

Introduction

The need to shift the attitudes of people working in an organization is recognized by many leaders, especially the leader who has led successful organizations in the past and takes responsibility for the leadership of a different organization. This leader's new charge may be a respectable and good organization, "good" in this case being a barrier to achieving the level of greatness required for the organization's next set of challenges.¹ In other cases, the new charge may be poorly performing, and the leader's challenge is to completely transform the performance of the organization from poor to great.



The challenge is rooted in ideas that production a *transaction trap*, in which people attempt to coordinate work as a series of transactions between silos, and within silos between individuals. Today's transaction traps were reinforced by how the Industrial Revolution shaped thinking about how systems of work best performed. The physical machinery of industry is a collection of individual parts, for which performance is easily

measured. Improve the part, and the system is improved.

This perspective, transferred to people, creates a dynamic in which individual performance is rewarded. Unlike industrial machines, people are clever, and this cleverness resulted in management systems with conflicting reward structures. These conflicts foster internal competition, hindering the ability of an organization to perform its declared mission.

The building design and construction industry includes an extra layer of complexity to this leadership challenge for people responsible for large capital programs. In addition to a building program owner organization's culture, there are multiple separate project organizations that are comprised of often dozens of project stakeholder companies. These companies are conditioned to operate as groups of siloed experts rather than as a highly coordinated unit. Any coordination breakdown that occurs within a single organization is easily exponentially increased in a large project team.

Addressing this organizational friction requires reshaping long-conditioned attitudes and practices from that of independent performance to interdependent performance. As this embodies the range of understanding of who people are as an organization, what

their role in the organization is, and how they are to best work in this role, the changes required are appropriately understood to as a culture shift.

The balance of this article identifies key themes informing high performing cultures and concludes with actions leaders may consider in leading a culture shift. The themes and actions are culled from research and observations by others and me of highly successful organizations and project teams.

Core Culture Shift Themes

People Are Biologically Altruistic

Neuroscientist Matthew Lieberman observes in his book *Social* that people are biologically wired to perform altruistic acts. When thinking about acts performed or anticipated that contribute to another person or group without personal benefit the pleasure centers in our brain display activity when observed through functional magnetic resonance imaging (fMRI) scans.² Based on his research Lieberman asserts that most people appear conditioned to explain their efforts as serving some personal self-interest, even when there is no identifiable explicit or implicit benefit to those people.

There is a cultural conditioning that people are “what’s in it for me” (WIIFM) in nature. While individuals have basic survival needs even those needs are often met through group coordination. A

detriment of WIIFM conditioning is that beyond basic needs it justifies sub-optimization within organizations and project teams while eroding trust in other people’s motivations.

Our natural altruistic natures do pose risks in group work. During a project core management group leadership workshop one of the members identified that he felt burdened by all the responsibilities his role entailed. He had been carrying this load without telling anyone else in the group. While his intention was service to the project the workload had the potential to harm his long-term contribution. Recognizing this, the other core group members worked with him to devise a plan to more equitably distribute the workload.



People Respond Differently in an Environment of Trust and Cooperation

A very clear example of the impact that trust and cooperation have on the people working in an organization comes from the experience of the New United Motor Manufacturing (NUMMI) experiment began in 1984. That year

Toyota and General Motors began manufacturing cars in Fremont, California, as a joint venture operation. The manufacturing facility in Fremont had been shut down in 1982, retired as one of the worst performing factories for General Motors, a company with a less than stellar manufacturing track record across its facilities.

With Toyota taking the lead in managing plant operations for NUMMI, 80% of the assembly workers hired for the plant were former workers for the previous General Motors leadership. The plant operations under the NUMMI leadership became one of the best performing car factories in the world, with largely the very same workforce on the assembly line.³ Factors credited with this success include a commitment to a shared destiny between leaders, managers, and workers, and a focus on cooperation and quality.⁴



Trust and cooperation were not slogans. Workers were supported when they identified quality problems. There was a

sense, even among United Auto Workers (UAW) leaders such as George Nano, that NUMMI leadership was “committed to providing employees with a voice in their own destiny.” When an industry slowdown occurred in 1988, rather than lay off employees as did most manufacturers, NUMMI reduced production by 40% and redeployed people not required for production to training and problem solving.⁵

A similar if less dramatic impact is observable on building projects that authentically leverage the Last Planner System® and other lean-branded practices.⁶ Tasked with a collaborative role in planning and coordinating work, project team members recognize the value of optimizing workflow across the entire project and cooperating across disciplines to address unanticipated problems quickly and effectively.

