on that
type of high profile, schedule sensitive, design-build project. This sort of action is in strict alignment
with the company’s core value of integrity.

The best in class companies, those ranking the highest in this category, typically had a core ideology
developed by its employees, or at least one that the employees had a significant role in creating. Sessions
to examine "who" the company was, "what" it stood for and "why" it was in business generated the
common purpose and created logical core values to live by. In most cases, these were closely aligned
with the values held by the people in the company. This activity typically promoted an extreme sense of
belongingness and pride within the company, traits that led to a positive, strong company culture. In the
companies that developed their core ideology in this way, the guiding principals were evident and easily
explained. The examples shared by interviewees exemplified high degrees of evidence of its existence.

4.1.2 Worst in Class
Is the core ideology in your company simply words, or is it identifiable by deeds? Several companies
have an established core ideology. This is positive, because those who typically announce their guiding
tenets live by them. However, a collection of companies in this research have not maintained or
supported the ideology over time. Others simply cannot explain instances where its presence has
impacted their business. This has a host of impacts. In most cases where this occurred, six out of 14
companies, the company did not thoroughly indoctrinate its employees into the ideology; a consequence
that negatively impacted the company culture. They were also more likely than best in class companies to
promote senior leaders that did not fit with the core ideology, or they hired leaders from outside the organization who did not have those values ingrained. Finally, by not following the most basic principles of the company in decisions regarding goals, people, strategy, and organizational design, the company suffered.

It was evident throughout these companies that the people did not fervently hold the ideology nor was it consistently used to guide difficult decisions. Typically, these companies are number or profit driven. There is nothing wrong with honestly stating, "we are here to make a fair return," however, the way a company goes about doing so is critical. Of the companies interviewed, it appears that those who believe in treating people fairly, both inside and outside the company, and those with honest, open relationships with their clients achieve a fair return. In fact, they create customers for life who choose them because they have an ideology rooted in these principles. Those that don’t concentrate on the principles of a guiding ideology must find other ways to capture the same return, normally by shopping subcontracts, unscrupulously backcharging subcontractors and suppliers, passing general conditions items to subcontractors, creating lucrative changes or cutting architectural fees.

Still some companies work hard to promote the behavior they describe in their company’s tenets. However, it is apparent when interacting with the company, that the core ideology is weak or generally not ingrained. These companies will likely continue to compete, but are less likely to evolve into the outstanding leaders that will shape this industry in the future.

4.1.3 Summary
A core ideology is a difficult concept to maintain. As discussed, several companies have a deep-rooted ideology established. Just as many don’t have one, which caused them to score lower. The important point is that those who have just recently developed guiding tenets have made the commitment. As the new principals grow within the company they will surface in the work performed internally and externally. These companies, like those who already have established a core ideology, have started to change their culture. This is a slow, difficult process, but now they have a core ideology to guide them in their efforts. Similarly, actions continue to speak louder than words. Although some do not publish, preach or worship an ideology, the existence of one is evident. In these cases it is recommended that the company print and distribute it throughout the company.
4.2 Audacious Goals

"Staying in the comfort zone does little to stimulate progress."

James Collins and Jerry Porras
- Authors, Built To Last.

"Far better to dare mighty things, to win glorious triumphs, even though checkered by failure, than to take rank with those poor spirits who neither enjoy much nor suffer much, because they live in the gray twilight that knows not victory, nor defeat."

- Theodore Roosevelt.

Visionary companies use clear and compelling goals to serve as unifying focal points of effort. Many times goals are lofty and stimulate progress while generating tremendous team spirit internally. In this sense, the goal becomes the motivating factor, rather than the charisma of past or current leaders. Remarkably, visionary companies are so focused, that in several instances, the goals outlast generations of management. Most importantly when setting a long term audacious goal of this nature, visionary companies are careful to set it in alignment with its core ideology. In other words, they choose goals that allow them to operate without breaking the rules of the core ideology. The goal should be a powerful, reinforcing statement about the core ideology. A goal of this type and magnitude does much to stimulate progress in other areas, such as the company culture. In fact, people in these companies feel that they belong to something special, an elite organization.

Measuring evidence in three component parts ranked company goals. First, evidence of a company's use of these goals to stimulate progress was measured. Long term audacious goals should be clearly defined, understood and measurable. For example Boeing, in the 1930s, committed the entire company to the goal of becoming a major force in the military aircraft market and began work on the P-26 military plane. Again in 1952 they defied conventional wisdom by committing to be a major player in the commercial aircraft industry. They subsequently introduced the Boeing 707, a product that brought the world into the jet age.

Second, the type and audacity of the goal(s) is important. Did the goal represent a risky situation? Did the goal require extreme commitment - to the point of sacrificing either margin or conventional operating methods in order to reach it? These questions help uncover the audacity and commitment to company goals. As an extreme, Boeing laid off a total of eighty-six thousand people, 60% of its workforce, to reach one of its riskiest goals, the development of the 747. Goals found in visionary companies seem almost impractical and sometimes impossible. However, by setting bold and sometimes risky goals, it is
the high level of confidence generated within the company that allows each team member and the company to strive for and ultimately reach them.

Finally, the historical pattern and commitment to these goals was ranked. As in the P-26 example, Boeing has used audacious goals for over sixty years to stimulate progress. Examples include the B-17 Flying Fortress, the 707 described above, the 727, the 747, and the more recent development of the Boeing 777. These indicate a historical pattern of clear, compelling and risky goals. It is important to remember that a long-term audacious goal only helps a company if the goal has not yet been achieved. Therefore instead of coasting after arriving at a goal, it is critical for the company to replace it with another before the current milestone is reached.

