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**MOST INNOVATIVE
APPROACH TO
DRIVING CULTURE
CHANGE**



How to Build a Culture of Innovation

A case study of Arconic Technology Center's culture transformation
to drive innovation and deliver tangible business results

By: **Heather Gilmartin Adams** and **Gaurav Bhatnagar**
Co-Creation Partners Inc.

WITH CONTRIBUTIONS FROM:

Suze Faull and Shobha Nayar, Co-Creation Partners Inc.
Ray Kilmer and Ray Betz, Arconic Technology Center



How Arconic Technology Center Built a Culture of Innovation



Continuing our series of white papers on culture transformation in service of operational excellence, Co-Creation Partners is excited to share the story of Arconic Technology Center (ATC). Whereas our previous research focused on continuous improvement in the manufacturing sector, here we encounter a research and development organization that transformed itself into an innovation powerhouse for its parent company.

About ATC

ATC is a key research and development center for Arconic, a global leader in multi-material, precision-engineered products and solutions for high-growth markets. Featuring the world's largest lightweight metals lab, ATC employs about 500 scientists, engineers and support personnel

to help customers design and develop innovative solutions to challenging problems. Previously the Alcoa Technical Center, ATC became the Arconic Technology Center when Arconic separated in late 2016 from global aluminum leader Alcoa.

In Brief

From 2011 to 2015, ATC accomplished the near-impossible: while facing significant business pressure and enduring two major headcount reductions, the site achieved outstanding improvements in both business performance and organizational culture, transforming itself into a valued business partner for its customers across then-parent company Alcoa.

In particular, this five-year period saw the site increase revenue from licensing technology by about 500%; Degrees of Implementation (DIs)

with the business units by approximately 350%; and on-time delivery of high-priority projects by 22%. At the same time, ATC dramatically increased its Global Voices Survey (GVS) index scores: Leadership/Vision by 33%, employee engagement by 26%, performance excellence by 22%, and supervisor effectiveness by 20%.

In this paper, find out how ATC set a new strategic direction and transformed its culture to unleash its employees' potential and achieve these dramatic results.

SITUATION

When Ray Kilmer arrived at ATC in mid-2011 as its Chief Technology Officer and head of the site, he found a highly dysfunctional organization disconnected from its core customer base. The environment was characterized by fear, silos, internecine competition, bureaucracy and "behaviors that were selfish, in that they were very focused not even on ATC, but on whatever section that person worked for."¹ He "joked

that it felt like an amusement park that had closed down five years before. It used to be fun, but not anymore."²

Compounding these internal challenges were the headwinds then-parent company Alcoa faced as a whole. Profits had fallen dramatically, from a high of \$2.6 billion in 2007 to a loss of \$1.15 billion in 2009 and a profit of \$254 million in 2010.³ The price of aluminum

¹ Personal interview, senior executive, April 2016.

² Personal interview, Chief Technology Officer, April 2016.

³ Alcoa Annual Reports, 2007 and 2010, http://www.alcoa.com/global/en/investment/info_page/annual_report.asp

had plummeted more than 50% between 2008 and 2009 – volatility which led CEO Klaus Kleinfeld to set the company on a drastically different strategic path. Rather than remain dependent on the price of one commodity, Alcoa would focus on more value-added products and being a partner rather than just a supplier to manufacturers.⁴

ATC should have been at the forefront of this strategic shift, working with the business units to develop new, high-value products. The center existed, after all, to help the business units tackle their biggest technical challenges in innovative ways. Instead, ATC was seen as a “country club” where scientists were “doing funky experiments that aren’t really practical, and just playing all the time.”⁵ Project leaders struggled to find business units willing to fund research. Moreover, employee engagement scores had hovered between 51% and 56% since at least 2006.⁶ ATC was considered neither a good place to work, nor a good organization to work with.

But Ray Kilmer had a vision for a different ATC: a “more outward-looking, impactful organization” that could

help Alcoa not just survive, but thrive.⁷ One where “team-based innovation” and extensive collaboration made possible larger, more impactful, “meaningful projects that are critical to the businesses’ strategies.”⁸ He also wanted to make ATC financially independent, to help justify the company’s investment in long-term research that can take years to pay off. He set a goal of increasing revenue from licensing technology developed at the technical center by about 900% by 2015 and 3900% by 2020.⁹

Achieving Ray’s vision was not going to be an easy task. In addition to the dynamics mentioned above, the core group of employees at ATC consisted of deeply introverted scientists and engineers with strong task orientation and deep attention to detail. There was a great deal of resistance and fear of doing anything relational or, as they called it, “touchy-feely,”¹⁰ even though this relational work would allow ATC to collectively become a high performing organization and an effective business partner to the rest of Alcoa.