Leaders Are Responsible for Culture

There are two key words in this section heading; “leaders,” and “culture.”

Leadership within high-performing groups is shared, distributed among the people in the group, all of whom have responsibilities as leaders. Each person has a responsibility for making decisions that will contribute to the results they and others are seeking.⁷ This often means influencing those with more authority in an organization.⁸ In a high performing organization and on such a

project people do not hide from leadership. They step forward when called or when they recognize the need.

Culture can be a confusing term due to the varying definitions people apply to the word. In the context of this article culture refers to what Gene Kim and Steve Spear label in their recent book, *Wiring the Winning Organization*, “social circuitry.” They define social circuitry as “the overlay of the processes, procedures, routines, and norms that enable people to do their work easily and well.” Their observation following this definition is that individuals want to work in a system that facilitates their success in addressing challenges and problems in support of a common purpose.⁹

An interesting question is whether the right blend of “processes, procedures, routines, and norms” creates an environment of trust and cooperation, or if that environment must john shook lei somehow first be cultivated to allow such a blend of practices to flourish. John Shook, who while at Toyota played a role in the NUMMI experiment, asserts that culture change happens through changing people’s actions rather than their thoughts. The tremendous success of the Fremont plant turnaround with largely the same group of people supports this assertion.¹⁰

A challenge to this action-based orientation for culture change is that the

workers understood the former General Motors assembly system, and so were primed to accept a new way of acting as a better alternative. Many UAW workers were brought to Japan by Toyota, so they could experience firsthand how the Toyota Production System supported an innate desire to produce quality work by participating in the assembly process. It’s most likely that new action and new thought were concurrent experiences for the NUMMI workers, the new thinking communicated through action, observation, and respect, the latter being an entirely new experience for these workers.



Building industry culture change for building project owner, design, and construction professionals from transactional and narrowly optimized to collaborative and optimized to support the project is more challenging than the change experienced at NUMMI. Most organizations working on a project have protective systems that identify and shield them from risks they may be unable to control. These systems include

barriers to information transfer out of a lack of trust that certain information will not be exploited by another member of the project team to the detriment others. Lacking trust, people will not fully engage in processes, procedures, routines, and norms proven to facilitate open and transparent communication and coordination.

These barriers exist between organizations on project teams, and often within many of those organizations, between divisions and departments. These barriers are sometimes unintentional. At dinner the evening following the first day of a two-day workshop for a developer I was asked to address silos within the company the next day. The executive sponsoring this workshop was shocked to find that people felt there were silos within the company. The conversation we held revealed that people did not always realize how the work they performed impacted others and that there was a need to make all their work visible and coordinated.

Agreements between parties such as the ConsensusDocs 305 Lean Addendum¹¹ establish a framework of shared expectations about how people will work together. Beyond establishing this framework, it is important that people become comfortable meeting these expectations, especially those people who find working in an environment with

a high level of transparency uncomfortable. It can be challenging to trust that revealing information that in a past project environment may have been a cause for caustic criticism is in a collaborative project environment a cause for others to offer help.

Some teams have found dedicating a small amount of time to discussing what the project means to them, and how their personal as well as professional strengths contribute to the project team, as a helpful means toward developing stronger personal connections with their colleagues. This happens both between colleagues within their organizations, and between colleagues from other organizations serving the project. These discussions, whether during informal lunches or as part of structured leadership workshops, strengthen personal bonds in ways that normally only happen outside the work environment.



A Focus on Shared Learning Supports Culture Shift

The main contributor to the success of organizations that significantly outperform their peers is the ability to learn and implement improvements quickly, as Steve Spear documents in *The High Velocity Edge*. The workplace as a continual source of team-based learning and discovery are central to the success of top performing organizations.¹² An emphasis on rapid learning through problem identification and solving supports a work environment in which the change that occurs through growth is normal rather than be resisted.



One of the early objectives of the core management group leading the design and construction of the Lakewood Family Health Center in suburban Cleveland was to establish a learning environment across the entire project. This project team was successful in lowering the cost of constructing the building to nearly 85% of expected market costs for a building with the same functional and aesthetic features. Every significant design decision was an opportunity for shared learning through the rapid development and exploration of options.

It was a series of continuous, small improvements through shared learning that compounded to produce a highly successful project.

