

MANUFACTURING LEADERSHIP JOURNAL

BOLD LEADERSHIP / APRIL 2018

Boeing's Additive Ambition

VP Kim Smith believes additive manufacturing has the ability to transform the aircraft maker's manufacturing strategy.

CRITICAL ISSUE

The Collaborative Enterprise

Survey: CE
Trudges
Forward

Cooley
Revamps
Its Culture

The New
Power
Of Lean



FORGING A CULTURE FOR COLLABORATION

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Daniel R. Dwight

Determined to successfully embrace M4.0, Cooley Group undertook a total operational transformation to create a collaborative culture that would drive long-term sustainable growth.





Daniel R. Dwight is President and Chief Executive Officer of Cooley Group, a position to which he was appointed in March of 2011. Previously, Dwight was a Partner and Cleantech & Renewable Energy Segment Leader for Tatum, President and CEO of Kronos Advanced Technologies, and a 17-year executive with GE in the Americas, Asia, and Europe. He holds a bachelor's degree from The University of Vermont and a master's in Business Administration from The University of Chicago Booth School of Business. Dwight is a member of the Manufacturing Leadership Council.

THE SHIFTING LANDSCAPE OF CONTEMPORARY INDUSTRY is profound enough to be deemed the fourth industrial revolution, or, as it's referred to more colloquially, Manufacturing 4.0 or Industry 4.0. This historic fourth round is precipitated by a rapid increase in the use of digitization, artificial intelligence, and big data to enable more rational and effective business decision-making. This technological shift is not only putting companies' bottom lines and corporate reputations at higher risk, but also challenging archaic doctrines in business leadership.

Conscientious companies are humbled by the ever-changing manufacturing environment. Rather than immediately succumbing to the peer pressure of adopting the latest digital manufacturing toy, Cooley resolved to look inward, viewing M4.0 as an opportunity to evolve our people, processes, and partners to the highest possible levels of operational efficiency. The result of this experiment in refined collaboration continues to unfold as we witness evergreen business successes, not to mention an overall increase in employee satisfaction in both our factories and our offices.

At Cooley, we define collaboration as the cross-functional and cross-cultural union of employees and business partners working collectively to achieve a mutually beneficial objective. With this idea in mind, we embarked on a total operational transformation.

Cooley -- a 90-year old company with the same affection for old habits as most people the same age -- appreciated that simply recognizing the need to evolve operationally beyond our entrenched hi-

erarchies and silos would be very different than attempting to enact effective and long-lasting transformation. Our business challenge begged the question: How do we develop a more collaborative culture intrinsically?

Refreshingly, we've found that the answer is not another corporate program laid on top of your existing business program. The right answer requires the transformation of the business culture by senior leadership with buy-in from all levels of personnel in all areas of the business. The transformation involves creating the right environment by identifying the right people in the right positions, implementing the right processes, and collaborating with the right partners.

At Cooley, this transformation in the name of increased collaboration resulted in a financial turnaround in the short-term while positioning the company for long-term sustainable growth. Determining the right concoction of elements that will lead to a more collaborative culture sounds (and certainly feels) daunting. However, using

Cooley Group as a use case, we break down each of the 'right' approaches to collaboration that worked for us to serve as a guide for our fellow industry and manufacturing partners to evolve their people and their processes in the same way.

Diversity Drives Collaboration

Understand the problem before embarking on a solution. With this helpful adage in mind, our first finding in the journey towards increased collaboration led us to this realization: The more diverse the company, the more challenging yet evermore essential collaboration becomes. Cooley's diverse product offerings are reflected in a diversity of global clients and culturally diverse employees. When you operate a company with many disparate parts -- as most manufacturing businesses do -- senior leaders interested in staying ahead of the latest business trends must be sensitive to the unique operational requirements of each disparate part.



Cooley C3® roofing membrane technology covering USBank Stadium (Super Bowl LII).