### 4.2.1 Best in Class

No company in this study achieved a score of nine, the maximum score for this category. Four companies did record a score of eight while the average company scored 6.7. (See Table 4) Eight companies, just over half the sample, recorded high evidence of using goals (column a). Many construction companies hold two types of goals, those that reflect alignment with a core ideology and those that do not. Those goals that do not align with core ideology are generally profit, volume or margin based. Four of 14 companies (column b) had created truly audacious goals. Only two companies (column c) had clear goals aligned with their core ideology. For example, one company’s goal was to add value to the process. They set a philosophy to serve the client in this way and measure their performance through customer satisfaction. Namely, “are they creating customers for life?” In turn, this company is profitable, rewarded for their value added risk and continue steady, controlled growth.

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Table 4 - Audacious Goals Scores

Another organization has established a mission to build a truly great construction company by the year 2000, a goal set during their inaugural year just nine years ago. This company has created 12 tangible images by which to guide and measure itself to this end. Yet another company set the goal to become the most sought after construction services partner by the year 2000. This goal is measured by the number of
clients seeking them out to design and build their projects, a direct byproduct of their core ideology of client satisfaction, quality, continuous improvement, teamwork and integrity. These examples indicate a clear vision towards measurable goals.

Not all of the goals described above or throughout the study indicate highly risky endeavors. More often in the construction business, goals are audacious or far-reaching. For instance, one company described a goal for estimating projects – a 6% acceptable range between the initial “napkin” estimate and the contract GMP. Another company set a “zero accidents” safety goal. A two-year old company set a compelling goal to establish itself within a specific region by winning a non-bid, high profile project away from local competitors, a goal that rallied the entire company until it achieved it during only its second year. It is interesting to note the diversity of company goals. In cases where goals were set, they greatly improved the focus of the company. In cases where evidence did not exist for goals, the employees of the company, even senior management, could not point to any one item or driving force that was motivating or moving the company forward.

Another interesting component of the use of goals was the extent to which a company implemented them throughout its history. Just two companies had high evidence of this. The first company, in keeping with its core ideology, has a history of taking on highly risky projects, projects others shy away from, dating back to its founder in the mid 1960s. By discovering an innovative engineering solution, the company serves the client and typically collects a higher margin for the risk they assume and the value they add. The second company, created in 1961, began with a goal to become the full service design-build provider for Japanese clients in the U.S. This transpired into becoming a predominant domestic contractor and finally into becoming a long-term U.S. builder rooted in Japanese values. These companies have used goals in conjunction with their core ideology to propel them past competitors and progress through new and challenging ventures.

4.2.2 Worst in Class
Out of a possible nine, five companies scored six or below in this category. Three of this group had financially based goals that were inconsistent with the core ideology. Two had goals that were short term or not clearly measurable, such as the bundling of services or diversifying into broader markets. Some companies set out to increase or focus on profitability, not volume, by becoming more efficient with systems or operations. They would rather achieve equal if not greater return on the same volume without the added risk. However, these companies are not providing themselves with other stimulating goals that really motivate or involve the entire company in its pursuit. This fact was obvious when interviewing
employees in these few companies. When asked to describe the long term focus or if an audacious goal was out there for the company to reach for, the typical response was, “not sure, I think we are trying to double our size or something.” Contrast this with an employee from a highly visionary company, “Well, we have 12 tangible images by which we will all measure whether or not we have made our goal to become a truly great construction company by the year 2000, and this is how I am helping…”

The construction business is a service business. Although the services provided are sometimes argued to be products, it is difficult to sell a service, since it is not something you can see, touch or feel. Therefore, goals for construction companies tend to be customer based. By serving the client, the company is serving itself. The worst in class companies do not focus on the client. For example, one company set a goal to survive in an industry that is headed for consolidation. This goal will mean the survival of the company, yet its achievement is measured by market share. The goals should be measurable and tangible to the people who are working to achieve them. Audacious goals in this business might be to obtain a number of customers to serve exclusively, setting up a number of strategic alliances with key subcontractors and facility owners, making a significant contribution to the community by becoming a local builder even if the company operates nationally or becoming the first truly global builder.

Naturally, it is difficult to achieve historical consistency of goals if they are not used. Some companies ranking low in this category have just begun to formulate goals, leaving them with no historical evidence. Others have set some goals, but have not yet reached them. Interestingly, the same companies who exist to grow in volume or market share, have a pattern of setting goals to execute sold or backlog work. These goals do represent a historical pattern, however, their ideology does account for the rapid hiring of personnel once sales or volume goals have been achieved, a consequence that can devastate a company’s culture. Choosing goals in alignment with the ideology is critical. Finally, some of these companies have had difficult or challenging periods of time in the recent past, such as a change in ownership, acquisitions or a complete overhaul of management. These companies are using short term goals to realign themselves behaviorally and technically for the future.

4.2.3 Summary

It is important to remember the distinction and connection between purpose (one component of core ideology), and audacious goals. Purpose cannot be achieved, but an audacious goal can! The companies with high evidence in this category are using goals of this nature to stimulate progress inside the company. More importantly, the best companies use goals to develop a culture that generates extreme pride and belongingness in people, byproducts of being in an elite organization. Even in this highly
fragmented industry, long term audacious goals can be set and achieved. Other companies are just getting started. Still certain companies are pursuing goals not aligned with their core ideology. The employees inside these companies are typically more prone to leave in search for something more.

4.3 Cult-Like Culture

"Because visionary companies have such clarity about who they are, what they are all about, and what they are trying to achieve, they tend to not have much room for people unwilling or unsuited to their demanding standards."

