

# CMWG Talking Points

May 30, 2017

[Slide 2]

You might have heard this quote from famed management guru Peter Drucker, “Culture eats strategy for breakfast.” It highlights the importance of culture to the success of an organization even above other important things like the organization’s strategy.

[Slide 3]

You might know that “culture” was Merriam-Webster’s Word of the Year in 2014 based on searches on its dictionary site. People were clearly interested in culture if they were searching for its definition.

[Slide 4]

You might have heard someone use this buzzword: DevOps. It’s kind of a thing.

[Slide 5]

If you’ve heard of DevOps, you might also be familiar with this acronym – “CALMS” – coined by John Willis, Damon Edwards, and Jez Humble – members of the DevOps Illuminati. CALMS identifies five key aspects of what DevOps is all about. “Culture” is one of those key aspects. “Sharing”, which is related to culture, is also a key aspect.

[Slide 6]

We’re going to do a quick exercise. Over the next 30 seconds, think about how you would describe your organization’s culture. I’m going to call on a few of you for your answers at the end of the 30 seconds.

[Slide 7]

I’m not actually going to call on anyone. Relieved? How did that feel? Confusing? Stressful? We know culture is a thing. And we believe that thing is important. And yet, when you ask someone to describe their organization’s culture, you often get this “deer in the headlights” look.

[Slide 8]

Once the shock of the initial question wears off, the words begin to flow. Words like “fun”, “friendly”, “collaborative”, “dynamic”, and “innovative”. You might have thought of some of these words when describing your own culture. Words that might give some sense of the vibe of what it’s like to work there, but aren’t that meaningful in terms of how they contribute to the performance of the organization. How does being “fun” and “dynamic” help the organization win?

[Slide 9]

We’re left with this realization that culture is hard to describe in any meaningful way.

[Slide 10]

Because culture is hard to describe, it's also hard to measure.

[Slide 11]

And if culture is hard to measure, it's also hard to change because you won't know if anything you're doing is having any effect on it.

[Slide 12]

But what's the big deal? So what if culture is hard to describe, measure, and change? Why is that important?

[Slide 13]

You might have read the State of DevOps Reports. If you haven't, I would strongly encourage you to do that. In those reports we see metrics showing how much high-performing organizations are outperforming their non-high-performing peers. In the 2016 report, we saw metrics like 200 times more frequent deploys, 2500 times faster lead times, 24 times faster mean time to recover, and three times lower change failure rate.

[Slide 14]

The 2015 State of DevOps Report also had a very interesting finding. It made the case that certain cultural attributes predicted higher levels of IT performance in terms of throughput and stability, and higher levels of organizational performance, in terms of productivity, profitability, and market share. Culture predicts both IT performance and organizational performance.

[Slide 15]

How do we know this? Because science. If you're a statistics geek, you can read this paper by Nicole Forsgren and Jez Humble, two of the people behind the State of DevOps Reports. The paper explains all the science and statistics used to come to those conclusions, including partial least squares, beta coefficients, and R-squared measures – if you're into that sort of thing.

There's one more important conclusion in the paper that wasn't called out in the report and that is culture also predicts lower levels of burnout. We'll come back to that later.

[Slide 16]

Science now tells us something we probably already knew in our heart of hearts. Culture contributes to more successful organizations...

[Slide 17]

And happier employees.

[Slide 18]

I've tried to make the case so far that culture is a thing and it's an important thing that contributes to the success of organizations and happiness of employees. But what is culture?

How do we get beyond the “deer in the headlights” response and flow of words like “fun” and “dynamic” to help us describe, measure, and hopefully even change culture?

[Slide 18]

One tool we have is based on the work of Dr. Ron Westrum. Westrum is a sociologist who created a typology to describe organizational cultures based on how they shared information and responded to failures and mistakes.

Westrum’s typology identifies three cultures: pathological, bureaucratic, and generative. Pathological cultures are characterized by low cooperation, messengers being shot when they deliver bad news, and novelty being crushed. Bureaucratic cultures are characterized by some cooperation, messengers being ignored or neglected, and the attitude that novelty creates problems. Generative cultures are characterized by high cooperation, especially across organizational boundaries, messengers being trained to deliver bad news, and novelty being celebrated and implemented. You might already have a sense for where your own organizational culture falls in this typology.

[Slide 20]

This generative response to failure is also reflected in a blog post by John Allspaw, one of the fathers of the DevOps movement. Allspaw talks about the engineering culture at Etsy and their use of blameless postmortems to learn and improve. People not familiar with blameless postmortems often leap to the conclusion that blamelessness really means a lack of accountability. Allspaw refutes that. He says it’s about creating a safe environment for people to share and be honest, which actually promotes accountability, and has the added benefit of helping the organization learn from failure and improve performance. Allspaw references the term “just culture” to encapsulate this balance between safety and accountability.

