



Executive Edge 2009

National Safety Council Annual Congress & Expo
26-28 Oct 2009 - Orlando, Florida USA

Executive Edge Session C Driving EHS Performance: Effective System Implementation

ABOUT THE EXECUTIVE EDGE

Executive Edge leadership track brings together business executives and top leaders in environmental, health and safety (EHS) management at the National Safety Council's Annual Congress & Expo. Top decision-makers are increasingly discovering that well-integrated EHS management systems create world-class organizations with competitive advantage and business sustainability. The Executive Edge was developed to meaningfully and purposefully engage business leaders and advance EHS in businesses worldwide. With a variety of panel discussions, technical sessions, and hands-on workshops, the 2-1/2 day Executive Edge track provides leaders with tools to lead their company toward world-class performance. Dynamic dialogues, cross-sharing among leaders, and interactive workshops aim to sharpen leadership skills and capture leading evidence-based solutions for successfully integrating EHS into business operations.

EXECUTIVE EDGE RESOURCES 2009

Proceedings for each of the Executive Edge events and topic areas

Economic Resilience

The Executive Forum:
The Role of EHS in an Economic Downturn – How Do We Deal with the Conditions of the Economy Strategically?

Operational Excellence

The Executive Breakfast:
Operational Excellence - EHS as a Competitive Edge

Paired technical sessions and workshops:

Risk Reduction

Leading-Edge Management: Leading Indicators and Risk Management

Leadership

World-Class Leadership: Lead with Safety

System Implementation

Driving EHS Performance: Effective System Implementation

ABOUT THE EXECUTIVE EDGE SESSIONS & WORKSHOPS

As a groundbreaking new part of the Executive Edge track, the Executive Edge Technical Sessions & Workshops were developed to provide key insights into critical EHS topics: Risk reduction, leadership, and system implementation. Sessions feature practical and theoretical presentations followed by a Question & Answer session designed to allow leadership at all levels a chance to directly engage with speakers and their peers. Following these sessions, paired interactive Workshops drill deeper into crucial EHS leadership topics and seek to capture learning that participants can actively and effectively take back to their own organizations.

Note: EHS, SH&E, and HS&E are used as variant acronyms for "environmental, health and safety"

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INTRODUCTION



Chris Balkema
EHS Manager
Caterpillar

Introduction

Balkema: Good afternoon. This is day number two of the Executive Edge Track and the last session of the day. Thank you for hanging in here. I promise you we're going to have a great session. I'm Chris Balkema, from the Environmental, Health, and Safety group at Caterpillar. I'm very pleased to be part of the World Class Team that helped put this Track together.

It's my privilege to moderate this session this afternoon. We're going to spend about 55 minutes with the two speakers, Jim Johnson with the National Safety Council and Buzz Morris with Chevron. We'll have some time for questions and answers at the end. First, let me introduce Jim Johnson. He's going to walk through some things and we're going to have a real-life follow-up with Buzz afterwards. He'll be speaking from Chevron's perspective

Jim was Vice President with LibertyMutual in the Risk Management area. He served on the Board and Executive Committee of the National Safety Council. He's recently joined the National Safety Council and serves as their Senior Director for Workplace Strategy. He is tasked with developing and implementing the future workplace efforts within the Council. He had a lot of fun being on the board of the NSC. He's having even more fun now as an employee. Please welcome Jim Johnson.

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Johnson: Thank you very much, Chris. Good afternoon, everyone. It's good to be with you in my new capacity working for the National Safety Council. This is a good change for me. After quite a few years supporting for-profit companies, I've moved into the non-profit sector. We have some ambitious goals at the Council. I think you know who we are. We've been around 100 years. We got our start in the workplace and today we're looking to do even more and even better with our workplace initiatives. If you were at the Opening Session, you heard Janet [Froetscher, NSC

President & CEO] talk about our goal. It is to save an additional 10,000 lives and prevent an additional million injuries by 2014. We have a lot of work ahead of us. We're off to a good start. We are measuring our performance to those goals and reporting out on them so that we can be confident that we are making a difference.

As Chris said, my role is focused on the workplace and determining what safety initiatives and activities are going to be more effective in making a difference toward our goal. I'm sure that you've all seen these types of numbers before. I don't need to walk through them. Needless to say, there is still far too much human suffering and far too big an economic burden on U.S. industry. What we're trying to understand at the Council, and what this Executive Edge Track in part is about, is how we can all contribute more and push these numbers down faster than they have come down up to this point. That's why we have the different sessions in this Track. We have a focus on how to improve risk reduction efforts and use leading indicators, and another focus on how to improve leadership and employee engagement. There is also a focus on what we're talking about today, which is the effectiveness of safety management systems.

The Traditional View and Plateaus

We can start with this very traditional view of safety performance. Most companies use it. They use it in order to understand where they've been and, to an extent, where they're going. This sample is certainly a good one. Here we see an example in which rates have decreased by about 50% for both total recordables and lost workday incidents since 1992. There are a couple of interesting questions that we should all be asking ourselves. Clearly, one of them is, "How do you compare?" Are you above? Are you below? Are you decreasing faster than this trend line? As you look at your performance, are you doing better than the average decline over the years? There's also an interesting concept that I'll ask you to think about. You could call it "Beware the Plateau." As you look at your own incident rates,



Jim Johnson
Senior Director,
Workplace
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you may start to see that plateau, where you've got a flattening in your rates. You're not seeing a change, quarter over quarter, year over year. That's a danger sign. You have to start to think about what it is that you're doing. Are you doing it well enough? Maybe you need to be doing different things within your systems to break that plateau and drive it down. The plateau can occur at any point on this curve, whether you're above average, average, or world-class. You could be at total recordable rate of 1 or less and still be on that plateau. A better understanding of safety management systems, including what they are, how they work, and how they can be measured, is important to understanding how to break through plateaus. That way, when organizations get to the point where they're not quite sure what to do next, there are some good indicators in the systems.