- James Collins and Jerry Porras
  Authors, Built to Last

One chairman shared this point, “businesses where employees are respected for their skills and fulfilled in their work draw the best talent.” These statements represent the theory behind a tight knit, almost cult-like culture. Not only does a well-developed and highly respected culture define the people who make it up, it attracts others who are predisposed to it.

Creating a strong culture requires a set of practices that over time establishes an environment by which a core ideology is lived. Operating principles, and recruitment, retention and termination of employees reinforce the core ideology and create a deep sense of loyalty to the company and its ideology.

Companies use mechanisms to screen out potential employees who are not predisposed to the company culture and also quickly terminate individuals who drift from the core. This sort of rationale can be easily explained during the interview process with a statement such as, “If our attitude about customers and service is incompatible with yours, we’ll part ways, and the quicker the better.”

Culture was measured by examining how companies indoctrinate new employees into the company culture, how they evaluate and promote a tightness of fit with that culture and how the company establishes itself as an elite organization, one that people don’t want to leave.

4.3.1 Best in Class

Best in class companies have preserved their core ideology through careful attention to indoctrination, tightness of fit and elitism. The following sections investigate each of these subcategories. (See table 5)

Six companies nurtured their cultures by using a formal indoctrination process (column a) while half of the companies (column b) recorded high evidence of imposing a tightness of fit with the company’s ideology. Every company but one (column c), made significant efforts to create a culture that gives employees a sense of belonging to something special. Elitism was high in each of these companies.
Below, examples from the "Built To Last" book are described first to give a perspective of how visionary companies have established and maintained strong company cultures. The section is concluded with examples from the highest ranking construction companies. Examples are taken from companies that have incorporated these characteristics, or those like them, to a greater degree than those ranking lowest (worst in class) in this category. Examples given have been made generic to honor company confidentiality.

4.3.1.1 Indoctrination

Indoctrination is the orientation of new employees to the company, its culture, processes and ideology.

*Built to Last Examples*

- Orientation seminars and ongoing training programs that have ideological as well as practical content, teach such things as values, norms, history and tradition.
- On the job socialization by peers, immediate supervisors and senior management.
- Tight screening process, either during hiring or within the first few years.

*Construction Company Examples*

- Use of extensive interviews at the University and at the company.
- Internship and Co-operative education programs.
- “Caliper”, “Prevu” or other personality profile tools.
- Rewards for employee referrals if new employee is hired and remains with the company over time.
- Self guided orientation questionnaires and interactive orientation videos.
- Established career paths to monitor experience and performance during early development stages.
- “Best Practices” seminars to train individuals on the way company does business.
- Company universities, which offer courses to enhance experience and reduce learning curve.
- Senior management address to each new employee within three months of being hired.

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| Maximum Score | 9 |
| Average       | 7.71 |

Table 5 - Cult-Like Culture Scores
4.3.1.2 Tightness of Fit
Imposing tightness of fit in a company requires mechanisms to ensure consistency across the culture and alignment with the company’s ideology and preferred behavior.

Built to Last Examples
- Internal “universities” and training courses.
- Rigorous up-through-the-ranks policies – hiring young, promoting from within, and shaping the employees’ mind-set from a young age.
- Awards contests and public recognition that reward those who display great effort consistent with the ideology. Tangible and visible penalties for those who break the boundaries.

Construction Company Examples
- Nurturing university relationships with faculty and students is the start of the employee filtering process.
- Awareness programs to expose problems and bring employee concerns/issues to the table early.
- Senior management travel to visit, preach, listen and instill core ideology.
- Brutal honesty throughout interview process. Heavy interaction helps employee and company recognize a comfortable fit.
- Retention target rate of 90-94% (turnover 6-10%). Slowdowns in business cycles used to diversify “superstar” employees and shed non-multiskilled individuals.
- Acceptance of an employee back into the company once he/she has left.
- Mentoring programs to support personal and professional development.
- Post orientation interviews.
- Performance appraisals and progress reports conducted during probationary periods (if applicable) and throughout career development.
- Exit interviews.

4.3.1.3 Elitism
Elitism describes the company’s culture. It is an atmosphere that generates an extreme sense of pride and a sense of belonging to something special.

Built to Last Examples
- Unique language and terminology that reinforce a frame of reference and the sense of belonging to a special, elite group. Constant written and verbal emphasis on corporate values and heritage.
• Celebrations that reinforce successes, belonging, and specialness.
• Workplace or office layout that reinforces norms and ideals.

Construction Company Examples
• "Potential Employee Welcome Packages" sent to applicant’s home.
• "People Issues", "Celebration" committees organized to focus on quality of career and life mixture.
• Highly accessible senior management team. (open door policy)
• Company cafeterias and kitchens.
• Company exercise facilities.
• Creative room/office names ("Innovation Office", "Imagination Conference Room")
• Extreme empowerment through decentralization and responsibility assignments (ask for forgiveness, don’t ask for permission).
• Open office plans. No corporate titles. No corporate organization chart.
• Company newsletter given to employee and sent home to the family.
• Company website and internal/external communication by email.
• Annual corporate meetings.
• Job site huddles.
• Company parties, picnics, social events, sports teams and family activities.
• Community involvement. (Habitat for Humanity, United Way, Toys for Tots, etc.)
• Company specific language. (The ‘company’ Way, “Associates”, etc.)
• Distribution of customer letters to project team and company.
• No real titles or many layers of responsibility as opposed to many layers of management.
• Use of employee feedback during rebuilding and strategic planning efforts.
• Culture surveys (What are we doing right, what are we doing wrong?).
• Recognition/rewards to external team members (subcontractors, suppliers, etc.).