WHY TRANSFORM? A MANAGER’S TAKE

Ray Kilmer came into ATC into a culture where people were doing a lot of science, but a lot of that science was taking a really long time and it wasn’t making money. If you think of a government research center, they can do fundamental research, which is research for research’s sake...But in business, you don’t have time for that. It’s great if you have some projects like that, but the majority of your projects have to be making a financial impact on the company. That’s the reason you’re there. That wasn’t always happening at ATC...[and] what happens is your research center becomes irrelevant because the business units don’t want to fund it, because they aren’t seeing a return on investment.

“The reason for transformation was [to] bring people together to come up with ideas, make improvements, and change the culture to be more productive. There was a realization that there were so many silos on site, people weren’t working together, that there wasn’t much chance of changing things without doing something with the overall culture. It couldn’t be fixed just by leadership saying, ‘We need to make more money.’ Something fundamental needed to change.” — Manager

⁴ <http://triblive.com/mobile/4506645-96/alcoa-aluminum-center>.

⁵ Personal interview, senior leader, April 2016.

⁶ Personal interview, senior executive, April 2016.

⁷ Personal interview, senior executive, April 2016.

⁸ Personal interview, Chief Technology Officer, April 2016.

⁹ <http://triblive.com/mobile/4506645-96/alcoa-aluminum-center>.

¹⁰ Personal interview, senior executive, April 2016.

APPROACH

Ray Kilmer and other senior leaders at ATC recognized that to achieve this vision, “something drastic needed to happen to move forward.”¹¹ It was clear that galvanizing employee engagement teams, while important, would be insufficient to realize Ray’s aspirations.

In early 2012, Ray Betz joined ATC as the Director of Human Resources. At his previous company, he had experienced a large-scale culture transformation program and thought it could make the difference for ATC as well. He worked with Ray Kilmer to craft a more comprehensive approach, and together they led the charge to transform ATC’s culture into one that could foster and sustain the collaboration and innovation the company so badly needed.

In 2012, certain employee engagement initiatives were well underway, such as renovating the outdated cafeteria to create a welcoming space where people could connect as people. These human connections were an early and enduring theme in the site’s transformation. In addition, ATC introduced a large-scale culture effort to create a common set of culture skills, tools and language across the site. Together with Co-Creation Partners, they co-designed a holistic transformation program to foster understanding and conviction, role model desired behaviors, reinforce changes with formal mechanisms, develop technical and cultural skills, and communicate the new way. Underpinning the entire culture effort was one overarching theme – to move from a victim mindset to a mindset of “mastery,” or as they termed it in ATC, “It’s ME, not the LME!”¹²

Evaluate

The transformation program began with a comprehensive diagnostic that included mining the Global Voices Survey, conducting and analyzing a Barrett Cultural Values Assessment to identify the desired culture shifts, and holding focus groups and interviews with leaders and employees to understand the underlying mindsets that were creating ATC’s current culture.

ATC’s senior leaders collectively engaged with all this diagnostic information in a “mirror workshop,” where they closely reviewed the data and jointly identified the “FROM-TO” culture shifts that were needed to make ATC a high-performing organization. (Please see page 9 for more detail on the FROM-TO culture shifts.) The mirror workshop was an essential part of the transformation process because it established collective ownership of the culture work within ATC.

ATC’S CULTURE SHIFTS

FROM	TO
ISOLATED COUNTRY CLUB	VALUED BUSINESS PARTNER
SILOS	COLLABORATION
LOW INNOVATION	INNOVATION CULTURE
LACK OF ACCOUNTABILITY	PEOPLE TAKE OWNERSHIP

¹¹Personal interview, senior executive, April 2016.

¹²LME is the London Metals Exchange, which largely determines the price of aluminum.