Shared learning can also be accomplished through quick yet significant changes to how a segment of the work is accomplished. Art Byrne, writing in *The Lean Turnaround* about his experiences as CEO of Wiremold, described how radical one-week overhauls of production machinery set-up changeovers greatly increased production capabilities, and quickly changing mindsets regarding the value of collaboration. Production workers became converts to collaborative improvement work because the changes improved both their productivity and quality of work.¹³ The introduction of the Last Planner System, while a departure from traditional project management approaches, has a similar impact on productivity and culture.

The case studies in *The High Velocity Edge*, the work of the Lakewood team, and the record of quick improvements at Wiremold illustrate an important point regarding rapid learning and culture. Learning and problem solving when collaborative, involving people with varying skillsets and professional experiences, creates conditions supporting changes of mindsets from transactional to relational.

Honor the Past

Much of the language around the need for change, including culture change, is based on “transforming” from a way of working that is implicitly wrong toward a way of working that is implicitly virtuous. Design and construction focused transformation conversations use aggregated productivity analyses to persuade “holdouts” of the need for change.¹⁴ Comparisons such as that of the construction industry to a “dumpster fire” are offered to ridicule current practices.

True transformation, however, is not about flipping a binary switch from the bad way of working to the good way of working. Transformation is about continuous growth. While there should be abandonment of bad, and in cases truly awful, practices, there also needs to be recognition of the aspects of how some current practices worked well in the past and were in cases improvements over previous practices.

Vilifying the past rather than honoring the past increases resistance to change and can hinder the shifts in culture sought for an organization or project teams. People can see attacks on the past way of working as a critique on their personal professionalism, and then cause them to be antagonists rather than supporters of needed improvements.

Actions

The following are seven broad actions for leading a shift in culture from transactional to relational. Within each of these actions there are several supportive practices that together could fill a book. The first two actions address leadership actions, the middle three actions address the social aspect of change, and the last two actions address the technical aspect of change.

1. Take a Direct Role in Leading Culture Change

Leaders advocating the shift in culture need to take a direct role in leading and encouraging the work required. While it is possible to delegate culture change and see pockets of results, systemwide improvement require active engagement by the people with ultimate authority over the system.

2. Honor the Past to Enroll People in the Future.

Even when shifting cultures from transactional to relational it helps to recognize that the intentions of the people working in organizations and on projects has been to perform well. Identify accomplishments worth celebrating and describe how the shifts being made will support more such accomplishments. Make it clear that the changes are about improving the

system people work within to better support their skills, strengths, and the quality of their work experience.

3. Strengthen Personal Bonds to Develop a Foundation for Trust

Foster conversations within work groups of six to fifteen people that encourage people to explore and discuss their personal, non-professional strengths, in the context of how those strengths contribute to the work of the group. Work groups as used here refers to people that have a shared responsibility for accomplishing objectives, and therefore a strong need for mutual respect and trust. Personal, non-professional strengths are those such as being able to resolve a tense situation, the ability to make sure all voices are heard, and the willingness to tackle tedious work. These strengths vary between individuals, and while they support our professional work, they are apart from professional skills, such as project management, cost estimating, structural engineering, and field crew leadership. These discussions can take place as periodic short sessions or as part of a facilitated leadership workshop.

4. Encourage Appreciation for Shared Accomplishment

As part of the above conversations, encourage work groups to articulate a shared statement describing the impact they are making that benefits other people. While this statement should align

with and support the broader mission and vision for the organization or project, it also should be specific to that group, and personally meaningful to each person in the group. Some work groups have articulated the impact they are making in terms of helping the community a project supports. Other work groups have articulated the impact they are making on how they are helping other members of the project team. Either is fine, the value being in the meaningfulness and intrinsic motivation for collaborative work the statement promotes.

5. Read and Discuss Books About Collaborative Team Cultures

A study action team is a structure for learning from a book and implementing ideas from that book to improve some aspect of collaborative work. Between regular group discussions people in a work group read the same chapter or chapters of a book. The discussions focus on how the ideas in the book bear on the work the group is doing. From these discussions the work group generates ideas for improvements to their work. Good books supporting collaborative team cultures include *The Fearless Organization*,¹⁵ *Excellence Now*,¹⁶ and *Everybody Matters*.¹⁷

6. Make All Processes Visible for Shared Clarity and Ongoing Improvement

Request people make the work of the organization and project visible, in terms

of process maps and checklists. Often the way work is accomplished is maintained as tacit knowledge that varies between people. Visually mapping processes helps people align on how tasks that require the support of several people are being performed. These maps then become a foundation for improvement. This helps shift the culture by helping people see how their individual work best supports the broader objectives of the team's work.