4.3.2 Worst in Class
Evidence of the above characteristics was found to a far lesser degree in the worst in class companies. Although some of the companies scoring below average (7.7) in this category had a weaker overall culture, some exemplified the practices discussed above in individual subcategories. However, in these cases, it was evident that pieces of the puzzle were missing. In general, the companies that didn’t have all component parts working together were also the ones reporting high turnover rates or the need to hire from the outside because members of middle and upper management were leaving the
**organization.** In contrast, extremely tight cultures retain people and are able to target a controlled turnover rate, typically 6-10%. In this sense, the culture itself with the tightness of fit created, ejects those individuals not in alignment, rewards those who are and consistently evaluates for individual and team performance. People who form the cultures in these companies are less likely to be lured away. In fact, during the recent industry growth and the subsequent increased activity of placement agencies, those employees who are most precious, those most rooted in a sound company culture, express reasons why not to leave before discussing the reasons to leave the organization.

Furthermore, worst in class companies communicated strategic initiatives, company goals, organization structure changes and company performance facts less often than the best in class companies. Keeping people in the dark about past performance, the future direction of the organization or their individual role in the company's success led to weaker cultures. At the same time, a secretive nature towards the external world creates a sense of elitism (belonging to something special and superior) and pride that can fuel a strong culture internally. However, a company that is secretive internally, between management and employees, is less likely to preserve its core ideology over time or cultivate a tight culture. Misery loves company. Even if one employee feels unformed or mislead about the future of the company, that employee can create a virus that can spread quickly throughout the company. This only leads to rumors, misconceptions and concerns - each of which distracts employees from the pursuit of the company's goals and purpose. Communicate!

### 4.3.3 Summary

As best in class companies continually adapt to and shape the marketplace, there is an increased focus and profound recognition that employees are indeed the companies’ most important resource. Companies in this study have or are in the process of creating cultures built around sound principles, core values and the balanced lives of their employees. Those companies which have survived the difficult process of cultural change or who have had a “cult-like” culture during their history are experiencing higher rates of retention, faster employee learning curves and more enjoyable working environments.
4.4 Purposeful Evolution

"Our company has indeed stumbled onto some of its new products. But never forget that you can only stumble if you're moving."

- Richard P. Carlton, former CEO, 3M Corporation.

Visionary companies have been likened to evolving species. This is done to explain the nature of progress inside these companies. In this sense, progress (those small steps that a company makes as it evolves over time) is ambiguous. The word ambiguous is used to describe the very notion that real progress results from trying a lot of different things, keeping what works and learning from the ideas that don't. This is the exact mentality that led Johnson and Johnson to the development of the Band-Aid in 1920, a product that became its largest seller and ultimately moved the company into consumer products (Collins, C. and Porras, J., 1994).

Evolutionary progress is continuous. Trying many different things requires constant experimentation and risk taking. Consistent experimentation is what built the 3M Corporation and the creation of products such as waterproof sandpaper, 3M masking tape, scotch cellophane tape and the very popular 3M Post-it-notes. These products resulted from a constant strive for change – a byproduct of 3M’s biggest creation, the mutating 3M company itself. Therefore, the evolution principle requires an atmosphere that allows for unanticipated outcomes, consistent trial and error and individual autonomy, each guided by a core ideology and strong supporting culture.

The pursuit of evolution inside construction companies is not unlike the examples noted. Companies in this study were ranked in two areas of evolution. First, evidence of using steps to improve and grow the company, and second, the operational autonomy of people inside the company to stimulate progress. A maximum score of three was achievable in each subcategory.

4.4.1 Best in Class

Similar to the Culture category, the best in class companies experimented or made strategic steps to improve far more than the worst in class companies. Eleven of 14 companies achieved a maximum score in this category (Table 6). All but one company (column a) had high evidence of using strategic steps to improve the company while 12 companies (column b) showed high evidence of using extreme autonomy inside their companies. As an introduction to each subcategory, specific examples of mechanisms used at the 3M Corporation (Collins and Porras, p. 156) to stimulate evolutionary progress are listed. These areas are then followed by examples of how the best in class construction companies have achieved purposeful evolution.
4.4.1.1 Use of steps to improve and grow
Companies use small steps (such as experiments) to try new things and act upon ideas.

3M Corporation Examples

- “15 percent rule” – encourages people to spend up to 15% of their time on experimental projects. (Used to stimulate unplanned experimentation and variation.)
- “25 percent rule” – each division is expected to generate 25 percent of annual sales from new products introduced in the previous five years. (Used to stimulate continuous product development.)
- “Problem Solving Missions” – small teams sent out to customer sites in response to specific customer problems. (Used to stimulate innovation via customer problems that are the seeds of new opportunity.)

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Maximum Score 6
Average 5.79

Table 6 - Purposeful Evolution Scores

Construction Company Examples

- “Don’t Wanters” – taking projects that others don’t want and solve the customer’s problem.
- Problem solution - create new market through the development of a Hybrid Precast Concrete Moment Resistant Frame. Opportunity to solve the problem led to a diversified service as being the only company qualified to inspect the frame on future installations.
- Client satisfaction and subcontractor satisfaction surveys.
- Self perform capabilities on high profile and schedule sensitive activities such as drywall and concrete.
- “Graffiti Wall” – blank wall in the office for employees to express opportunities for improvement.
- “Project Cap” – maximum number of projects taken to concentrate on service quality and profit.
- Diversification of products and services (engineering services, interior construction, energy studies, site location, financing, steel fabrication, etc.)
- Geographic expansion to service existing, long-term customers and create employee opportunity.
- Decentralize away from departments - create project/ market teams.
- Create full time research and development position/ committee/ team.
- Conduct learning lunches for training.
• Cross training and resource sharing across company.
• Annual award given to the individual generating the year’s best new idea.
• Development of strategic customer, subcontractor, supplier and design alliances.

