Creating A High Reliability Culture: An Interview With Bob Koonce, Former Navy Submarine Commanding Officer, The US Nuclear Navy

Interview conducted by:

Laura Methot, Ph.D.
Managing Director, CLG Canada

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The dip in oil prices of more than 70 per cent in the past 18 months has put palpable strain on oil and gas companies to make ends meet while still maintaining standards in productivity and safety.

In this interview, we speak with the former commanding office of a US Navy Los Angeles-class nuclear submarine about how the unwritten skills he learned in his years of military service can be perfectly applied to create a high reliability organisation in the business world.

SPEAKER KEY

LM Laura Methot, Senior Partner, CLG
BK Bob Koonce former Navy Submarine Commanding Officer, US Nuclear Navy

LM Good morning Bob and thanks for joining us in this discussion about operational excellence and high reliability cultures. You'll be delivering a presentation at the upcoming OPEX, the Oil and Gas Summit in Calgary in early June. And we would like to give participants a preview of your experiences as a senior leader in the US nuclear navy.

The nuclear navy is one of the oldest and largest nuclear organisations in the world and it has a tremendous safety record. So let's get started with a little background. Could you give us a thumbnail sketch of your career and how you came to be here today?

BK Sure. Well, I started out as an electrical engineering student and found out pretty quickly I was not a design engineer type. So I was looking for some adventure and some excitement and the nuclear navy recruits pretty heavily for engineers. So I met a recruiter, and next thing I knew, I was a young naval officer on my way to a submarine.

Over the course of about 20 years, I served on five different nuclear submarines and climbed through the ranks of the nuclear navy's hierarchy to the Commanding Officer position of Los Angeles-class nuclear submarine out of Pearl Harbour, Hawaii. It was the USS Key West (SSN 722).

On the way, I did get an MBA from Northwestern University in Organisational Behaviour which, kind of, sparked some of my interest in culture and organisations and organisational models and leadership. In 2011, I retired from the military and I have been working in the power industry, for the most part. I hope that gives you a little background on me.

LM Yes, it sure does. And it does sounds like an adventure that you've been on throughout your career and your journey from being an electrical engineer into the nuclear navy and into senior leadership, then layering on the MBA and the Organisational Behaviour components to it. I think it's something that our participants in the OPEX summit would find very interesting.

OPEX is largely about high reliability organisations. What makes the nuclear navy, with its impeccable history of reliability, different from civilian organisations or other military operations?

BK I think when you look at the US nuclear navy, the culture is very strong and you can distil it down into about five principles or five pillars.

Those pillars are, firstly, a high level of knowledge and secondly, a high level of formality and professionalism, which manifests itself in communications and procedural compliance.

The third pillar is a questioning attitude which is actually when you understand your equipment and you understand how to do your job and you're communicating, so you can take a critical thinking perspective.

The fourth pillar is what we call "forceful watch team backup" in the Navy, but that really translates to engagement. We're looking for our employees or our team partners, or sailors and officers, to be engaged in everything around them, not to just be part of a silo and work in their own role, but looking outside their role for ways that they can interject themselves and their knowledge. We don't want passive employees.

When you're in a nuclear submarine 800 feet underneath the water, you can't afford to have somebody making a bad decision and not having someone else speak up.

The final pillar is integrity - the concept of doing the right thing when no one's looking. And it goes even further than that. In the navy, it's somewhat of a technical integrity – doing the right thing to make sure the reactor is safe, the submarine is safe.

That culture is very, very strong and it's not a programme in the Navy, like a corporate programme; it's just the way people live. I didn't even know those five pillars were the five pillars until I actually retired and a consultant told me those were the pillars. There were no posters, there were no programmes. I just got taught that's how we do things.

I've seen other organisations that have similar things but I've also seen organisations that have a weak culture or maybe they don't know what kind of culture they want and so they have a mixed culture where people are going in different directions.

LM Terrific. Many organisations talk about culture and I hear leaders discussing the gap between the kind of culture we have and the kind of culture we want and it seems that often the difficulty is that starting point – how do we operationally define the kind of culture that we want and need in order to get the types of engagement and results that we're driving for? You've articulated very clearly the five pillars of the nuclear navy culture.

Are there other special things that operators need to know and do, their mind-sets and behaviours, things they do on the job everyday to ensure constant reactor safety?
And when you think about the knowledge and behaviours associated with the cultural values, and the special operator behaviours that are directly reliability-based, are these things that the navy selects for, or can they be learned? Can they be trained?

BK Yes, it's an interesting question. And I think that I would tend to say that they are definitely learned and not selected for it. In the military we bring people out of high school or right out of college, and we have an in-at-the-bottom and up-through-the-top organisation. You don't bring in a midlevel or a senior level executive into the military.