[Slide 21]

Allspaw built on the work of Sydney Dekker, who coined the term “Just Culture” – as in, “a culture that is just”. Dekker worked in the airline industry investigating accidents and incidents, trying to figure out what caused them and how they happened. He made some pretty countercultural conclusions. First, he said instead of punishing people for making mistakes, which then makes people less willing to acknowledge mistakes and ironically makes those mistakes more likely to happen again, use those mistakes as opportunities to learn and improve. Second, you can’t eliminate mistakes entirely because we live in a complex world. So accept mistakes as a fact of life and learn from them what you can.

[Slide 22]

Dekker highlights a case study where an organization didn't take this approach. There was a criminal prosecution of air traffic controllers involved in a runway incident. In the year following that prosecution, there was a 50% drop in reported incidents. Incidents were still happening. They just weren’t being reported and the organization lost the opportunity to learn from all of the unreported incidents, which then made air travel less safe.

[Slide 23]

We need to create an environment that strikes a healthy balance between accountability for mistakes and learning from those mistakes.

[Slide 24]

To create the kind of environment that strikes the healthy balance between accountability and learning, we need to make people feel safe to share mistakes, errors, and failure. We need to increase psychological safety. You can assess psychological safety by measuring how strongly people respond to the statement, “If I make a mistake on our team, it is not held against me.” Do people strongly disagree with that statement? Do people strongly agree with that statement? Or are they somewhere in the middle?

[Slide 25]

To reinforce how important psychological safety is, Google did a study a few years ago of hundreds of teams within Google. They found psychological safety was “far and away the most important dynamic” that set successful teams apart from other teams. Google’s description of psychological safety was that team members felt safe to take risks, knowing they might make a mistake, and be vulnerable in front of each other, including admitting mistakes and taking accountability for them.

[Slide 26]

Google’s finding is supported by more science, specifically research from Amy Edmondson around psychological safety and its impact on team learning. Edmondson found that the more team members felt safe with each other, the more they engaged in learning behaviors like seeking feedback and discussing errors. She also found that the more team members engaged in those learning behaviors, the better the performance of the team.

[Slide 27]

Safety, learning, and performance are all connected. The safer you feel, the more you learn. The more you learn, the better you perform.

[Slide 28]

We’ve covered that culture is a thing and an important one because it’s connected to performance. I’ve suggested some ways to describe culture using Westrum’s culture typology, Dekker’s “Just Culture”, and Edmondson’s concept of psychological safety. Now let’s assume you don’t have the culture that you want. How do you change culture so you can improve team, IT, and organizational performance?

[Slide 29]

One tactic we can use is to assess our culture. Now that we have better tools for describing our culture, we should be able to measure it better, too.

[Slide 30]

Gene Kim, Nicole Forsgren, and Jez Humble formed a company last year called DORA, DevOps Research and Assessment, based on their work with the State of DevOps Reports. Warning: this is going to sound like a commercial. I don't intend it to be that way, but I do think they're doing something pretty interesting. They took the survey instrument from the State of DevOps Reports with all the data, and packaged it into a service companies can use to assess their own DevOps transformation. Capital One and Verizon have both used it with good results.

[Slide 31]

In addition to aspects of DevOps like a lean practices, automation, and measurement, DORA can also give you insights on your organization's cultural capabilities like Westrum's culture typology, learning climate, collaboration, and job satisfaction. It can also show you where you stand against industry benchmarks for both high-performing organizations and the industry overall.

[Slide 32]

DORA also isn't free. If you're on a budget and looking to do something more homegrown, you can use the questions that are in Nicole Forsgren's and Jez Humble's paper about the science behind the State of DevOps Reports to run an assessment yourself. These statements show up in the appendix of that paper as the ones used to assess organizational culture.

[Slide 33]

Another tactic we can use is to educate people on culture and the effect it can have on teams and organizations.

[Slide 34]

Because knowing is half the battle, right?

[Slide 35]

When you start educating people within your organization about culture and its impact, speak to both the head and the heart. Speaking to the head is addressing the intellectual aspect of culture. You'll use logic, studies, science, results, and numbers. Speaking to the heart is addressing the personal or emotional aspect of culture. You'll be addressing the human element.

[Slide 36]

Here's what I mean. If I'm speaking to the head, I might bring in the results from the State of DevOps Reports, those studies from Nicole Forsgren and Jez Humble, and Amy Edmonson and the Google study. I'm going to connect all of that to the impact and improvements on our team, our IT, and our organizational performance.

[Slide 37]

Earlier in the talk I mentioned I would come back to the connection between organizational culture and burnout. Now is that time. Now I'm speaking to the heart. Burnout is real and it has a human toll. You may know of teammates or colleagues who have suffered or are suffering

from burnout. You might be experiencing burnout yourself. Organizational culture contributes one way or the other to feelings of burnout. An organization that doesn't want its employees to feel burned out is going to care about changing its culture. I'd encourage you to read John Willis' post titled Karojisatsu. He gets very real about this subject in that post. John's post is about burnout-related suicide and his personal encounters with it.