4.4.1.2 Operational autonomy
Operational autonomy in a company is the level of freedom given to employees for risk taking. It is used to promote individual initiative and typically involves the setting of responsibility boundaries that allow employees to operate with wide personal discretion.

3M Corporation Examples
• “Technology Sharing Awards” – granted to those who develop a new technology and successfully share it with other divisions. (Used to stimulate internal dissemination of technology and ideas.)
• “Dual ladder career track” – allows technical and professional people to move up without sacrificing their research or professional interests. (Used to stimulate innovation by allowing professional and technical people to advance without having to switch to a managerial track.)
• Early use of profit sharing. (Used to stimulate a sense of individual investment in the overall financial success of the company, and thereby stimulate individual effort and initiative.)

Construction Company Examples
• Link safety initiatives to corporate goals and compensation programs to promote desired behavior.
• Establish minimal layers of management by pushing responsibility down. Decrease overhead.
• “Empowerment Zone” - establish a minimum set of standards to live by. Otherwise employee is free to develop, experiment and implement new ideas.
• “Don’t ask for permission, ask for forgiveness” mentality.
• Project audits and peer review programs to gain and disseminate best practices and lessons learned.
• No rules for required time spent at work. Work at home or away if your situation requires it.
• “Out of the Box” clubs created to stimulate individual, forward thinking.
• Encourage employees with ideas to develop and present a business plans to the company. Create your own opportunities.

4.4.2 Worst in Class
A high level of evidence in each subcategory was found inside each company. Eleven of 14 companies achieved a maximum score of six in the Evolution category. Many companies are diversifying services and products in an effort to better serve existing clients. **Companies scoring low in this category**
typically expend more energy on keeping up with their competition than they do on keeping up with their clients. Companies that do not examine the needs of past, present and future clients and who are not recognizing that owners are becoming more sophisticated are the same companies who do not show evidence of evolution. These companies show evidence of using steps to grow and giving employees the freedom to experiment less than the best in class companies.

4.4.3 Summary

Collins and Porras summarize the essence of Evolution with five key points. Based on evidence presented here, these points apply closely to the evidence found in the best in class construction companies examined in this research.

1. Try something new, do it quickly and be sure it is in alignment with the core ideology.
2. Mistakes accelerate training. Making mistakes is critical to the progress of evolution in a company.
3. Small strategic steps can lead to bigger steps of evolution. Making mistakes are more tolerable when they are from small experiments.
4. To benefit from unplanned variation, people must have the room they need to grow and change.
5. Send consistent reinforcing signals to promote points 1-4. This requires putting in place mechanisms that will encourage the behavior of evolution.

4.5 Management Continuity

"From now on, choosing my successor is the most important decision I'll make. It occupies a considerable amount of thought almost every day."

Jack Welch, CEO, General Electric
– Nine years before his anticipated retirement.

A visionary company ensures the continuity of quality leadership because of its vigor to preserve its core. The visionary company becomes everlasting due to a sound, continuous management plan that acts proactively to recruit, train, retain, reward and advance the management leadership of the company across generations. Three aspects of home-grown management include: selecting internal candidates for leadership positions (breeding from within); establishing management development programs that ensure candidates are ready for senior leadership; and the careful selection of CEO successors. Combined, these aspects decrease the likelihood of leadership gaps. Working as a continuous process, these aspects are inter-related, not independent. A sound management development and succession plan leads to a strong
pool of internal candidates. This ensures continuity of leadership excellence from within which will ultimately preserve the core and continue to evolve the organization.

Evidence was analyzed in each of these three areas (Table 7). A maximum score of three was achievable in each subcategory for a category total of nine. First, *homegrown management* (column a) measured the tendency of a company to promote from within or import from outside the organization. Just eight of 14 companies had high evidence of choosing from within. Second, *management development* (column b) examines how each company is preparing its next generation of senior leadership. Three of 14 companies have established formal management development programs. Their goal is to develop and promote individuals who have the potential to stimulate change and progress and are in strict alignment with the company’s core ideology. Finally, *succession planning* (column c) identifies the careful strategies put in place to ensure a smooth transition from one generation to the next. Amazingly, only 7, half of all companies, currently have a succession plan in place.

Several examples taken from the best in class construction companies are discussed below to highlight each area. Those companies scoring lowest in class generally did not exhibit evidence of such mechanisms, or did so to a lesser degree.

### 4.5.1 Best in Class

While no single company achieved a ranking of nine in this category, four companies scored a value of eight. (See Table 7) These companies were all either employee or family owned companies where the tendency to import external candidates was low. Rather a commitment to grow from within was established early in the company’s history, typically the first generation of management. Evidence in this area is focused on the development of internal candidates for operational and chief executive leadership positions.

Several companies have needed to insert external chief financial officers, managers of sales or business development, and directors of human resources into the company. These roles typically have not impacted the overall culture or disrupted the management development programs because of their
particular roles in company operations. The expertise needed for each of these activities are not those typically developed internally. They are fairly transferable skills that can be applied to various businesses once a rigorous indoctrination period is applied to a market or company. Scores for companies importing these leader types were unaffected.