This is from one of our Campbell Award Winners, Alcan, Inc. What you see here are a couple of things. They were a Campbell Award Winner. Therefore, they had an effective safety management system that worked well. It included environmental aspects. It was integrated into the business. If you look at their outcome rate, this lagging measure of performance, you can see that they beat the average, declining much more rapidly than the industry. They now have their total recordable case rate below 1, which you could call world-class. What's interesting about world-class companies, which we've learned through Campbell Award Winners, is that they have a different viewpoint than you'd expect about their performance. One of them actually said this the other night. When you ask them how they're doing with their safety management system, you might think that they would say that they're doing well and are proud of what they've accomplished, since they have this level of performance and have won an award recognizing it. In fact, what they say is that they're not satisfied. They say that they still have work to do. They say that there's more

they can do to prevent more injuries. In essence, they're no injury is acceptable. There must be a goal of zero. You have to continue the journey and seek that incremental improvement over time.

Moving the Curve

As you think about your own safety system, you need to understand where you're at from a performance perspective. We're moving beyond outcome measures and talking about how your systems actually perform. This is information from our employee perception survey database, which covers hundreds of companies and tens of thousands of worker responses. This is the distribution of all of the responses across the organizations. It's on a scale of -2 to 2. What you see is a bell curve distribution. You have some companies doing well on the right. You have some companies on the left who aren't doing quite as well. You have a big group of companies right in the middle, just a little bit to the right of zero. They're maybe 65% of their way there. What this says to us at the Council is that there are a lot of opportunities with a lot of companies to do a lot better.

This is a simplified view of that same performance distribution. My guess is that within your company, you're on the distribution somewhere, whether you're a single location or a larger company with multiple locations. The question is whether you know where you're at. If you're leading, we want to partner with you and learn from you. We'd like you to consider applying for the Campbell Award. I don't believe that there are any lagging companies here in the room. You're here to learn and do better. The question is, where are you and what is the gap between where you are and where you want to be? How are you going to close that gap? One of the ways you close that gap is by understanding the weaknesses in your systems and how you're going to improve them so that you can start to improve performance.

At the Council, we're trying to understand how

“One of the ways you close [the gap between where you are and where you want to be] is understanding the weaknesses in your systems and how you're going to improve them.”

**- Jim Johnson
National Safety Council**

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we can move this entire bell curve to the right. How can we impact far more companies than we currently do? We'll be talking with many of you about that. For example, larger companies work with a lot of smaller companies as suppliers. You can help us get the word out to smaller companies and get the word out about how they can improve their performance as well.

Safety Excellence

Let's take a minute to talk about safety excellence. I think it's important to set the stage so that we have a shared understanding of what we're talking about in terms of what makes companies excellent when it comes to many things, including safety performance.

In order for the Council to succeed at its mission, we need to continue to be a learning organization. One of the ways that we do that is by learning from best practitioners. We established the Campbell Award. It recognizes organizations that demonstrate excellence in safety and environmental responsibility as well as integrating these systems into business

operations. In order to properly select the companies who are honored with the Award, we've refined performance criteria that relate to our view of a safety management system and its performance criteria.

What we've learned over six years in qualifying companies and assessing their performance for the Campbell Award is that companies who compete for the Award are organizations in which safety is a core value. They all have common attributes. First, they have a safety management system. That's what we're talking about. They have performance expectations. This is important. They're measured against defined criteria. They have management that is committed. We know that this is essential. They seek to engage all workers. I'm going to talk more about that in a minute. I think you would agree that worker engagement is increasingly being recognized as a best practice for safety. Campbell Award-Winning companies also appreciate the intrinsic value of safety to the vitality of their business.

"We're trying to understand how we can move this entire bell curve to the right."

**- Jim Johnson
National Safety Council**



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Campbell Award – a Study in Excellence



- Common attributes of safety excellence
 - Quality Environmental, Health & Safety (EHS) Management
 - Performance to defined criteria (SMS)
 - Integrated into business operation systems
 - Management commitment and worker engagement
 - Appreciation of the intrinsic value of EHS to business vitality (culture)



This is a list of the Campbell Award Winners. You might recognize some of them. Some you might not recognize. They are Noble Corporation, Johnson & Johnson, Alcan, DynMcDermott, The Bahrain Petroleum Company, Fluor Hanford, Gulf Petrochemical Industries Company, and Schneider Electric North America. They're in two different categories. The first is large companies, which we define as having greater than 1,000 employees. The second is smaller companies, which we define as those with 1,000 or fewer employees. What's important is that we do present the Campbell Award to all sizes of companies. That's important because it tells us that we've looked at these different companies and assessed their performance. They have passed muster. Safety management systems work regardless of the size of the company, or the size of a location or business unit of a larger company. The other important thing is a distribution of different industries among Campbell Award Winners. Whether you're in the construction, transportation, petrochemical, or manufacturing industry, the same basic

elements still apply. There will be industry-unique things that you have to add, but the basic elements of a high-performing safety system remain the same.

Again, part of what we've seen with the Campbell Award is the importance of the integration of safety within the business. You hear that talked about a lot. It's hard to do if you don't have a safety management system. You have to be careful that the safety management system doesn't compete with the other processes that you have in place for improvement. If your safety management system competes with your quality initiatives, or if your efficiency efforts introduce risk, that's going to impact safety. The integration has to work across all of the processes and systems that are in place. This is how you will ultimately have the value that creates the culture that companies are looking for.

I don't know how many of you were at the Executive Breakfast this morning, but Bill Williams from Maersk had a lot of good things to say. He talked about the competitive advantage

"...Safety management systems work regardless of the size of a company."

**- Jim Johnson
National Safety Council**

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“If you want to find out what’s going on within any particular job or task, go ask the people who are doing the work...You’re going to get some brilliant ideas about how to make the job safer.”

**- Jim Johnson
National Safety Council**

of a high-performing safety management system. We all want to make sure that companies are thinking about reducing injuries, suffering, and fatalities in the workplace rather than the cost of safety or what they might have to cut during tough economic times. However, they can also think about building return on investment and a better, more competitive business. One of the questions you have to ask yourself is, “Is safety a key business value in my company?” Is it recognized for the overall impact it can have on your enterprise, including the impact on operational excellence, human performance, and other factors in which a safety management system can help?