Transform

The mirror session was followed by transformation workshops for senior leaders and employees selected to become Change Agents. The Change Agents were the informal leaders within the organization, the people who were deeply socially networked and whose word carried weight beyond their formal authority. They were not always the high performers or the natural cheerleaders – in fact, some were the hubs of resistance to change. These workshops took six days over approximately three months to allow participants to practice and

embed their learnings in their day-to-day work. Essential to these workshops was the focus on shifting participants' ways of "Being" before asking them to "Do" things differently. Thus the leaders and Change Agents first experienced a Leading Self workshop to work on transformation of individual belief systems. The focus then shifted to "Doing," with workshops and fieldwork on Leading Others and Leading (the System through) Transformation.

Embed & Sustain

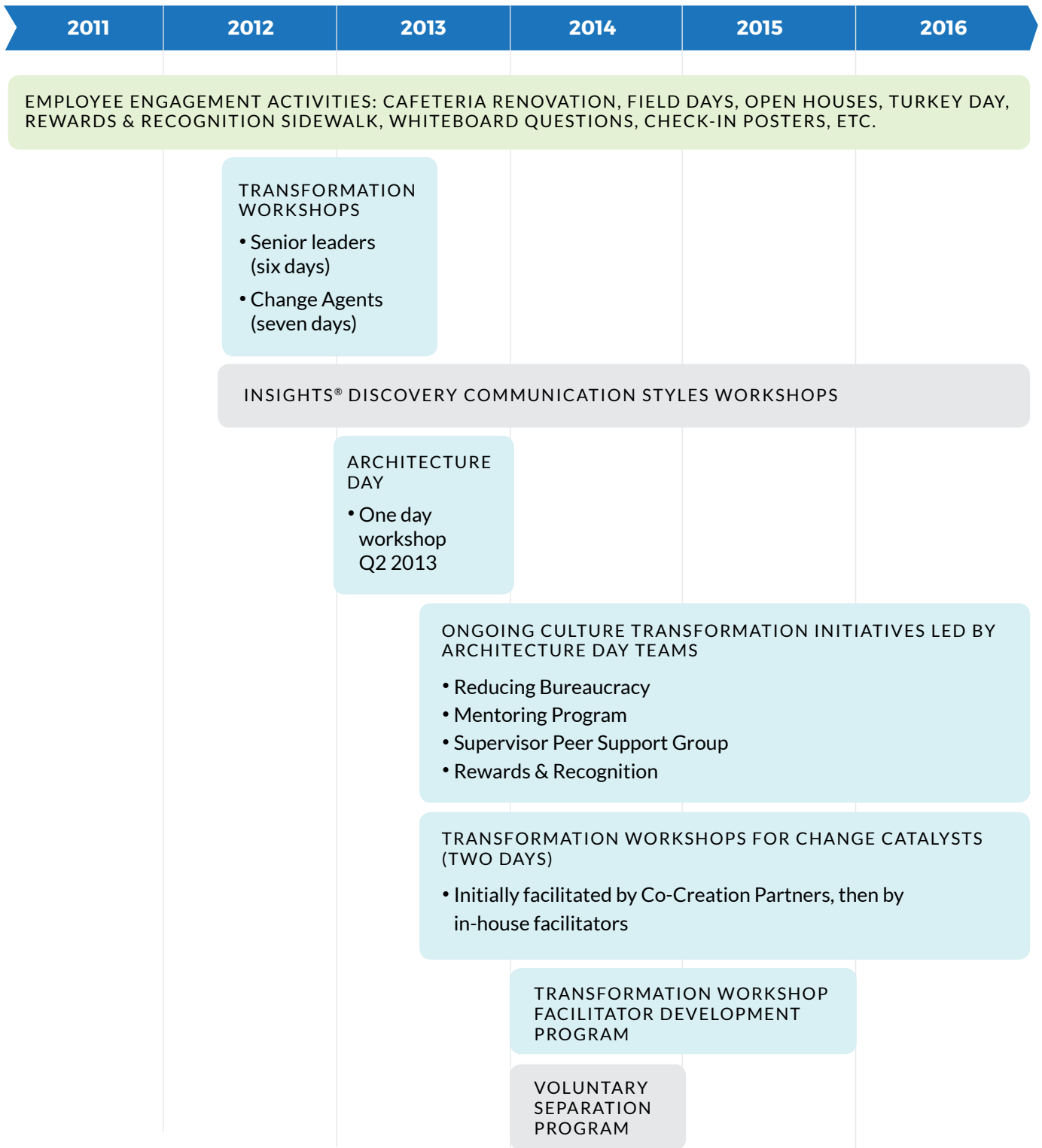
After leaders and Change Agents experienced the transformation workshops, they came together – 90 individuals in one room! – to architect the key initiatives that would drive the transformation over the coming months and years. In parallel to the work with Co-Creation Partners, the site also embarked on the Insights® Discovery program to allow everyone to understand the different information processing and communication styles of individuals, as well as how to work effectively in teams.