4.5.1.1 Leadership development
Another characteristic common to best in class construction companies was the mechanism of “training your replacement.” Advancement in the company was highly dependent upon one’s ability to train and mentor the individual who would assume their current position. Upper management would use this to ascertain an individual’s readiness and ability to lead and advance the company. Throughout an individual’s career, the effectiveness or success of this potential leader could then be measured by monitoring the performance of his or her followers. If this individual became a strong internal candidate for senior management, decision-makers would have a history of leadership success or failure to judge.

Other ways to establish formal management development programs include internal company universities where the company develops and delivers specific courses to be taken by employees. Other professional seminar courses were also used to develop specific skills such as making presentations, public speaking, developing proposals, interviewing and safety awareness. Advanced management programs can be used to train a select group of senior managers on company standards and best practices for their next level of advancement. These programs were used to prepare this group of individuals for the responsibilities in their next promotion. Leadership institutes offering multi-year development tracks were also used to develop employees. Typically, the individuals who are nurtured in this way have been identified as high potential employees. This is a group of people the company has committed to developing into the future leaders of the company.

Furthermore, various levels of empowerment are being used to create an extreme sense of responsibility and individual initiative within rising management candidates. Construction companies used empowerment in conjunction with a mentoring program to guide and monitor risk taking, problem solving and professional development. Empowerment in the best in class companies came with performance and the acceptance of additional responsibility. Employees were given freedom to experiment and try new ideas, however, not at the expense of the company. Supervision of that freedom was directly proportional to success.
4.5.1.2 Succession planning

If it is absolutely critical to ensure a smooth transition from generation of leadership to the next, then succession planning becomes a key responsibility of a current CEO. Only four companies out of 14 achieved a core of three in the subcategory of succession planning. Two of these companies had recently imported their proposed heir apparent. Only seven companies, 50% of those interviewed, had a definitive “milk truck” plan (a plan that could be implemented quickly in the case of an emergency) communicated and in place in the event the current CEO would leave or die. This lack of succession planning in many of the companies might be indicative of several things.

First, strategic planning in most companies did not include succession planning. It appears from many strategic plans (“Company” 2000, Blueprint 2000) that companies are thinking seriously about the future of the market and their place in it. Although for many, strategic planning has become the creation of sound people strategies, a byproduct of which will be solid internal successor candidates, not the identity of strategic markets or clients. It seems companies are searching for ways to create opportunity for developing employees, either market or geographically based, so as not to lose them to a competitor or related industry. The more successful companies offer and advertise sound core values, a culture that stimulates progress and a tightness of fit that is attractive to young, high potential employees. Most importantly, they recognize that they must encourage constant change internally in order to accommodate rapid external changes in the marketplace and offer growth opportunities to long standing associates.

Second, a small number of companies have elected to create a strong internal management team to run the company in the event replacement managers were needed suddenly. This group typically consists of company officers, a pool of proposed successors to the leader, or family members. In these cases, the future ownership of the company is well documented and communicated throughout the company, with day to day operations put into the hands of the management team. Still others, recognizing the need to create a logical transition have created new positions, “number 2” positions, to house and coach an heir apparent candidate. This is typically the COO (chief operating officer), President, Executive Vice President, or other customized position in the company.

Seven of the fourteen companies are privately held companies or employee/management owned. Four of these have clear succession plans in place. Six other companies were family owned. Three of these companies have clear succession plans in place or have created management teams to orchestrate
management transition in the event of an emergency. One company was publicly held and was among those that did not have a succession plan in place.

Family companies in this study created unique exit strategies as well. A few of these had successfully transitioned into their third generation of management. Others were either developing or creating exits for themselves. Only two companies used sale as an exit strategy. Two others were in the process of selling the company to its employees or management team. All of these activities require a significant investment of time and talent by the parties involved, energies taken away from the day to day operations of the company. As these companies plan for the future of their organizations, only seven have a distinct plan in place to ensure a smooth transition of management. Seven others could expect a leadership gap tomorrow in the event of an emergency.

4.5.2 Worst in Class

Consider the opposite outcome when not focusing on the critical aspects of management continuity. In a similar loop as described above, poor management development over time and inadequate succession planning creates a scarcity of strong internal candidates, or a collection of individuals who are not “ready.” This creates a leadership gap in the company, a problem often times fixed by importing external candidates. The worst in class companies were somewhere in this loop. Few companies were to the point of importing a COO or CEO into the company. Several others are developing or re-developing a management program to breed the next generation of candidates. Consequently, evidence supporting historical consistency with a core ideology and a strong culture was limited.

A note on importing leaders.
Companies importing senior leaders, heirs or successors have done so because of an absence or lack of internal candidates. In these situations, the company now has a clear and distinct succession plan in place. However, until these individuals are accepted fully into the fabric of the company’s culture, they will be unable to successfully lead the organization. It will take time for the new individual to earn the power and respect required to guide the existing company. Furthermore, each of these companies as well as the others who have imported people into senior positions, have experienced some fall out throughout the company. The voids created from this must now be filled. This will likely create opportunity in a company, promote those who may not be ready or create the challenge of recruiting from the marketplace specifically for these positions.
4.5.3 Summary

The companies with less evidence of sound management development programs, had fewer internal candidates to groom and choose from and consequently were less likely to have a definitive succession plan in place. This was either because the people were not ready or because there was no program to stimulate the evolution of management internally. Others identified high potential employees or superstars very early in the candidate’s career and planned a careful development track with intense assignments and stimulating challenges that tested their ability to perform and lead the company over time. These individuals, after going through a program became obvious strong candidates for succession. Furthermore, creating a successful management development program seemed to challenge the current leaders to grow and evolve the company to create the needed room for employee growth.

4.6 Self Improvement

"Comfort is not the objective in a visionary company. Indeed, visionary companies instill powerful mechanisms to create discomfort – to obliterate complacency – and thereby stimulate change and improvement before the external world demands it."