Defining Safety Management Systems

Here’s a definition for safety management system. There are a lot of definitions out there. I like this one. I ran across it not too long ago. It’s from Transport Canada, which is a part of the Canadian government dealing with transportation issues, including safety. It talks about a process for managing safety risks. It talks about the importance of goal-setting, planning, and measuring. It includes the importance of culture. According to this organization, a safety management system is, “a business-like approach to safety, with a systematic, explicit, and comprehensive process for managing safety risks.” As you’re thinking about safety within your company and your own safety management system, do you have that level of detail or specificity? Wherever you’re at in this process, whether you have a mature system that you’ve been at for a while or you’re helping a company to improve or enhance their system, this question regarding the quality and detail of your system and the extent to which there is performance criteria behind it becomes very important.

One of the things that we did was to look at our criteria for the Campbell Award and the information that we share with our customers and members as a basis for comparison. I think this is always helpful. If you have a safety management system that you want to improve,

what’s the basis that you use for development or comparison? There are many available, such as the OSHA Voluntary Protection Program (VPP), which you’re probably all familiar with, as well as some of the other certification and consensus standards. As you consider what you have in place and you’re looking across these consensus standards, you might notice that they all cover the same elements. That’s not terribly surprising. They talk about management commitment, employee involvement, worksite analysis, hazard prevention and control, and safety training. Whether you look at ANSI-Z10, OSHAS 18001, or other standards, each gives you good guidance in terms of what should be in your systems. They will also give you some good ideas in terms of the performance criteria you should have in place.

How have we defined and organized our safety management system? We break it down into several elements. One is leadership and management, which includes not just the visibility of leadership but also the resourcing and funding of it. Again, this was one of the things discussed at the Executive Breakfast this morning. Also included is not only having a system in place but being able to measure the performance against the system so that you know where you are at all times. Technical and Operational elements is another category. This has to do with the risk in the workplace. What’s the chance that something could happen and how serious would that loss be? What am I going to do to reduce that risk? What’s the impact that has on workplace design, operational processes, and procedures? Very importantly, we also look at the Cultural and Behavioral element, which deals with getting workers engaged and how to do that, including the opportunities that they have for input on such things as risk reduction. If you want to find out what’s going on within any particular job or task, go ask the people who are doing that work and who have to maintain the equipment and environment. You’re going to get some brilliant ideas about how to make the job safer.

Assessing Safety Performance

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The question of assessment becomes a very important one. If you haven't taken a close and studied look at the safety management system, it's going to be much more difficult to determine what you need to do to improve and where best to invest so that you can set priorities, spend your money well, and have greater confidence that you're going to have good outcomes. We have a scored assessment that we use for the Campbell Award and with our customers and members. Having performance criteria is very important and necessary to be able to carefully assess what's going on in any organization.

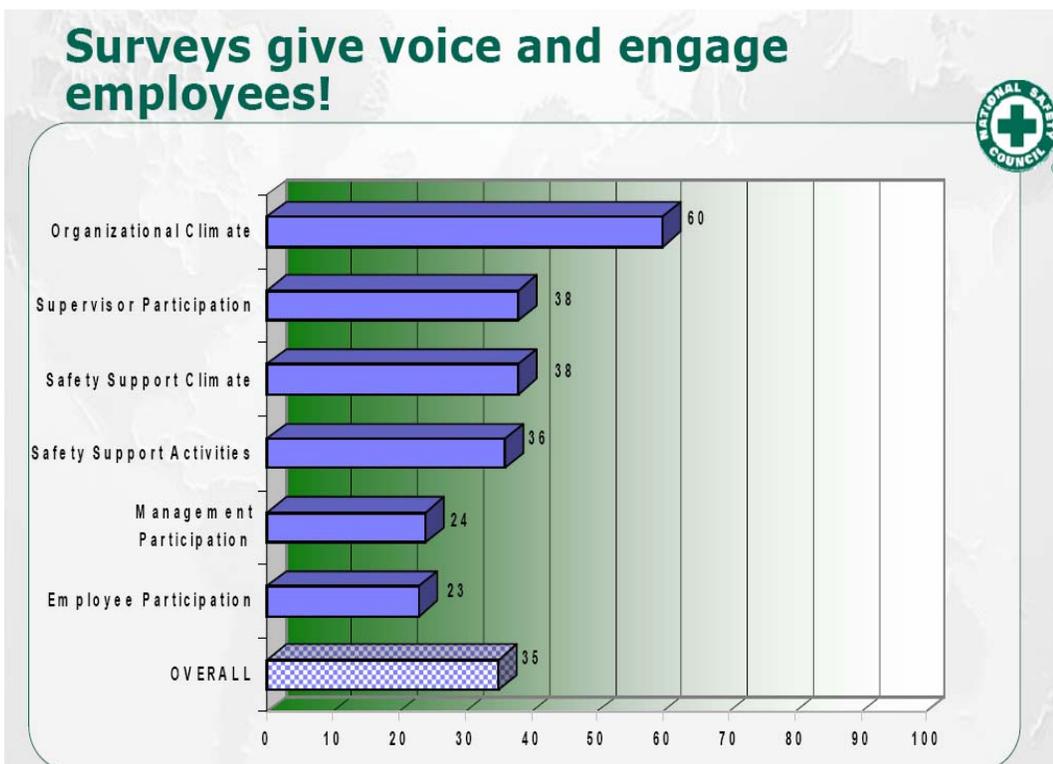
For each of the elements of the system that we look at, we have numerous questions. We have performance criteria which are carefully defined. This way, when we look at evidence of what's in place and what's taking place, and when we talk to people and observe what's going on in the workplace, we can go back to the criteria. We have a scale of 1-5. We can then peg the performance. The Campbell Award assessment, for example, has over 200 questions. It's a very

thorough and detailed process. The folks who have won the Award have been assessed by a team that goes on-site and puts them through the paces in order to really understand where they're at with their systems. It's a great approach. To be able to get a picture of how the systems are performing and what you need to do in order to improve is crucial. It's also important to think about management and leadership. They're important to both the performance of the system and the opportunity to attain excellence within any company. When we think about management, we're really thinking about what gets done, how it gets done, and whether it gets done in a quality fashion and on a timely basis in order to reduce risk and the outcome of injuries and fatalities. You can measure that through the safety management system assessment.