In a corporate setting, you have to look for character traits and background that would fit into the culture that you want to establish or that you have established. I think cultural fit is important. I think it really depends on what kind of situation you're in. I think if you're bringing in new employees that are fresh out of college or fresh out of high school, they can certainly learn the culture and there should be an element of that.

If you're bringing in senior leadership into positions of influence and importance in your organisation, then I think you must evaluate for their cultural fit.

LM The US military in general, and the Navy, are known for very, very deep and well done research with respect to personal selection and placement. So we can probably make the assumption that

there is some selection but what I'm hearing is that the behaviours that are required are really shaped over time and enabled by this overall culture that has been developed in the nuclear navy over the years.

Given that strong culture and the well-defined performance requirements for both operators and leadership – something went sideways in 2005 when the USS Philadelphia was in the Gulf. Tell us that story and what leadership and cultural issues you believe contributed to it.

BK Sure. Just a little background on the story. The USS Philadelphia, hull number 690, is a Los Angeles-class submarine that was operating and fully-deployed in and around the Arabian Gulf area. This is a talented ship with talented leadership. I know the people personally.

On the night of September 5th, 2005, they were on the surface after coming through the Strait of Hormuz which is a very challenging navigational operation. Very dangerous, very complex – you're travelling submerged with significant shipping in rather dangerous water. And they very safely navigated through that passage and they were surfaced at one o'clock in the morning, local time. It was a fairly clear night and really no reason for any danger, other than the normal dangers of navigating at sea. Essentially, the ship was heading west, on a westerly direction, at about eight knots and a Turkish freighter was coming north from Bahrain and it was heading up through the Arabian Gulf. And the two collided. It's really very difficult at first glance to say, well, how could that possibly happen with all the technology and the training and the knowledge of the operators and sailors, the officers?

But when you get deeper into the story, the Commanding Officer was asleep in his rack, resting for the next day, as would be expected because pulling into port, which they were headed for the Port of Manama, Bahrain. And so you would expect him to be asleep because he needs to rest. And he had assigned his second in command, the executive officer, in a role called the command duty officer which essentially is overlooking all the safe operations of the ship. That Executive Officer was not up on the bridge of the ship and the officer on deck was trying to get his attention.

And again, I can't go into too much detail, but I can say that there was a breakdown in one of our pillars that I mentioned before, the five pillars, and that is the team backup concept, the engagement. Why did no one wake up the Commanding Officer? The Captain actually woke up when the collision happened and he got thrown out of his bunk. No one went to his door and knocked on it. No one went to the XO and said, why aren't you up on the bridge? There were various things that could've taken place that would have gotten the right level of experiences to properly take action to avoid the collision. So, these are complex things and you look at what happened, you think, how did that engagement break down?

The Navy did a safety investigation and I came in as part of the operational evaluation team. The reason I tell this story a lot is because I became part of a team that had to pick up the pieces. And so we came in and the Commanding Officer and the Executive Officer and the Chief Engineer were all dismissed from their positions and new people were put in place.

I was just put in place as the Executive Officer. And that was a challenging leadership position. Here you are, in the country of Bahrain in the Middle East with a new leadership of this organisation that had just had a catastrophic event. Fortunately, no one was killed but significant damage was done. There was obviously a lot of damage to the confidence of this organisation. And we were 6,000 nautical miles from home and we had to bring that ship home safely.

I was sensing in my gut really that there was a cultural problem deep within this organisation. And I did not have a means to really measure it or somehow formally identify it. I took measures. I wrote down memos saying this behaviour is not right, I'm seeing this. And I actually got a lot of pushback from senior leadership saying, we have new leadership and a new commanding who was very good. But he wasn't seeing what I was seeing.

And for some reason I wanted to be able to explain that I kept seeing behaviours or witnessing or being a part of behaviours that was not in keeping with our five pillars. I didn't say it in that language but I said, this is not the way we should behave and it's not the way we do things. Unfortunately, there was an accident several months later when I was still part of the ship where a young man almost shocked himself to death working on electrical equipment that he should not have been working on.

Once that accident happened the root of the problem was found very deep within the culture of the young sailors and young officers that had not been changed, even in the last several months with new leadership on-board. To me that was a big lesson learned, that changing the leadership out doesn't instantly change your culture.

I also realised that I needed a way to measure the culture. And I didn't really even have the language or the tools in my toolbox, to really quantify or measure the culture that I wanted.