In many organizations, business realities and cost pressures often lead to actions that contradict the culture effort. At ATC, however, great thought was given to managing the business pressures the organization was facing in a way that would enhance the culture.

For example, the design of the voluntary separation program supported the culture transformation by inviting people to leave if they felt they could not shift in the direction the organization was moving. Rather than pushing people out the door, great dignity and respect was given to the employees who did indeed choose to voluntarily separate.

In 2014, recognizing the need to actively sustain the shifts that had been achieved, ATC asked Co-Creation Partners to train a cadre of in-house facilitators to deliver a two-day version of the transformation workshops. Transformation leaders set a goal of 100% participation in the two-day workshop, to be achieved by the end of 2016.

ATC CULTURE TRANSFORMATION JOURNEY | HIGH-LEVEL TIMELINE ¹³



¹³Information for this table taken from Co-Creation Partners internal information and personal interviews with ATC employees, April 2016.

RESULTS

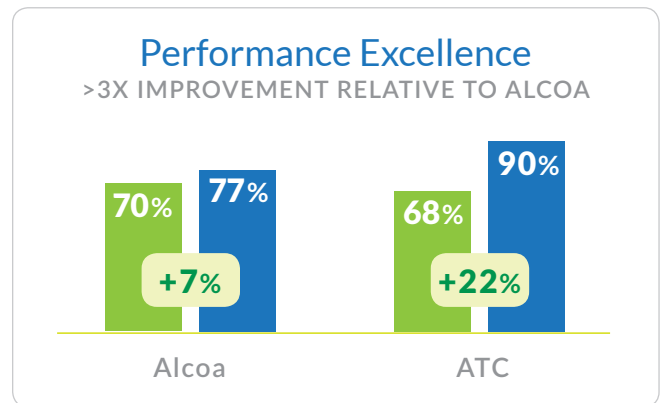
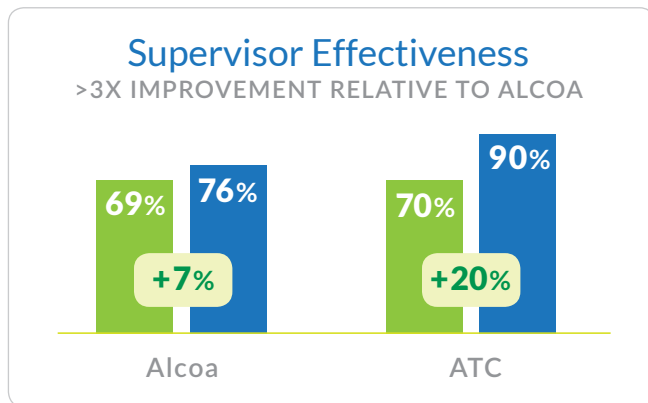
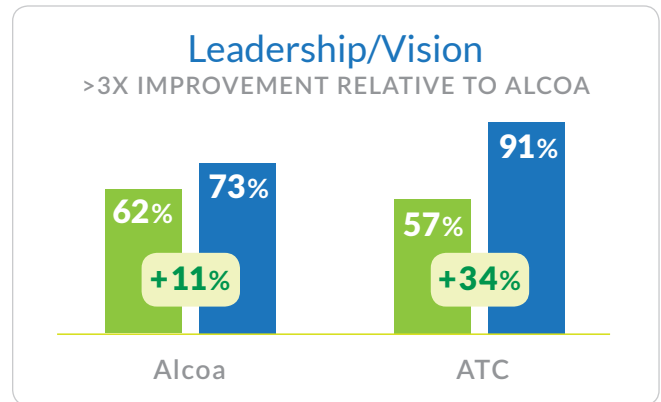
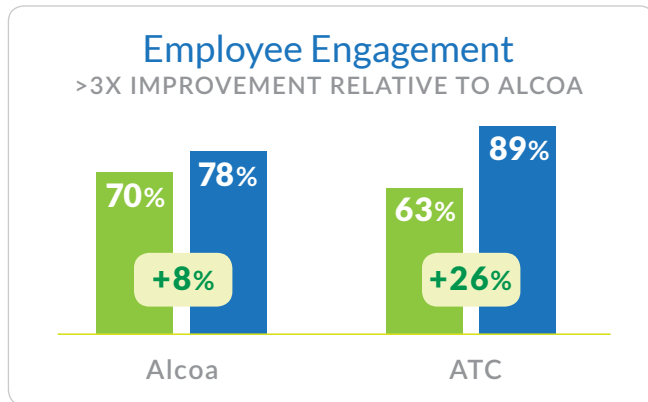
ATC achieved significant enhancements in its culture that led to both improved business performance and enhanced employee engagement.