What the safety management system assessment might not get at is leadership components or the engagement of workers. This is, if you will, the culture of an organization. The assessment will touch on it but perhaps not

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completely capture it. For this, we use a tool called an employee perception survey. There are all kinds of variations of it in use. We've found that the employee perception survey gives us a good view of where leadership is at within an organization and how workers are actually being engaged. If you think about it, the assessment of systems looks at the quality of activities on a day-to-day basis, which will give you indications of leadership and culture. The employee perception survey, however, looks at the individual workers' experience of those systems. It's a great combination. You get the facts of what's taking place. You get the experience of the workers. The combination of those gives you a very good and complete picture of what you're doing well, what you might not be doing as well, and what your opportunities for improvement are.

We're working to improve the quality of our assessments and perception surveys. We're making to sure that they align and support each other so that you can work with each of them together. This is an example of the output that we get from our perception surveys. There's obviously a lot of detail behind this. You get a sense of how we can hone in and see where some of the issues are. For example, you might take out of this chart that you have some management and employee participation problems. It's pretty easy to see those as priorities to work on.

Audience Member: On the bottom of that chart, there is a scale. **Is that a percentile ranking?**

Johnson: Yes, it's a percentile ranking.

Audience Member: How many organizations is the scale based upon?

Johnson: Right now, there are over 400 companies in our database. It's tens of thousands of employees. That's just an example, not the totals.

The Safety Management System Process

I'll start to wrap up so that I can turn this over to

Buzz, so that he can start talking to you about a more practical application of the systems. Here is one way to think about the system itself. It's a process.

In the center, you have an integrated business system. You could put within the center something like "leadership, safety management, and risk reduction systems" instead. Phase 1 in the process of building this integrated system is to continue to work to ensure that you have management engaged and that they're demonstrating leadership and resourcing as they need to. Here, you're starting to find ways to get the employees engaged. You're measuring so that you can establish a baseline. The second phase is looking at this baseline as your "As-Is" state. Where am I now with my systems? In Phase 3, you set your goals for what should be. This, in other words, is what your vision is. In this way, you understand what gap exists between what you have and what you want. In Phase 4, you close the gap by developing and implementing plans. In Phase 5, you learn things and review and adjust. This is an iterative process. I'm sure that you've heard the term "journey" applied when discussing this. We use the phrase, "Journey to Safety Excellence." That works for us. We're going to continue to promote that so that we reinforce the idea that the Campbell Award Winners have. Again, when you ask them, "How good are you?" They tell you, "Not good enough." They're continuing the journey. We're going to try to find a way to motivate more companies to do that. We want to motivate them not just to start on the journey but to continue it.

Improvement and the Future

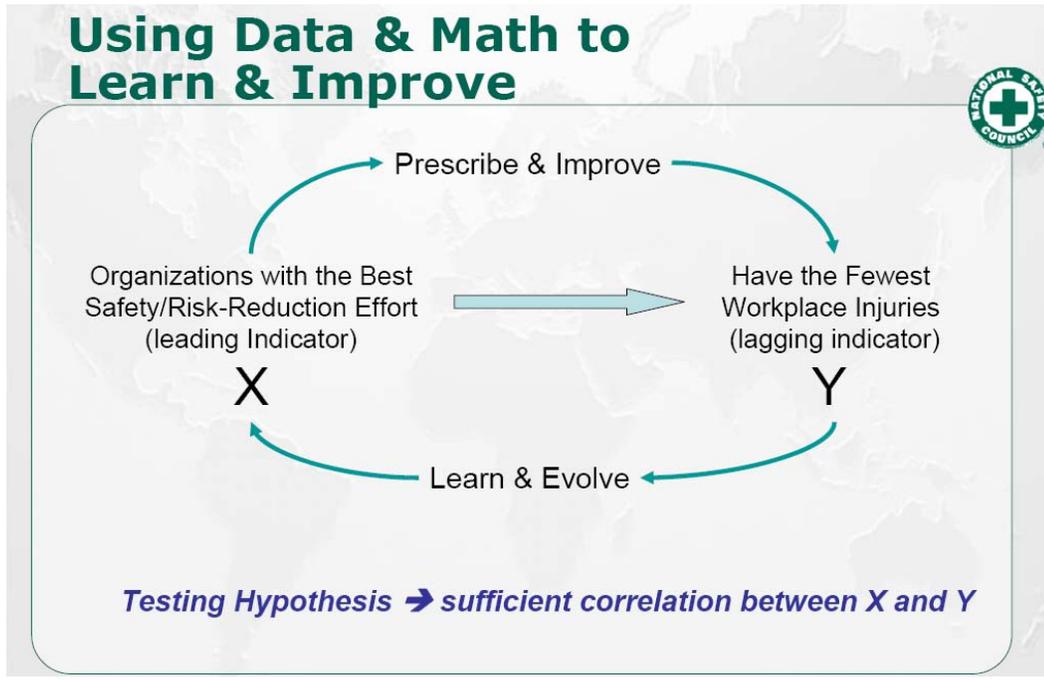
Some of you were hopefully in the Session yesterday on Risk Management and Leading Indicators. This is a simplified view of what was a great technical discussion yesterday. If you look at x, those are leading indicators within organizations with the best safety and risk reduction efforts. Think about near-miss reporting as an example. How many do I get?

"This is an iterative process. We use the phrase, 'Journey to Safety Excellence.'"

- Jim Johnson

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What's the timeliness of the review? Was there anything identified to be done? Who's it going to be assigned to? Did it get done? Was the money available? Those are all the x items. Those are leading indicators. What you want to know is how they relate to y. Y is the outcome of injuries, severity of injuries, and fatalities. In other words, these are the lagging indicators. You can use math and statistics to determine whether there's a correlation. You might see this as the next generation of safety. We are starting to get a lot smarter about what works and where we should be spending our money.

This is an example outcome. You heard Janet talk about the Spectrum of Safety Survey. Hopefully you went by our booth, took a look at it, and gave it a try. This is some of the results that we got through the pilot. The Spectrum of Safety Survey measures the opinion that a person has on the performance of their safety program. It's not an evidence-based assessment. It captures what people think about roughly 40 different questions regarding how their company is doing, on a scale of 1-5. This is the outcome. The diamonds are

groupings of companies based on their total score from the survey. It's plotted against the outcome, which is Total Recordable Incident rate. What we found is that there is a significant correlation. The companies who thought they were doing better had a strong correlation to those who actually were. The same held true for companies who didn't think they were doing as well. They had higher total recordable case rates. It's interesting, and it presents a lot for us to pursue in the future of safety.