The third lesson that I took away from that was that you need an outside perspective. You know, there were people in that organisation and too close to that organisation that couldn't see what I was seeing. I was an outsider, for the most part, even though I was brought in to be the second in command

I was really still an outsider and I wasn't planned, scheduled to be there more than a few months. Everybody, kind of, knew I was coming in just to help get things going back in the right direction, but I wasn't scheduled to be there for years. And I think I felt like an outsider and I also looked at things like an outsider. And as an outsider, I was able to perceive things and observe behaviours that others would maybe filter out or not recognise.

Those are my three things that I put in my pocket at the time and I went on and took command of the USS Key West. I applied some of those lessons learned. And at times I had to actually identify and then eradicate some behaviour that was heading in the wrong direction.

Had I not had that experience of USS Philadelphia, I would not have been able to stop something from going much worse on my own ship when I was in command.

LM Very interesting story, Bob. There's something that rises to the top for me as I look into your story. As a person who consults to organisations on leadership and behaviour, I often talk about the notion that all behaviour is rational, if you understand the drivers. So when we point to issues of operational discipline by the operators themselves, that's not to say that the operators are intentionally doing something wrong or being poor performers. Looking at root cause analyses for many of the world's biggest process, safety and environmental disasters over the years, including as far back as Three Mile Island, Love Canal, Chernobyl in the 80s, and more recently Horizon in the Gulf of Mexico, the RCA's identified multiple causal factors in all of the situations which included leadership, culture and behaviours related to operational discipline very similar to what you've just described.

Do you think that the requirements for leadership excellence are different under nuclear conditions as opposed to other operational situations? Or will these best practices resonate with our participants in the OPEX for Oil and Gas discussions as well?

BK I tend to think of leadership separately from operational excellence. And not that they're not interrelated, but maybe we have to agree on the terminology.

Operational excellence, I think, has something unique to the industry, unique to the company, unique to the process that is part of the operations that you have to really look at. I work in both the nuclear and non-nuclear sides of the power industry, for example, and there are subtle differences in the way that you have to operate a nuclear reactor from the way you operate a gas turbine-based power plant, and even the way you engineer and design it.

I think that you have to really look at what you're trying to achieve and what the operation is in order to define what operational excellence is, and then you go about putting together a culture that achieves your own strategy that you want to achieve excellence with.

So, operational excellence to me is getting alignment within your organisation to achieve what you're trying to achieve, and so that can be very different. You know, if I'm running a retail organisation or I'm running a pharmaceutical manufacturing plant or maybe I'm in the creative arts, then I set up a different culture and I set up a different, operational excellence model.

But when it comes to leadership, I believe that there are some principles of leadership that apply almost universally. And not everyone agrees on those types of leadership. I mean, Admiral Rickover, who was known as the father of the nuclear navy, had a leadership style that many would not embrace. He was pretty tough to deal with.

But people loved him and the culture that he set up, or at least in what they were able to produce. So, leadership to me is just very different and I think it takes very strong leadership to achieve operational excellence and to establish a strong culture.

LM In our summit last year, it was clear that the topic of leadership, culture and behaviour is really becoming predominant in many of the discussions around what drives a high reliability organisation. You've talked about how the values are articulated for the nuclear navy and issues around operational discipline.

What are the best practices that you can recommend for developing or changing organisational culture? What are the fundamental and the universal practices that you believe are necessary to drive culture and specifically a high reliability culture?

BK I think you really do, as a leader or leadership group, have to define the culture very clearly. It's much easier with a group of 12 people than it is with 1,200 or 12,000 but it does take a clear definition of the culture that you want to establish, the behaviours of your people throughout the organisation. The bigger the organisation, the more challenging that's going to become.

Secondly, you have to communicate. The leadership has to consistently communicate to the people that are part of the team what their role is and how their role should behave under this culture. Especially if you're instituting cultural change, it's very difficult, and those behaviours are daily within the people and a part of your organisation. As commanding officer, it was almost daily I was on an announcing circuit or in front of my men and speaking to them about the behaviours.

That's part of leadership but it's an important part of communicating the culture so that everybody understands. If you have a large organisation, clearly that has to happen throughout the levels of organisation because it can definitely get lost in large organisations as you move through the levels. So you have to consistently and clearly communicate the culture.

And then the third piece is what I call my "secret sauce". This is really what sets apart the nuclear navy and it's very difficult to summarise. It's what we call in the navy, a critique process. We critique what the event was. You already talked about root cause analysis and corrective actions and there are various programmes out there that do that, in process safety especially.

If you go into the nuclear navy, they have a very well-defined critique process where if something happens that violates one of the behaviours, whether or not somebody didn't know what they were supposed to do or they didn't follow a procedure or their integrity was lacking, we went through this critique process. And, you know, it sounds simple. it's just gathering the facts, gathering a timeline, putting together that timeline as a group and then really very quickly sitting down with all the people that were part of that event.