Results | Business Impacts

- **Revenue from ATC-developed licensing technology up ~500%**
- **Degrees of Implementation (DIs) with Alcoa business units up ~350%**
- **On-time delivery rate of high priority project documentation up 22%**
– From 65% in 2012 to 87% in 2015
- **Significant improvement in ATC’s reputation among business units**, to the point that business units now ask ATC to lead and facilitate ideation and brainstorming on a regular basis. ATC has clearly established itself as a valuable business partner.

Results | Culture Impacts

ATC outpaced and far exceeded the rest of Alcoa on all key culture metrics on the Alcoa Global Voices Survey (GVS).

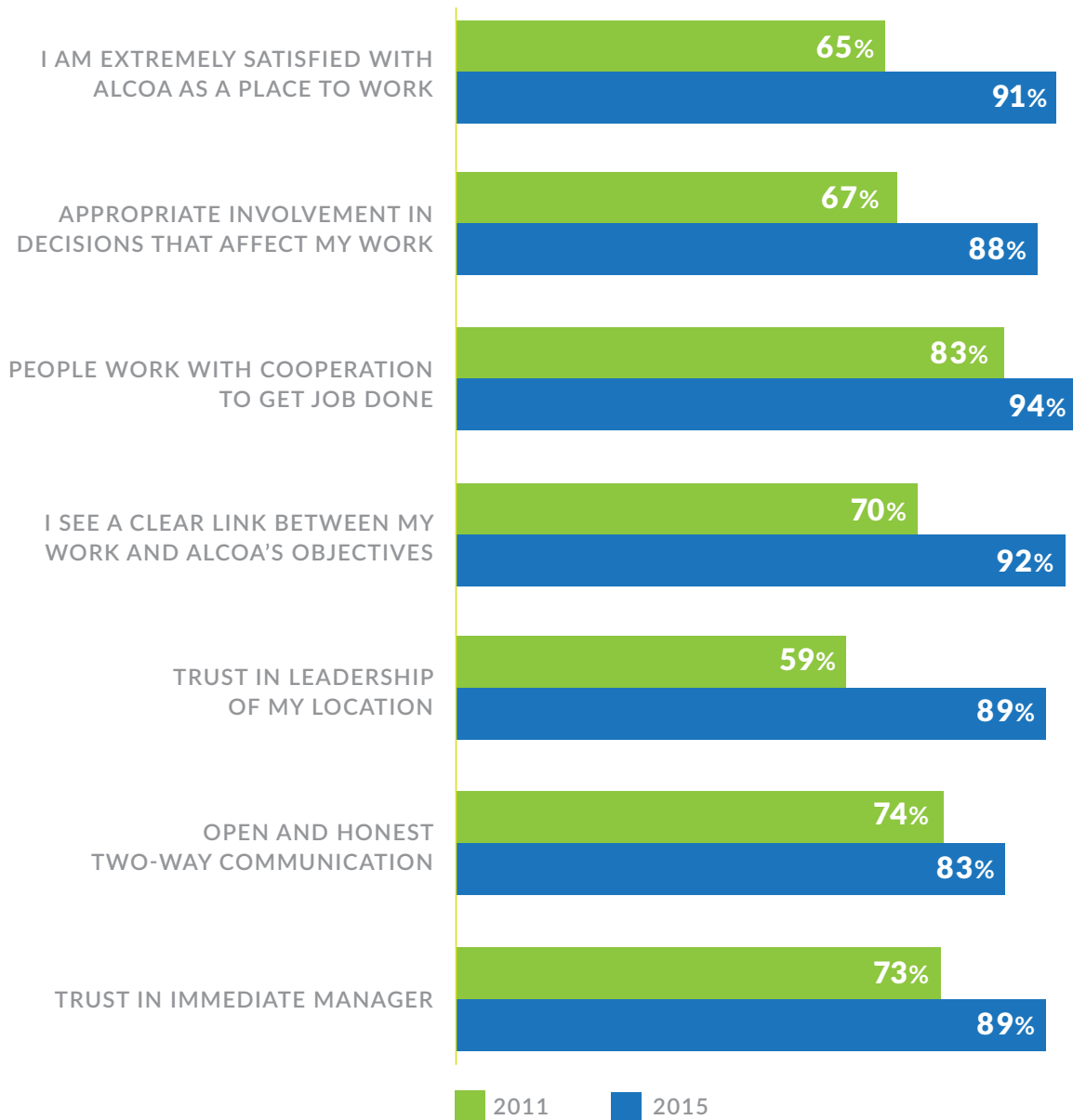


■ 2011 ■ 2015

¹⁴ Business impact information from personal interview, Chief Technology Officer, April 2016 and Grover, "Actively Fostering a Transformative Culture of Innovation in a Research and Development Environment."
¹⁵ All Culture impact information taken from the Alcoa Global Voices Surveys, 2012 and 2015.

The impressive improvements in culture indices were driven by a few key shifts.

Underpinning Drivers of ATC Culture Shifts



IMPROVED REPUTATION

"I think the transformation effort was...one of the most important things that have kept the technology center from going belly-up. Not belly-up from finances, but belly-up in terms of respect, prestige, and clout, and influence."

— Senior Leader

RESULTS | CULTURE SHIFTS

FROM	TO
<p>Isolated Country Club: “We didn’t have a good relationship with the business units. It was very adversarial...We would often argue with them and say what they were doing was stupid... Business units did not want to give us funding for projects because they didn’t trust us. They thought ATC was a country club... just playing all the time.” – Senior Leader</p> <p>“When I was offered the opportunity to come out here, I was like, ‘Nah!’ I wanted no part of this place. It was really considered an island. You never had any idea what went on out here. Nobody wanted to come here.” – Senior Executive</p>	<p>Valued Business Partner: Joint ideation sessions have increased, including sessions requested by the business units themselves. The sessions are becoming the norm. – Senior Leader</p> <p>There is more of a common vision and purpose. “People want to work on projects that will have a larger impact on the business and the bottom line.” This mindset has led to much more timely, more efficient project completion. – Senior Executive</p> <p>“I have a long context [decades with ATC] and I see that we’re more connected with the business needs than we were in the past.” – Director</p>