Key Points and Conclusion

In summary, here are a few key points. Establish your baseline. If you don't know where you're at, get some resources so that you can measure and determine this. Whether you do that through an assessment or a perception survey, be sure to do it. You'll also want to look at your outcome rates. Be brutally honest. Whether you hire an independent that comes in or you do it yourself with internal resources, if you're not honest and tough in grading, you're going to lose the value of assessing yourself. You need to either define further or enhance the

“Be brutally honest....If you're not honest and tough in grading yourself, you're going to lose the value of assessing yourself.”

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Charles "Buzz" Morris
General Manager,
Health, Environment,
and Safety
Chevron Global Upstream

system you have in place. Continue to work on leadership and employee engagement. Remeasure. Identify additional needs. Enhance, improve, repeat. Start in on the dialogue of the correlation between the things that we do, how well we do them, and the ultimate impact. Stay on the journey with us. Be relentless in your pursuit of safety excellence. Thank you.

Balkema: Thank you very much for the insights, Jim. Next, we're going hear from Buzz Morris. He's the General Manager of the Health, Environment, and Safety Group for Upstream Capability, which is part of the Global Upstream and Gas business at Chevron. He's worked in operations in wonderfully diverse cultures, including in Angola, Kazakhstan, Nigeria, and the Gulf of Mexico, with increasing responsibilities. Please join me in welcoming Buzz Morris.

Morris: Thanks, Chris. Good afternoon, everyone. Thank you for coming to listen to this Session. I want to thank the organizers for inviting me, especially Joe Stough of Syntex, who first asked me to participate and share my experiences. I'd also like to thank Tanya Lughermo, who is my Communications Advisor. She advises me on things regarding stakeholder engagement and is really responsible for pulling this together.

Background and Learning Experience

Putting together what I came to talk to you about has been an incredible learning experience. I had not sat back after six years of "laboring in the mine" to look back at what we have achieved. I was really fascinated by many of the things Jim said. I think that we've been successful at Chevron in creating a culture where good is not quite good enough. We continue to push for incident-free operations. That's what we're looking for. I have some learnings to share with you. I'll try to move through quickly the parts that Jim covered. You might accuse me of stealing his slides, because

a lot of what we built looks exactly like what Jim talked about. I've come to the same kinds of conclusions. I did it the hard way. I wish I'd seen Jim's presentation six years ago!

In any case, I'm excited to be here and excited to learn. My learning started about six or seven years ago when we tried to install a management system. I've been an HES professional all my life and I've worked in various parts of the world and business. Changing a culture is probably the hardest thing I've done in the company. You can't have a management system without integrating it into the business, having clear business processes, having a culture where people care whether or not you do this. A brief disclaimer before I move forward. I'm not saying that what we've done is right or wrong. I'm merely saying that this is what we've done. What I have learned is that you will continue to learn how to be more effective and more efficient at doing this, streamlining it, and getting to the point where you know that if you do A, it will likely result in B happening. Within Chevron's operations, we're beginning to get there.

I should say a little bit about the part of Chevron's business that I'm in. I'm in the Global Upstream and Gas Organization. We have 18 strategic business units around the world. Most of those business units explore and produce crude oil and natural gas. Four of those businesses do midstream work, related to pipelines, power, and shipping. I spend a fair amount of my time traveling and going to different cultures. Chevron produces about 2.7 million barrel-equivalents of oil and gas a day. It's a big operation. We spend a lot of money. Producing oil and gas around the world is very capital-intensive. We occasionally drill wells in deep water that may actually be what we call "dry holes." They can cost tens of millions of dollars each. It's not a cheap business to be in and it's not for the faint of heart. You really have to have good decision-making qualities to decide where you're going to put your money.

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Objectives

I have three objectives today. I hope that you take something away that you can apply to your business. First, I'll talk about the key components of our management system. I want to share with a case study in which we standardized the process, and I think has been very successful across the organization. Then I want to share some of my personal lessons about what I might have done differently and what I'm committed to doing going forward.

My career as an HES professional at Chevron started in earnest about 10 years ago, when Chairman David O'Reilly took over. This is a statement he made. "Achieving operational excellence requires a systematic approach and commitment to incident-free operations, always and everywhere. That's the power of the Operational Excellence Management System." He had a strong commitment to operational excellence, and to the health, environment, and safety aspect of operational excellence. He was committed to driving us to world-class or incident-free safety. That's been his mantra. I haven't seen a communication from him since in which he hasn't mentioned that. He has personalized it himself. He doesn't look at the numbers anymore. He looks at the people. I think that's a big breakthrough in the culture. When people don't talk about incident rates, and instead talk about who was hurt, what happened to them, what their name was, and how many family members were impacted, it's huge. That's the kind of culture that we're getting to in the company that I work for. As you can tell, I'm very proud to be part of that.

Vision for Operational Excellence

Chevron in 2000 had just been through a decade of decentralization, downsizing, low crude prices, and low gas prices. Because fuel prices were low, we were cutting staff and trying to stay in business. We destroyed all of our "centers" of functional excellence. We distributed the businesses around the world. They were

responsible for coming up with business plans and making their own decisions, executing those plans, and returning the proceeds to the center. That was a tough environment to be in. I spent the 1990s overseas in three different countries, trying to work in this environment. The centralized nature that we had in the 1980s had dissolved.

Along comes a new Chairman. He said, "We're going to put in an Operational Excellence Management System." This is defined by health, environment, safety, liability, and efficiency. He said, "We're going to do this in a systematic way, and we're going to get to zero." You can imagine how that resonated with people. "Yeah, okay. We'll get there." He put this on what he called the "Four Plus One" platform. There were four strategic intents. Operational excellence was just one of them. Capital stewardship, profitable growth, and cost management were the others. The "Plus One" was organizational capability, which is a way of looking at whether you're capable of delivering those things. That's the lens through which I've looked at things for the last 10 years. Do we have the capability in our organization to achieve those objectives?

Our operational excellence objectives are clear. They were stated 10 years ago in our Operational Excellence Management System, which was nothing more than a brochure when it started. It was just a gleam in someone's eye. The objectives were to have an injury-free and healthy workplace, to eliminate environmental incidents and long-term liabilities, to have incident-free and industry-leading reliability, and to make efficient use of our resources and assets.