- James Collins and Jerry Porras
Authors, Built To Last

The visionary company believes and invests in itself. A desire for self improvement is used to stimulate progress, challenge employees and most importantly, to enhance the culture by providing an atmosphere of teamwork, reward, recognition, belongingness and challenge in the workplace. An atmosphere that promotes continual progress requires continual company investment and discipline.

Best in class companies spend more time proactively shaping their future than they do worrying about being prepared for a future imposed by the external world. These companies recognize the importance of constantly raising the bar of expectations and company standards. To do this, investments in people, education, services, technology and systems become the building blocks for a company preparing itself to evolve and create its own path consistently over time. Visionary companies engage people by creating discontent – the healthy discomfort that is packaged with the challenge of always doing things better tomorrow than they were done today.

Construction companies were ranked based on evidence found in two categories. First, has the company been investing in the future? Investment can include cash expenditures for technology or system upgrades, professional certifications or the investment of time required to develop university partnerships, training curriculum, mentoring programs or management development tracks. Second, what mechanisms
has the company instituted to promote improvement? Mechanisms such as incentives, competition and satisfaction reviews are typically used to ensure that people remain sharp, motivated and are constantly improving themselves and the company. Each subcategory has a maximum score of 3, for a category score of 6.

### 4.6.1 Best in Class

Nine of 14 companies achieved maximum scores in this category (Table 8). Interestingly, every company (column a) is making significant investments in the future and in themselves while nine companies (column b) have created mechanisms to motivate and challenge their employees to improve for the future. Examples of how the highest scoring construction companies are investing in the future and the mechanisms being used to promote improvement internally are described below.

**Investment**

- Funding industry research and corporate development
- Creating a diversified portfolio of services
- Upgrading systems and technology
- Contributing to the education of craft labor (e.g. NCCER)
- Acquiring or creating subsidiaries to expand service
- Becoming ISO 9000 or ISO 14000 certified
- Developing and maintaining university partnerships

**Stimulating Progress**

Mechanisms for making improvements

- Using customer satisfaction reports to evaluate bonus compensation and promotion opportunities
- Creating internal competition between groups and teams to improve processes and services
- Offering employee ownership in both equity and company performance risk
- Demanding the use of high performance teams that don’t let teammates fail
- Evaluating incentives and discretionary bonuses based on individual and team performance
- Creating a tangible profit sharing program at all levels
- Utilizing management and employee development programs
- Creating annual training requirements/performance reviews/learning centers for employees

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<td>Average</td>
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Table 8 - Self Improvement Scores
• Using “phantom shoppers” or people who visit sites to anonymously track performance
• Using regular peer reviews and audits to share lessons learned across the company
• Sharing resources and cross training people to enhance the skill set of employees in the company

4.6.2 Worst in Class

Nine of the fourteen construction companies in this study achieved a maximum score in this category. The remaining five companies scored a five, one less than the maximum. Therefore the scores in self improvement were good. It appears that these construction companies are making conscious efforts to improve and grow for the future by investing and planning today.

4.6.3 Summary

Four questions are offered here to challenge individuals who are building their organizations for the future. Answers to these questions can help reflect the current state and future potential of the company to constantly improve itself.

1. How can you create discomfort internally? Use this to ensure that people remain sharp, motivated and constantly improve themselves and the company.
2. Are you investing in the future? Are you a leader in your industry? Identify ways to forecast future markets, businesses or technologies, invest in them and strive to lead the industry in this regard.
3. How do you respond to the cycles of your business? How do you put your company in a position to continually build for the long term even during slow periods?
4. Do your employees recognize that creating a best in class company is not easy? It is far more important to remain disciplined towards setting and reaching goals than it is to arrive at one and stop or become complacent. Reject doing well as an end goal.

4.7 Built To Last Guidelines

Section four has outlined specific examples of how best and worst in class construction companies are using the principles of “Built To Last” in their day to day operations. It is hoped that these thoughts can create awareness to the six categories introduced and promote the willingness of companies to reflect internally on them. Using the examples offered, the reader could review the scoring criteria put forth in section 3.0 and develop a customized ranking for their particular company. Tracking evidence over time by an outside or unbiased third party is a good way to honestly evaluate the existence of evidence inside your company.
5.0 CONCLUSION

It was evident from interacting with the various company types that these “Built To Last” principles lend themselves to the analysis of construction companies. In this study, the companies with the strongest culture and the most audacious goals set in strict alignment with their core ideology seemed to be the most vibrant. Internally, their employees were fulfilled in their work and extremely excited about being part of something special. A sense of elitism permeated these companies. What did this careful attention to the core gain these groups? It afforded them the opportunity to grow and evolve, to try new things, take risks, make mistakes, win challenging work, create opportunities and often times beat the competition while achieving success for a client.

As companies continue to compete in the design and construction marketplace they will be forced to change the manner in which they conduct business. Visionary organizations will be the ones who add something unique to the project delivery process. They will evolve purposefully to the future markets because today they are preserving their core, taking small steps to improve and are cultivating a culture that will allow them to try new things. They will create better value for their clients in the new millennium.

Suggested follow on research

This exploratory research evaluated good construction companies based on successful habits of visionary companies. An attempt was made to correlate these habits to the performance of each individual company, however the necessary performance data was limited. Performance measures such as return on investment, safety, margins and employee retention were used as possible indicators and tracked for a limited number of companies. No conclusions can be made about how the six factors measured in this study impacted the financial performance of each company.