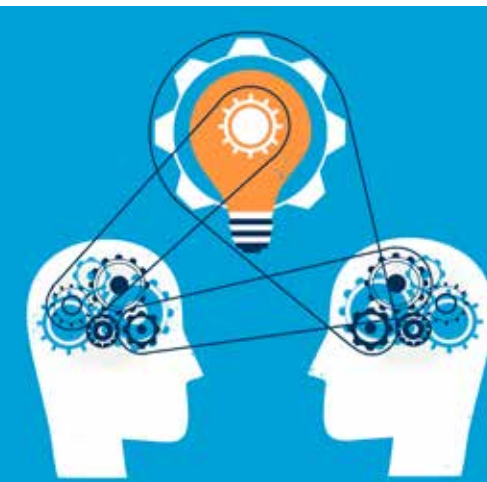


U.S. Military Combat Raiding Craft engineered from proprietary Cooley membrane technology.

In Cooley's case, we manufacture high-performance engineered membranes including water containment; combat raiding craft for the U.S. military (pictured above); fuel, oil and chemical containment geomembranes; commercial roofing; and sustainable commercial graphics substrates. Our latest roofing membrane on the USBank Stadium protected players and fans from the elements at Super Bowl LII. And our geomembranes protect the world's limited water resources in Israel, Australia, South Africa, and the United Arab Emirates. Each of these products serves a different functional purpose and each new country our clients call home operates with different cultural norms.

As Cooley endeavored to develop greater manufacturing solutions to protect global resources, to promote commercial brands,

Cooley had to get comfortable in the discomfort of relying wholeheartedly on internal and external collaboration.



and to support military requirements, we learned to get comfortable in the discomfort of relying wholeheartedly on internal and external collaboration.

Starting with a look inward, Cooley determined that there are three principles around which we have a zero-tolerance policy:

1. Operational Safety
2. Personal Integrity
3. Corporate Collaboration

The first two points seem obvious: safeguarding our employees' well-being as well as insisting on personal integrity in business operations big and small are paramount. However, adopting our less obvious but equally essential final principle of company-wide collaboration has reaped business and personnel rewards that shocked the very business leadership team that put these principles into place.

Inspiring the Team

The easiest way to determine if your business struggles with collaboration is first to evaluate your internal communications. How do your employees interact at meetings, over email, and on phone calls? Internal communications that aren't face-to-face (i.e., emails) are particularly telling. If you notice negative, frustrated even hostile inter-office messaging then you have

immediate feedback as to the deteriorated state of collaboration at your company.

At Cooley we have silos – physical silos that contain polymer compounds – as well as internal silos that pertain to separate functions, business units, and departments.

Pictured below are two sets of physical silos: one set old and the other new. The rusted, dented silos on the right are damaged as a re-



Physical silos at one of Cooley's Rhode Island manufacturing facilities.

sult of old-time measurement practices, one of which was when Cooley employees would throw rocks at the silo to determine the remaining volume of chemicals inside. To the left, the pristine white silos are equipped with electronic measurement meters that evaluate material volume without resorting to the archaic rock throwing method.

Just as Cooley no longer permits rock throwing to evaluate our physical silos, we've adopted a "no throwing rocks" culture when working with internal, functional silos. Prior to our collaboration transformation, negative emails would escalate to the senior lead-

ership level and we would placate them on an ad hoc basis. It wasn't until we conducted a full audit of internal communications that we realized the issue of poor cross-functional interaction was frighteningly endemic.

In one particular email thread, we found operations employees refusing to provide information to an internal customer service request, claiming they had "more important priorities to handle." The misalignment of priorities between silos was, in our experience, the number one source of interoffice hostility, and, yet, the first issue to resolve when we tackled a total cultural transformation in establishing collaboration as a non-negotiable business requirement.

To clarify, the term nonnegotiable is as threatening as it sounds. Where collaboration is concerned, you ought to be willing to let go of employees unwilling to work together – even in the case of your highest performers.