The Emotional Response to Change

Let me give you the primary lesson and fundamental learning that I've had over the last six or seven years with regard to operational excellence. This is a diagram of the human response to change. I wish I had realized what it takes to change a culture in an organization

When people don't talk about incident rates, and instead talk about who was hurt, what happened to them, what their name was, and how many family members were impacted by that, it's huge."

**- Buzz Morris
Chevron**

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“Virtually everyone that I’ve come into contact with within our company went through the stages of this curve [from denial to acceptance] at some rate with respect to what we were trying to do with operational excellence.”

- Buzz Morris
Chevron

earlier. Virtually everyone that I’ve come into contact with within our company went these stages, from denial all the way to acceptance. I would claim that there are still a few people in denial.

For the first several years, people said things like, “It’s just the flavor of the month. This too shall pass.” Those are the kinds of statements you hear from people in denial. Then, as we started to get people trained, certified, and understand what was going on, there was a lot of anger. There were a lot of people saying, “You’ve lost your mind. We can’t afford to do this. You can’t tell me what to do.” Then you get in to the bargaining stage. “Okay, I’ll agree to do it in a common way, but can’t it be the way that we’re doing it?” They didn’t want to adopt anyone else’s best practice. They wanted to decide how they were going to do it. This goes right through to fear. Fear probably started when we began holding leaders accountable for performance and using operational excellence metrics performance in selection processes and management incentive plans. They finally got

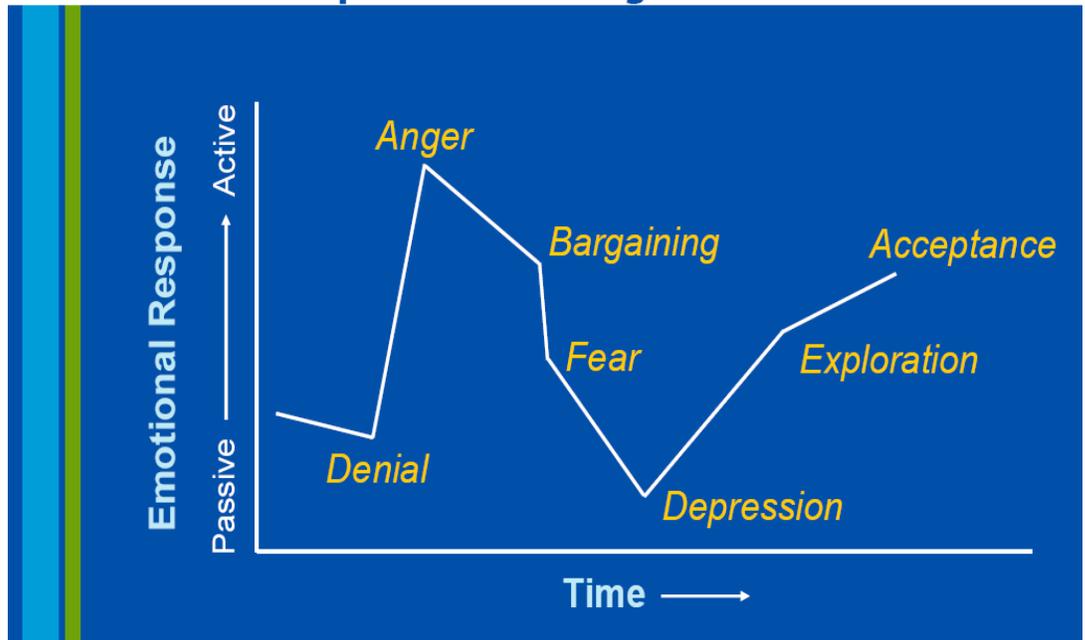
depressed, and so did I, before we started exploring how we could move forward together. Even the HES community and health, environment, and safety professionals went through this in the beginning.

This diagram is so powerful to me because any time I’m thinking of changing the status quo, I have to think about this. I have to think about what they’re going to go through. The technical aspect that Jim referred to, believe it or not, is the easy part. Most people on the line will do what you tell them to do and what their leaders expect them to do. I know that I align with my leader. How about you? You know that if your leader believes and impresses it, you’re going to do it.

Key Milestones

Our goal was zero incidents. Many people say that that’s not realistic and that things happen. As Jim said, however, zero is the only goal you can have. You have to make people believe that it’s possible. The way you make people believe it’s possible is to explain that we have big

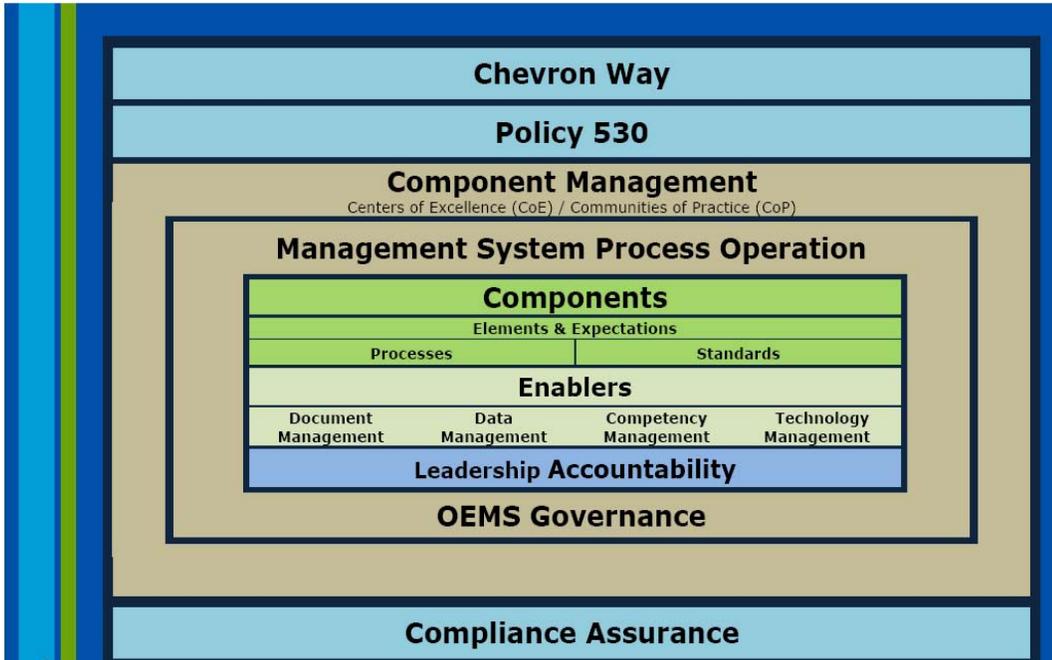
**Implementation Lessons
Human Response to Change**



SPEAKER PRESENTATIONS



Chevron's OE Framework



organizations around the world with thousands of employees who do it for a week, a month, or a year. Why can't we do it all the time? I really believe that we can.