<p>Silos: Work groups operated highly independently, without knowing who they could reach out to for expertise on the problems they faced. For example, “Let’s say a business unit calls the chemistry department, and they describe the challenges they’re having... It used to be, ‘Okay, chemistry is going to get this funding, we’re going to be the ones to do it,’ even if other groups were better suited to help.” – Manager</p> <p>Project leaders competed with one another for funding. The mindset was, “What kind of projects should I put in place to fund my people, take care of my people, for the twelve months?” – Senior Executive</p> <p>In succession planning, leaders considered only employees already in their departments. Employees saw that, “advancement only happened if your leader left.” – Senior Executive</p>	<p>Collaboration: Joint ideation sessions have increased, including sessions requested by the business units themselves. The sessions are becoming the norm. – Senior Leader</p> <p>There is more of a common vision and purpose. “People want to work on projects that will have a larger impact on the business and the bottom line.” This mindset has led to much more timely, more efficient project completion. – Senior Executive</p> <p>“I have a long context [decades with ATC] and I see that we’re more connected with the business needs than we were in the past.” – Director</p>

RESULTS | CULTURE SHIFTS

FROM	TO
<p>Low Innovation: “If a program wasn’t driven by a business unit (e.g., they wanted to optimize a process to get better throughput), ATC wasn’t motivated to try to optimize or innovate. We wanted to do the same old same old. Because of that, the innovation pipeline was stagnant – in fact, it was nonexistent. ATC was driven by what we could deliver to the BUs when they asked.” –Senior Program Manager</p>	<p>Innovation Culture: “We’re innovating technologies and presenting them to the business units with a case for why they should adopt them. If they aren’t interested, we have the Alcoa Venture Group, which goes out and looks for business... Or ATC takes on the technology and commercializes it ourselves. That’s way out of scope of what we used to do.” – Senior Program Manager</p>
<p>Lack of Accountability: People were unwilling to take responsibility for decisions about projects. “When we had a program, nobody wanted to take charge and lead it.” – Senior Program Manager</p>	<p>People Take Ownership: “People have been more willing to step forward and take something on that’s different from where they’ve historically been.” – Director</p>

REFLECTION

Reflection | Key Success Factors

Lessons learned from ATC's culture transformation highlighted five factors that enabled the site's success.