Setting Goals

While we were still in the nascent stages of evaluating internal challenges to collaboration without a clear exit strategy, the senior leadership team worked to define what successful collaboration might look like. We hoped that determining our end-goal would give us something to work towards. We settled on the following: For Cooley, success would be defined as exponential financial growth with no change in headcount; in other words, a significant company-wide productivity increase.

While financial growth was an exciting goal to keep front of mind, a simpler yet powerful morale-boosting way to think about a company-wide drive towards increased collaboration is do what is right. In our technological age of digitization, opti-

mization, and automation, just treating others as you would want to be treated is near-revolutionary. Doing right is easy when you are working through standard day-to-day processing. Doing right is exponentially more challenging when faced with inevitable operational mistakes. Human error is an opportunity for innovation – and should be viewed as such. In the context of collaboration, human error is an opportunity to adopt a collaboration mindset where Cooley would previously have enacted a theatrical performance of the Blame Game.

In the spirit of corporate collaboration, we conducted a company-wide review of employees. We held all personnel – regardless of level and division – to the highest standards, insisting on a total commitment to the team and to collaboration, without exception.

Placing the right people in the right positions while implementing a culture committed to collaboration demands that your leadership team needs to be the ultimate paragon of collaboration to set the tone for everyone else in your organization. While many would agree with the idea of collaboration in principle, implementation, although not always easy, is critical to a company's success. Recruiting, training, and retaining the right people with a commitment to collaboration is a major shift for most organizations and can take several years to fully implement.

At Cooley, implementation began with rebuilding the senior leadership team, a slow but worthwhile process. Once the leadership team commits to a more collaborative culture, it can begin the process of identifying which people, deeper within the organization, are not committed to collaboration and to the team. Once identified, these individuals can either be retrained or replaced -- again, without exception.

Using hostile internal communications

Cooley's success with collaboration has resulted in significant improvements in employee engagement, a doubling of production capacity, and six years of financial growth.

"The easiest way to determine if your business struggles with collaboration is first to evaluate your internal communications."



as a weathervane for poor collaboration, you may find – as Cooley did – that poor communications indicate a misalignment of personnel; that is to say, putting the right people in the wrong role. In our case, we realized a lot of the interoffice miscommunication was a result of hard-working, high-performers stuck in roles that didn't suit their skillsets. Moving employees to other roles was a huge win on the journey to increased collaboration that allowed us to retain some of our best employees.

While it's often easy to spot average performers who are not collaborative and retrain or replace them, a tougher leadership



Cooley's Vice President of Global Business Development and collaboration partner Dow Chemical observe the extrusion of a new membrane technology.

challenge is managing a star performer who is not committed to the collaborative approach. All companies have star performers on their teams -- people who are recognized by management and their peers for their consistently high performance. However, it is imperative that collaboration is required from them as well, which means retraining or replacing them, regardless of individual performance. Just like in sports, a strong team that plays well together will always win more often than an average team with a few star players.

At Cooley, the willingness of senior

leadership to let go of a star performer in the name of corporate collaboration was a turning point for the entire company. Through this experience, our people understood the gravity of leadership's commitment to establishing a corporate culture of collaboration. Transforming the corporate culture was challenging and at times painful; however, the successful implementation at Cooley has resulted in measurable productivity gains, a better working environment, and increased product quality. In fact, surveys of employees across the company suggest the retraining is worth the frustration as it enables an increase in personal gratification and work satisfaction across the entire organization.

The Right Processes

Although choosing the right people and providing the right environment are critical stepping stones to success, the right processes must also be implemented to empower and enable your people to collaborate. One of the most effective processes Cooley implemented in the name of collaboration was Cross-Functional Project (CFP) teams. Although there is nothing particularly unique about this approach (or the seven-step stage gate process), the depth and breadth of the implementation across the entire company was unique.