Here are a couple of key milestones that occurred. In April 2003, when we really launched our OE management system, we brought a whole bunch of people together in one room from all over the world. It was a very tactical discussion. We talked about what we were going to do going forward and how we were going to do it. We hadn't really operationalized it. Just recently, we had Lloyd's Registry Quality Assurance come in and attest that our operational excellence management system met ISO 140001 and OSHAS 180001 requirements. Instead of going out to get every facility around the world certified, we decided to get our management system itself certified. It's been quite a journey for us.

Management System Framework

Here, you see a recently-published framework of

our operational excellence management system that we could not have created several years ago. In the last year or so, we've been resolving around this framework. We had to take everything that existed in this space and understand how we were going to manage it going forward. The things I'd like to call your attention to are what I call component management, the management system process, and leadership accountability.

I'll start with the management system process. It looks much like what Jim showed a little while ago. We have a five-step process that we run annually. It's very important that it's integrated into the business planning cycle. We used to come up with a lot of great ideas in HES but never got them integrated in the business planning. You probably know this. I've learned over time that what doesn't get in the plan doesn't get done. We do these five steps. We set our vision and objectives. We assess ourselves against those objectives. What do we have to do to close the gap? Then we plan and

“Zero is the only goal you can really have...We have big organizations with thousand of employees who do it for a week, a month, or a year. Why can't we do it all the time?”

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“We had all of the content. What we didn’t have was a systematic way to manage the content and engage the leaders and give them levers to impact the outcome.”

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Chevron**

resource. We were very good at Chevron at going straight from assessment to implementation. “What do you mean, plan? What do you mean, wait until next year? What do you mean, it’s going to take fifteen full-time employees? What do you mean, it’s going to take \$50 million to do that?” Now, we plan and say that if we can’t resource it and close the gap, we’ve got to figure out another way. Then we implement. We monitor the implementation throughout the plan period. We review. We step back and look at the management system process. We see if it worked. We then recalibrate our vision and objectives.

The components of our management system are just as were articulated before. There are thirteen elements with 46 expectations. The expectations are very aspirational. They’re high-level. They’re a vision of the final state that we want to reach. That was not good enough for me. I didn’t know how to tell people what to do different. We started developing processes that were essentially mini-management systems that have five components. All of them have the same components. Then we build standards.

I mentioned the MSP, but I also want to mention the importance of governance. We have clear governance bodies with defined decision rights. We aren’t tripping over who is going to decide what. It’s very important to decide up front who gets to decide. If you’re in a consensus culture like we were, and many people would say still are, it’s very difficult to decide things. What you end up with in building a consensus is bringing the solution down to the lowest common denominator.

This is what I was talking to you about the organizational capability piece of the system. We define organizational capability in six pieces. First is dynamic leaders. Do you have the right kind of leaders? Next, do you have skilled employees? Do you have a way to learn and innovate? Do you have world-class processes and organizational design? Do you have the technology and have you created the necessary

strategic partnerships? Finally, do you have a recognition and accountability system?

Leadership Accountability

Leadership accountability is probably the component that gets the most attention. This was the focus of the original “Framers” in creating our operational excellence management system. It was trying to figure out a way to get leaders systematically engaged and to make them stay engaged to create a culture of caring and concern. I think this was the major change. We had all of the content. What we didn’t have was a systematic way to manage the content, engage the leaders, and give them levers to impact the outcome. We had a system which was based on what I’d call individual heroics. There were pockets of excellence all over the corporation, but everything depended on the leader. I got to the point where I knew key leaders and their performance. I knew their strengths and I knew what they would be driving. Now we’re looking for leaders to serve the system, not for the system to serve the leaders.

HES Case Study

I want to mention a case study. We have a Chevron-wide risk management process that we built several years ago. The previous state was that everyone was defining risk their own way. We had an expectation that people would do risk assessments, but it was all over the board. Risk assessments ranged from hiring a contractor to three people sitting in a room arguing about it. It got very emotive. We realized when we started the management system that we had to have a way of systematically assessing our risk and qualifying it. We created a process. All of our processes have five components: purpose, objective, and scope; procedures; resources; measurement and verification; and continual improvement. Chevron had everything except the last three. We didn’t have clear roles and responsibilities. We didn’t address who was accountable for what. It was a big change for us to get some valid leading indicators that could tell us the health of a process so that we could

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start to correlate the health of the process with the outcome that we were trying to achieve.

The fundamental core of our risk management process was the "RiskMan2" procedure, which has several sub-procedures. Through benchmarking and other means, we built our own risk matrix with our own definitions around risks. There were very clear guidelines. If you fell into a certain risk category, you had mitigation plans in place. We identified and tracked those to closure. We have now identified where we have elevated risk around the corporation. We know where there are short-term mitigation plans in place. We know where we have to have long-term mitigation plans in place. These are just some of the requirements.

This is a breakdown of our RiskMan2 procedure. It has five sub-procedures which get into more and more detail as you go further down. Interestingly enough, when we first started the risk management process, one of the unintended consequences was that we realized we were doing a lot more detailed quantitative studies

than we needed to do. This means we either had a lot of high-powered consultants convincing us that we needed quantitative studies that we didn't need or engineers that were simply trying to do the right thing. Now, we feel like we have a common approach. We may miss something, but it's very doubtful.