SUCCESS FACTOR 1: A HOLISTIC APPROACH TO CULTURE TRANSFORMATION

ATC was not the only department in Alcoa that took action to improve culture. In response to the statement on the Global Voices Survey, "I have seen tangible actions as a result of last year's survey," ATC improved 41% between 2011 and 2015 while Alcoa as a whole increased by 33%.¹⁶ However, improvement in employee engagement at ATC was three times that of the rest of Alcoa. So what did ATC do that was different? ATC engaged in a holistic culture transformation program that started with the individual and expanded to impact the entire system. This holistic approach facilitated fundamental shifts in individuals' mindsets that were sustained by supporting shifts in the environment at ATC.

SUCCESS FACTOR 2: CONNECTING PEOPLE AS PEOPLE

Events that brought people together outside of work, combined with transformation workshops that made space for individuals to share themselves with others, created an environment where ATC employees saw one another in a different light, on a human level. Events included an annual Turkey Day as well as field days, open houses, taco trucks and a lunch tent in warm weather, and more. These efforts "broke down walls" and allowed people to "see they have the same concerns I do, rather than the us-versus-them that was often set up when we had more silos in place."¹⁷ The mentality is now, "It doesn't just have to be about work. We can care about each other, and care about our work, and get our work done all at the same time."¹⁸ In addition, the professional networking that naturally occurred in these social settings fostered the cross-silo collaboration and innovation the site needed.

PERSONAL CONNECTIONS FOSTER BUSINESS IMPROVEMENTS

"There is no shortage of brilliant, brilliant people at ATC...[but] how does someone take their brilliant idea and turn it into something that makes sense and could make money? The transformation skills really come in that more organic environment because you have scientists that aren't necessarily business people that need to know how to collaborate with others in order to figure out if their idea (that they really want to work on, and they really want money for) is viable. So having them bring the right people together, and work together, for individuals that are very much introverted, from a demographic standpoint on site, is difficult. So the transformation skills really help in those organic situations"

— Manager

¹⁶ Alcoa Global Voices Survey, ATC results, 2012 and 2015.

¹⁷ Personal interview, director, April 2016.

¹⁸ Personal interview, special projects coordinator, April 2016.

SUCCESS FACTOR 3: BOLSTERING SKILLS IN TRANSFORMATION AND COMMUNICATION

A major underpinning of ATC's success was providing all employees with a common foundation to understand differences and talk through disagreements. The Insights® Discovery communication styles workshops helped employees understand others who may not think or operate like them, while the culture transformation workshops provided a common platform to talk about where ATC wanted to go and how to get there. In personal interviews, ATC employees said they continue to draw on concepts introduced in the workshops, such as the communication style colors, balcony and dance, above-the-line/below-the-line, and the iceberg.

In addition to supporting personal transformation and effectiveness at work, these tools fostered a common language for employees to have difficult conversations and work out problems. "Having the common language... being able to say to someone without it being personally offensive that something is 'below the line,' for example... gave us a common basis to have these [difficult] conversations. It's not personal; this is the way we agreed we're going to operate."¹⁹

COMMON LANGUAGE FOR RESOLVING DIFFERENCES

The transformation and communication styles workshops have helped people become comfortable giving others the benefit of the doubt. "When someone says, 'You can't believe what so-and-so did!' or, 'I can't believe so-and-so said that. He's usually so nice...' now I say, or I hear someone else say, 'We don't know what's below his iceberg. Let's give him the benefit of the doubt and see what tomorrow brings.'"

— Special Projects Coordinator

SUCCESS FACTOR 4: LEADERSHIP SUPPORT AND ROLE MODELING

Leaders cast long shadows in an organization. Whether the leadership is based on a position of authority or on social weight, people observe leaders' behavior and model themselves after what they see. If leaders adopt desired mindsets and role model desired behaviors, the transformation has a much higher chance of success. At ATC, three groups of leaders helped maintain energy and focus around the transformation: Ray Kilmer and the senior leadership team; the Transformation Leaders (four employees selected to manage transformation efforts across the site); and Change Agents (all employees who went through the six-day training). All of these leaders embodied the new culture and set an example of the new way.