[Slide 38]

Another tactic we can use is changing our thinking and maybe the thinking of others.

[Slide 39]

I'm really talking about changing our mindset. Changing our mindset is about changing our assumptions, attitudes, values, and how we interpret different situations.

[Slide 40]

Let me give you an example connected to psychological safety and creating a "just culture". How would you respond differently to a mistake, error, or failure if you started with these two assumptions? First, people do not come to work to do a bad job. Second, everyone is doing the best they can given the information they have at the time.

[Slide 41]

Instead of asking who made the mistake in an effort to assign blame and "hold someone accountable", you might start by asking why the mistake happened. Why did you do what you did? Why did it make sense to you to do that? And why did the system allow you to do it?

[Slide 42]

AWS did me a solid by giving me a great example to talk about. You might be familiar with the big S3 outage back in March. An engineer made a typo on a command to bring down some servers that supported the S3 billing process. That typo instead caused a large number of servers to go down in two critical S3 subsystems, which then caused a cascading failure. Whoops! Would your response be to blame the engineer for the typo? Maybe even fire that person for being so careless and making such a huge mistake? Or would your response be to figure out why the system allowed the engineer to make the typo in the first place? And why a simple typo had such widespread system effects?

[Slide 43]

One more tactic we can use is to act different and change our own behavior.

[Slide 44]

We can model the behavior we want to see in others within our organization. Amy Edmondson talks about this related to psychological safety and three ways we can increase that. One, we can frame work in terms of what we can learn from doing the work, rather than just in terms of what success or failure looks like.

[Slide 45]

One way we can frame work in terms of what we can learn is by framing our work as experiments. The only failed experiment is one you don't learn from. Just ask one of the most famous experimenters in history, Thomas Edison.

[Slide 46]

We're going to do our own culture experiment. Remember those questions Nicole Forsgren and Jez Humble used to assess culture? We're going to use them to assess our culture. Write down your answers to these seven statements using the seven-point Likert scale. I can provide the results later.

[Slide 47]

Let's come back to Edmondson's recommendations on how to act our way into a new culture. The first way was to frame work in terms of what we can learn: experimentation. Two, we can acknowledge we are capable of making mistakes and admit when we make them. Three, we can ask a lot of questions about our work and the work of others to demonstrate curiosity, seek feedback, and understand better why things happened.

[Slide 48]

If these behaviors aren't already typical of your culture, then modelling them is risky because you're being vulnerable. It takes courage.

[Slide 49]

I'll point out though, that courage is one of those attributes that's present in almost every great hero. By showing courage, you can be a hero to your teammates by taking a risk and doing the thing they've wanted to do, but have been afraid to.

[Slide 50]

Now I'm talking to all the supervisors, managers, and leaders in the room. Whatever your title -- anyone who considers themselves a boss.

[Slide 51]

W Edwards Deming was an engineer and management consultant, among other things. He led an industrial movement in Japan after World War II and is a big reason why many of us are driving cars made in Japan. Deming's book "Out of the Crisis" describes his 14 points for management that he used in Japan. If you read the book, you'll see they underpin a lot of the DevOps patterns and practices we follow today. This is a quote from that book. The quote addresses the belief that everything would be better if only our workers would just do their jobs in the way we had told them to do them. He says, "Pleasant dreams. The workers are handicapped by the system and the system belongs to the management." If you are not getting the results you want from the people and teams you manage, supervise, and lead, it's on you because you own the system in which they're doing their work.

[Slide 52]

But there's hope for all you bosses out there! You are a role model for your team and you have the opportunity to set an example for them. Any changes you make for yourself will rub off on the team.

[Slide 53]

You also control the part of the system that determines consequences and rewards for the behaviors and actions of your teams. You can decide to make changes to that system and thereby change how people behave. Bosses, if you want to change culture, you have a large amount of influence to make that happen.

[Slide 54]

Hopefully I've given you a better sense for what this culture thing is all about. It reflects how we think and what we value. It shows up in how we act. And despite what some people may think it is changeable.

[Slide 55]

So if we change our mindset and think different...

[Slide 56]

And change our behavior and act different...

[Slide 57]

Then our culture will change for the better...

[Slide 58]

And our teams and our organizations will perform better...

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And we and our teammates will feel better.

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The reason I wanted to share this talk with you is the realization I had of how important and impactful culture can be on the organizations we work for and for us as individuals.

[Slide 61]

Not everyone has deep experience with some aspects of DevOps like lean and various automation tooling. In contrast, if we work with other people we have our own deep personal experience with culture and contribute to our organization's culture through what we think, say, and do.

[Slide 62]

And if we contribute to our organization's culture through what we think, say, and do, then, by changing what we think, say, and do, we each have the power to change culture in a way that makes life better for our organizations, our colleagues, and ourselves.



[Slide 63]

Here's all my contact information in case you want to get in touch with me. I've posted all the resources for this talk like the books, papers and studies, on my blog "It's a Nice Life". There's also a link there to a version of the slides on Slideshare.