The next step is to develop concrete measures of performance using the same group of participant companies. The correlation between the principles identified and explained here and the performance of companies can only be made if each company actively participates by offering critical, confidential performance information. Furthermore, more companies, with a wider performance range, from the same or related markets would be extremely useful to better characterize principles outlined in this research for construction organizations.
Appendix A

Research Methods

Several steps were taken to develop and conduct the analysis of the 14 companies participating in this study.

1. Pre-qualify companies.

Each company was invited to participate after being pre-qualified. Criteria for pre-qualification included the company’s historical position in ENR’s national ranking of design-build and construction firms, the type of company, the services offered by the company, the types of markets and clients served, the company’s relationship with Penn State and the company’s industry reputation. Twenty-eight companies were invited to participate. Fourteen companies accepted and participated.

2. Define Measures.

Defining Excellence in U.S. Construction Companies was adapted from the principals presented in “Built To Last, Successful Habits of Visionary Companies” (Collins and Porras, 1994). Measurement categories were adapted to evaluate companies in the U.S. construction industry.


A collection of critical facts and performance measures were collected from each participating company. These included information in four areas: Company Facts; Company Performance; Operations; People and Other. Information was used to develop an understanding of the commonalities and differences amongst the 14 participant companies.


A one to two day visit was conducted on site with each company. One hundred thirty seven interviews (an average of 9.7 per company) were conducted with members of each company. Interviewees included entry-level personnel, middle management (superintendents and project managers) senior leaders in operations, marketing, human resources, information technology, chief operating officers, chief executive officers, presidents and chairman. Structured and unstructured interviews were used to measure the consistency and accuracy of evidence found within each pre-defined category.
5. Rank Companies.

Evidence recorded throughout company interviews and information acquired from Step Three above was used to evaluate the company's performance in each category. For example, the amount of evidence representing the existence of long-term audacious goals within each company was measured as high, medium, or low. Individual scores were then used to rate each company by category and overall based on the level of evidence and the consistency of responses received from interviewees to structured interview questions.


This report profiles the attributes of the study, defines ranking categories, and identifies best in class and worst in class practices. A two-page, company-rating report for each company outlines the evidence found (in bullet format) in each category and lists the score awarded for that evidence. These are available to that company only. This allows the company to see the basis for their overall rank.
Appendix B

Company Facts and Performance Measures

Company Facts
What products, services, project delivery systems do you provide?
Do you have subsidiaries? If so, why?
In which markets do you operate?
What were your growth areas last year? Next year?
How are you organized/ managed corporately? Please provide organization chart.

Company Performance
What was your annual volume for each of the past five years? Projected for next year?
What is the volume of new contracts?
What has been your ROI after tax for each of the past five years?
What is the volume of work with repeat customers?
What type of equipment do you maintain (if applicable)?
How much rework is typically seen on a project?
What is your EMR?
What is your incident rate?
What is the cost of safety to the company? Insurance?
How do you staff your projects?

Operations
What is your design margin (if applicable)?
What is your construction margin?
How do you use technology on projects?
How do you approach marketing?
What centralized services do you have?
What percent of company volume is from competitive contracts? Negotiated?

Personnel Facts
How many new employees have been hired in each of the past five years?
At what levels have new hires been brought in?
What is your employee retention rate?
How do you attract employees?
How many designers do you employ?
How many permanent craft employees do you employ?
How many construction personnel do you employ?
Other

List of key subcontractors/alliances.

List of key customers.

If available, please provide a typical RFQ or RFP from a recent project competition.
Appendix C

Interview Response Forms
Core Ideology

1. **What are your core beliefs?**
   - Strength of the leader in providing the vision vs. the people?
   - Example of using these beliefs, how the company has reacted in the past.

   a. Statements of ideology.
   b. Historical continuity of ideology
   c. Consistency of actions

1. Response
## 2 Audacious Goals

*What long term goal is the company currently pursuing?*

Alignment with core beliefs, consistency?

Highly risky, bold, cause for internal doubt?

Goals attained in the past and pipeline goals for the future?

Do they motivate people? Will they be reached no matter what?

<table>
<thead>
<tr>
<th>a. Use of goals for progress</th>
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<tbody>
<tr>
<td>b. Are they ambitious?</td>
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<td>c. Historical pattern of goals</td>
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</table>

## 2 Response
3 Cult-Like Culture

Describe the culture of the company.
How do you orient, socialize internally, promote individual initiative?
How do you handle lessons learned, mistakes and tightness of fit?
Does the culture fuel the company?
How many people leave after 5 years? Retention rate.

a. Indoctrination
b. Tightness of fit
c. Elitism, special place.

3 Response
4 Purposeful Evolution

What are your key growth areas and how have you gotten there?
Strategic shifts or moves.
New ideas, variations, seizing opportunities to serve customers.
Operational autonomy, promote risk taking, trying new things,
sharing ideas with management.

a. Use of steps to improve/ grow
b. Operational autonomy of people.
5 Management Continuity

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
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<tbody>
<tr>
<td>How are you planning for succession?</td>
<td>a. Internal vs. external leaders</td>
</tr>
<tr>
<td>How many senior staff have been imported from outside?</td>
<td>b. Formal mgmt development</td>
</tr>
<tr>
<td>How do you pick and develop the next generation of management?</td>
<td>c. Careful succession planning</td>
</tr>
</tbody>
</table>
6 Self-Improvement

What are you doing to invest in the future while doing well today?

a. Investment in long term growth? Investment in people, technology, systems, etc.

Market leader, first to adopt a new idea or process, innovative, progressive atmosphere.
How do you motivate people, mechanisms to create discomfort in house - competitions, performance ratings.
How do you continue to build for the long term even during difficult times?

6 Response