In personal interviews, ATC employees highlighted Ray Kilmer's role modeling as a special key to the transformation's success. He has an exceptional ability to be vulnerable to the workforce, to convey his vision and to lead by example. Ray himself reflected, "I've come back and apologized to people. I'll say, 'Look, yesterday I was under a lot of stress. I was frustrated and I took it out on you guys, and I'm sorry.' If you hold yourself accountable and see that we're all in it together, that's what works."²⁰ In addition, rotating the Transformation Leaders every year or so helped maintain energy and bring in fresh ideas.

¹⁹ Personal interview, director, April 2016.

²⁰ Personal interview, Chief Technology Officer, April 2016.

THE IMPORTANCE OF SENIOR LEADERS

“Being really analytical here, we think we can solve something right out of the gate. You give us a problem, and snap! Within hours, it’s solved. And that’s just not the case here. It’s a journey. And leadership kept embracing the journey and bringing it to the forefront. It wasn’t like a flavor of the month and then we’re done. It’s evolutionary, not revolutionary.”
— Manager

“You also have to have the full endorsement of the leadership. The leader and his direct reports have to go through the full workshops. It’s not one of those things where, ‘We’re doing this for the people. We’re in a white ivory tower over here and don’t need to go through that.’ That’s total B.S. Just because you get three million dollars a year and you’ve got stock options and you drive a Porsche and you live in Westchester County doesn’t mean you’re better than anyone else, specifically when it comes to behaviors... We’re all equal when it comes to behaviors. The true leader is the one who recognizes, ‘I can be better.’”
— Senior Leader

SUCCESS FACTOR 5: INVOLVING THE RIGHT PEOPLE

ATC made concerted efforts not only to select the right people to formally and informally lead the transformation, but also to ensure the right people comprised the organization as a whole. The voluntary separation program introduced in 2014 had two major objectives: to enhance business continuity in preparation for a wave of expected retirements, and to enable people who did not buy into the culture transformation to leave in a supported way. As a result of this program, the organization’s demographics shifted dramatically, which supported the culture transformation because new employees joined an energized organization and strengthened what was already there.²¹ Selecting the right people to lead the transformation was an equally important decision, as they set the tone and maintained energy for the transformation at the ground level.

BRINGING IN THE RIGHT PEOPLE

“There is less fear about going out and grabbing something – less fear about retribution and consequences. The passion, desire, aggressiveness that I’m seeing in all these new people is incredible. If they had come into the organization when there was still a mindset of fear, they would have been stifled and wanted to leave the organization.” — Special Projects Coordinator

*“I loved the approach that change agents can be from the negative leaders. Intentionally making those people part of the process, and leading some of it – if you get those people on board, that’s the key. You’re always going to have the natural cheerleaders who are going to be on board no matter what you’re trying to do, but when you start getting the people who have always been the skeptics and the naysayers and they’re buying into it, then you start to get a lot of others in the organization saying *hmm, there must be something to this..*”* — Senior Leader

²¹ Personal interview, senior executive, April 2016.

CONCLUSION

What's Next For ATC?

ATC executed an extraordinary transformation, evolving from an isolated and siloed part of then-parent company Alcoa to an integral business partner and high-performing organization even in the face of significant headwinds.

Five years into the transformation, ATC is not resting on its laurels. Site leaders and employees, from Ray Kilmer to Transformation Leaders to front line

staff, understand that transformation is a journey rather than a project with a set destination – in Ray's words, "It's a forever process."²² With this in mind, the transformation journey has just been taken over by the fourth set of transformation leaders. We are excited to see to what new heights of performance these leaders take ATC as part of Arconic – where the mantra is "Innovation, Engineered."

WHO WE ARE


Founded in 2010, Co-Creation Partners is one of the few organizations able to facilitate holistic transformation of the human system within an organization by addressing the individual, team and systemic aspects of transformation. We have a proven track record in enabling profound, sustainable organizational culture transformations that deliver extraordinary business results for our clients. We have a deep sense of ownership and pride in our clients' organization's transformations. Our benchmark of success is when we make ourselves redundant.


CONTACT US

To find out more about our approach and credentials contact:
Gaurav_Bhatnagar@cocreationpartners.com
heather@cocreationpartners.com

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www.cocreationpartners.com

²²Personal interview, Chief Technology Officer, April 2016.