You don't exclude people and just corner off in some organisational development group and have them look at it. That's, I think, a mistake that many organisations make.
This has to be the line officers, if you will, the people that are responsible for the operations. Gather your team, sit around the table, and go through the timeline. Sometimes you're going to argue about that timeline because humans tend to remember things differently. I've seen a similar process throughout the oil and gas industry. But, what I've seen is that many organisations don't really apply it properly. It really takes the leaders sitting down and saying, that's not a behaviour that is in line with our culture. We don't accept that behaviour here. And that's hard. I mean, this is really probably the most difficult thing that I've observed that's different from the military specifically.

The only way you can be excellent, at least from the nuclear navy's perspective, is to look for little things, to prevent them from becoming big things, and drive a culture of the behaviours that we want. And that comes through daily interaction; it comes through these critiques, and then sharing those lessons.

LM So, in terms of the best practices, when an event happens, you're bringing the root cause analysis down to a very behavioural level which brings it back once again to leadership as the engine that drives it. What should leaders be looking at in terms of their own behaviours, what they're saying or doing, to know how well they are responding to incidents and shaping new behaviours consistent with cultural norms? How do leaders gauge their own effectiveness?

BK Oh, that's an interesting question. You know, this goes to the integrity piece. I found that coming out of the navy I was much more willing to blame myself first for anything that went wrong under my team or any organisation I was a part of or responsible for.

In the case of the Philadelphia, the commanding officer had to be removed even though he was asleep. A lot of people would say, well, he was asleep – it wasn't his fault. But, you know, anything that happened under my command – any behaviour that happened, any problem, event that occurred that was untoward, I was accountable for that as if I had made the decision myself.

And that level of accountability and responsibility – you live that in front of your people, you walk that walk. In a lot of organisations, if something goes wrong, they want to look for what the root cause was and it's never on account of something they have done wrong themselves.

I remember many times admirals calling me into their office and saying, okay, Bob, Sailor Jones did this, he was drinking and driving –why did you let him do that? And my reaction, my human behaviour reaction was, I didn't do that. But it was under my leadership.

And so I have to think hard about what environment am I establishing as a leader? What example am I setting? What things am I promoting? How am I behaving? And am I always reflecting the culture that I want to my staff? And am I taking responsibility in finding out, when things go wrong, what can we do to fix it?

LM The word accountability is often used in leadership circles, when senior leadership teams talk about driving accountability through the organisation. But similar to culture, the definition of accountability is often pushed around. What do we mean by that? What does it look like? What does it feel like?

And so once again you provided an operational definition that gets to the heart of accountability as a set of leadership actions and values, the things that the leaders do to live and model and drive and own performance in the organisation. The idea of the captain being let go, even though he was asleep – that is a great example, a metaphor, for what absolute accountability looks like.

I want to recap with some of my key takeaways that I think will really be of interest to the participants. You shared with us your journey from an engineer to a leader of the nuclear navy and beyond; I've met several executive leaders in corporate environments who come from the nuclear navy. You're recruited heavily for your knowledge and your talent –I've seen it so many times – the ability that you and others like you have had in transferring your experience into the corporate role.

I think this is a real valuable add to our operation excellence in oil and gas. You described taking it right up to the cultural level; define your culture clearly, define the behaviours of all of the people involved; the leadership then must consistently communicate requirements and expectations. Finally you talked about being on the circuit daily and talking about behaviours.

I learned a term from an excellent leader I got to know in the mining industry and he called it face-time with intent. He worked with his leaders to describe, what does this look like? When you're being out on the circuit every day, what are the things you talk about? What are you looking for? What data-based dialogue will you be having with your performers?

That provides the fundamentals for being able to do a good critique process – which you described as a well-defined process to understand why a performer has behaved outside of standard. So you're talking about behaviours and conditions rather than making it a personal issue. And again you brought it back to line officers with the leadership, with the team, gathering the data, understanding the timeline, identifying the behaviours and the problem.

Many organisations do after-action reviews but I've heard of very few that effectively get to the behavioural level in ways that enable leadership to take action; many will get to the technical and process issues, but not to the behavioural and cultural level.. So I'm thinking, Bob, that this is something that will be a very, very valuable discussion for our participants in the summit.

And in closing, I'm sure I can speak for the participants in saying that we're really looking forward to seeing you in Calgary, hearing more in your summit presentation and hopefully lots of engagement in informal discussions outside of the presentation. Thanks so much for joining us and we'll see you in Calgary.

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