The creation of the CFP process involved organizing cross-functional teams featuring a variety of personnel from different levels and backgrounds across the entire company around specific problems or challenges that are material to the company's bottom line and require a cross-functional solution. With functional silos in a non-collaborative environment, Cooley employees (prior to collaboration transformation) often retorted, "it's not a functional

problem; therefore, it's not my problem."

The fact is that no matter the genre of problem, it's ultimately a business problem that requires a universal willingness to solve. Implementation of the CFP process company-wide has allowed for better identification of critical problems that cross functional boundaries, development of effective problem statements, and the ability to organize around the right team to identify and implement the right long-term solution, thereby preventing the recurrence of the problem or mistake.

Cooley manages the CFP process through daily and weekly cross-functional team meetings. The first Monday of every month, the CFP team leaders meet with the CFP Committee chaired by the CEO. Each team leader goes through a debrief of their CFP. While the CEO chairs the CFP, the meetings remain utterly democratic.

Neither the CEO nor the senior leadership team is above reproach. Each team member – including the most senior member of a given CFP – has a responsibility to contribute to the project as a whole and failure to do so is a topic of discussion at weekly meetings.

The CFP process has become a critical management tool at Cooley and it is owned by the CEO. A key outcome of this process has been the overall increase in employee engagement. As more employees were involved in projects outside of their own functional area, they became more vested

in the overall success of the company, thereby empowering and enriching each employee, each CFP team, and the company as a whole.

The Right Partners

Cross-functional project teams are not limited to internal employees. Cooley also has a number of collaborative partnerships with external parties. For example, Cooley currently engages in a polymeric partnership with Dow Chemical, DuPont, and other suppliers to develop new polymers. Additionally, Cooley manages CFPs with customers who work with us to develop, market, and sell new product solutions, including Johns Manville.

In our New Business Development pro-



cess, at least one customer is required to be a collaborative member of the project team. Customer input as Cooley designs,

"The fact is that no matter the genre of a problem, it's ultimately a business problem that requires a universal willingness to solve."



develops, and prototypes new products has been crucial to our new business development success and has resulted in consistently generating over 40% of our revenue annually from new products.

Depending on the problem or issue we are trying to resolve, the new market we are trying to enter, or new product we are trying to develop, Cooley enlists vendors, customers, and other third-parties to participate in our collaboration teams. We consistently seek out any internal and external resources necessary for long-term success.

Measuring Collaboration Success

Collaboration drives results. At Cooley, we've seen it. Through our collaboration efforts, Cooley's success has resulted in significant improvement in employee engagement -- 42% of employees are actively engaged in cross-functional projects. This includes 70% of the salaried personnel and 24% of our line operators. This renewed commitment to collaboration resulted in the doubling of production capacity (without adding any headcount or new production lines) and in six straight years of year-on-year revenue and profitability growth.

To call out a specific example, our Building Products Business doubled production output, grew revenue by 75%, improved quality and performance, and launched two new product lines with no increase in headcount. These results can be tied direct-

ly to the collaboration over 11 CFPs that were purposely designed and strategically implemented.

Clearly, Cooley has benefitted from a huge productivity gain from our collaboration efforts. Importantly, our employees are happier and more engaged in their own work, the work of their co-workers, and the



A cross-functional group of Cooley team members celebrate record revenues at the company's Annual Collaboration Meeting.

common goals of our company. They are more vested in fixing problems, overcoming mistakes, and celebrating the wins that are an integral part of the business process.

Collaboration 4.0 has truly been a driver of growth for our people, for our ability to innovate, for our product performance, and for our partnerships. In our experience, if you are willing to make the tough decisions regarding personnel, processes, and partnerships to establish a truly collaborative corporate culture, the financial rewards are not only inevitable but also infinitely more fun to celebrate alongside your committed employees, partners, and friends.

At Cooley, we celebrate our wins often and with gusto as each win is a result of our collaborative culture, people, processes, and partners. **M**