7. Leverage the Power of Proven Practices

Introduce proven collaboration practices that support the coordination of work, and the effort required to accomplish the work. The value of lean practices such as the Last Planner System, Target Value Delivery, and A3 Management is that they have been demonstrated to support the collaborative work of managing, designing, and constructing buildings. The impact of these practices can be quickly demonstrated in interactive workshops, which opens the intellectual and emotional gateways toward the acceptance of the culture shift. Beyond workshops, guidance in skill

practice development reinforces the appreciation for working within a relational context.

These actions are ongoing commitments people in organization and on projects make to each other. With vigilance, and the joyful spirit that comes from successful collaborations, work teams will avoid the transaction trap and be able to celebrate the results fostered by a relational environment.



RisingTerrain LLC equips building project teams working in design and construction with leadership, planning, and execution skills demonstrated to reduce project durations and costs, improve productivity, and deliver projects meeting clearly understood client goals.

¹ This theme of good performance hindering great performance is the first chapter of Jim Collins' book, *Good to Great*. Collins, Jim. *Good to Great. Why Some Companies Make the Leap... and Others Don't*, HarperBusiness, 2001.

² Lieberman, Matthew D. *Social: Why Our Brains Are Wired to Connect*. Broadway Books, 2013.

³ This experience is reportedly documented in a book published by NUMMI, *10 Years of Quality & Teamwork*. A copy of the book is not readily available, so the source for this information is a blog post by Mark Graban, <https://www.leanblog.org/2018/03/lessons-nummi-10th-anniversary-book-published-1994/>.

⁴ Graban, 2018.

⁵ Graban, 2018.

⁶ The Last Planner System® is a registered trademark of the Lean Construction Institute.

⁷ Jim Benson, writing in Chapter 8 of his book, *The Collaboration Equation*, has an insightful description of the problems generated by the anti-collaborative, superhuman characteristics often portrayed as leadership. The chapter effectively describes the importance and characteristics of collaborative leadership. Benson, Jim. *The Collaboration Equation: Strong Professionals, Strong Teams, Strong Delivery*. First Modus Cooperandi Press, 2022.

⁸ Unlike leadership, authority is not shared. Leadership and authority are different concepts. Position authority is granted to people with demonstrated capabilities to represent interests not party to project team conversations. In a project environment a project owner should share leadership responsibilities while retaining authority over budget and programming decisions as they have a fiduciary responsibility not held by other stakeholders on the project team.

⁹ Kim, Gene, and Steven J. Spear. *Wiring the Winning Organization: Liberating Our Collective Greatness Through Slowification, Simplification, and Amplification*. IT Revolution, 2023.

¹⁰ Shook, John. (2012, Winter). How to Change a Culture: Lessons from NUMMI. *MIT Sloan Management Review*.

¹¹ ConsensusDocs is a coalition of more than forty organizations representing professionals working in the architecture, engineering, and construction industry. The 305 Lean Addendum is designed to support project stakeholder's implementation of lean design and construction practices.

¹² Spear, Steven J. *The High-Velocity Edge: How Market Leaders Leverage Operational Excellence to Beat the Competition*. McGraw-Hill, 2009.

¹³ Byrne, Art. *The Lean Turnaround: How Business Leaders Use Lean Principles to Create Value and Transform Their Company*. McGraw-Hill, 2013.

¹⁴ Articles such as "US Construction Has a Productivity Problem," published by *Chicago Booth Review* from the University of Chicago (<https://www.chicagobooth.edu/review/us-construction-has-productivity-problem>) use aggregated data from the U.S. Bureau of Labor Statistics to assert that construction productivity lags manufacturing productivity and labor productivity generally. Even the Bureau of Labor Statistics has identified problems with their construction productivity measurements, as described in a January 2018 article published by the Bureau, *Measuring Productivity Growth in Construction*. (<https://www.bls.gov/opub/mlr/2018/article/pdf/measuring-productivity-growth-in-construction.pdf>)

¹⁵ Edmondson, Amy C. *The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth*. Wiley, 2019.

¹⁶ Peters, Tom. *Excellence Now: Extreme Humanism*. Networkling Publishing, 2021.

¹⁷ Chapman, Bob, and Raj Sisodia. *Everybody Matters: The Extraordinary Power of Caring for Your People Like Family*. Portfolio Penguin, 2015.