Here's a grouping of a number of different things that we figured out. The whole idea behind our risk management process is that we have some known risks. Most of those known risks, however, are big risks. For example, we handle flammables and combustibles. We know those are big risks to us. In most cases, those are already well-mitigated. You get credit for the safeguards that are already in place for risk mitigations. However, we found smaller risks. We found that a risk of lower consequence but higher likelihood on one of our offshore facilities was being bitten by a brown recluse spider in one of our bunkhouses. I don't know if you've ever been bitten by one. I have. It's not a good experience. That's not a risk that's going to bring

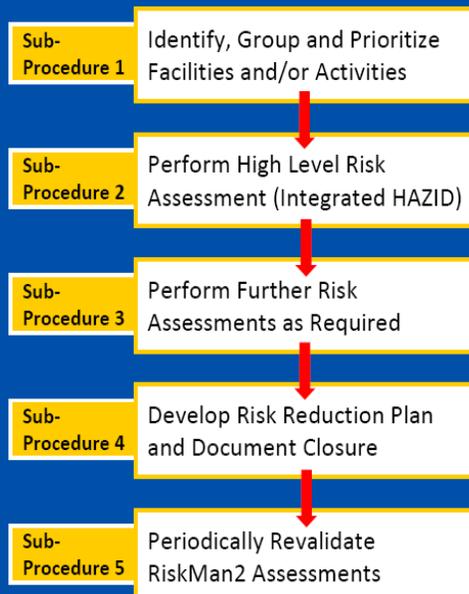
"...When we first started the risk management process, one of the unintended consequences was that we realized we were doing a lot more detailed quantitative studies than we needed to do."

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Chevron's Risk Management Features of the RiskMan2 Procedure



- Integrates health, environment and safety
- Provides a qualitative HES Risk Prioritization Matrix
- Establishes quantitative (safety) risk tolerance criteria
- Mandates closure of risk reduction action items
- Integrates existing risk assessment tools
- Provides for identification and prioritization of environmental aspects, reputation and social risks
- Used only with the assistance of a trained member of the Center of Excellence



SPEAKER PRESENTATIONS

HES Risk Management RiskMan2 Example – Offshore Platform



Known Risks

- Explosion / Fire
- Riser Failure
- Blowout / Major Spill
- Hurricane
- Helicopter Accidents

Results of RiskMan2 Assessment

- Major events (fire/rise failure) have severe consequences but low risk given the many safeguards in place
- Identified lower consequence but higher likelihood health risk (brown recluse spider)
- Hurricanes present a high asset risk but lower HES risk due to safeguards in place
- Uncertainty in explosion potential requires blast analysis (sub-procedure 3)

“[Risk management] studies led us to understand where we needed to focus further and where we could say, ‘Okay, that’s enough.’”

- Buzz Morris
Chevron

down the corporation. Nonetheless, it’s a risk. These sorts of studies led us to understand where we needed to focus further and where we could say, “Okay, that’s enough. We have the safeguards in place and we’re in good shape.”

What It Takes

Here’s the message. What does it really take? I’m a big governance fan. I think that before you start debating what it is that your management system is going to do and what the content is, you have to have clear decision rights. In our organization, it was very difficult to decide who was going to decide. All of the different functions that were impacted in line were the result of one person. That’s the top of the house. Our presidents and our chairmen couldn’t make all of these decisions. We set up layers of governance in the organization that had very clear rights to make decisions. Putting a framework in place for that is very important.

Another important factor is information management. We had tons of information

spread out around the world in different places that no one could really find. It was all there. The content was all there, but we had all these strategic business units operating independently. There was all kinds of excellence out there but we had no way to connect it together. Information regarding documentation and ensuring that everyone is on the right page is crucial. This has helped institutionalize our learning and bring it together in one spot. Someone can go to one place and look for safe work practices. They can go to the same place to see what our process is for managing contractors, and so forth.

The last key piece is content. The content needs to be there. You have to go get it and you have to figure out how you’re going to decide what “the best” is. I’ve become pretty worn out by the terminology “best practice.” Who’s going to decide what the best practice is? We’re really focused on trying to standardize and simplify our system across the globe. It can be painful, but I’m not whining. We’re better for it.

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Finally, at the end of the day, you need to be sure that people comply with whatever standards and processes you've set.

Lessons Learned

I can't say enough about leadership commitment. Most people say that they have it, but they really don't. It's critical. I always make the leaders put resources where their mouths are. We put together a plan. We resource the plan. If they won't resource the plan, they're not really committed. I worry, in our organization and others, that the goals are not congruent with the resources. I think you have to decide how good you want to be. You can spend infinite resources on this, or you can decide where on the curve you're going to sustain what you have.

Another lesson is to recognize that excellence takes a lot of time. One of the reasons I know this is real change at Chevron is because it's been so hard and such a long journey to get to where we are. I feel like we're just starting.

Try to begin with the end in mind. That's quoting Cubby. Try to figure out where you're going for at least the first three years. It's going to take many years. I've said enough about planning. We just had to keep working at it. If you don't have a plan, you're not going to get people on board.

We started out with the intent to design 20 or 30 standard processes across the globe. What a big mistake. I've narrowed that down. Now, I've got my organization focused on the six critical few. Stick with the critical few.

Jim mentioned benchmarking with competitors and learning what other industries are doing. We can all learn from each other.

A mistake we made was to not recognize that a management system is focused on the management. It's not focused on the rank-and-file worker. They ultimately get the outcome of it, but the management system needs to penetrate the leadership and management of the organization. The rest will come.

We had to stay the course. We still are. It's hard. We battle every day to keep the line believing and having faith that what we're doing is working. Develop, deploy, and stabilize. Get some run time on it before you try to optimize. Change management is critically important. Defining key terms is also very important. A huge success is that we can all be in one room, and, although we're from various parts of the globe, we can talk the same language and understand each other. When we refer to a standard or process, saying something like "contractor HES management," or "managing safe work," people understand what we're talking about. When I say "RiskMan2" everyone has the exact same view of what's happening.

Results and Conclusion

I want to close by saying that we've had some really good results. We've had four statistically significant shifts in our day days away from work and TRI rates in the last six years. We now have 18 standard processes across the Global Upstream and Gas organization. We have six environmental performance standards that we didn't have six years ago. We have created a culture of caring and concern in the organization. I'm very proud of what we've done. I hope that you are able to get something out of this. Thank you very much.

Question & Answer Session

Balkema: Excellent. Thank you very much, Buzz. We do have time for some questions. I'll take those and repeat them.

Audience Member: Buzz, has the same implementation course that you've described been taken on the other side of the business in downstream?

Morris: Yes. What we've done is tried to make it fit for purpose at the high level or corporate level. For example, the risk management process is across the corporation. As you get into some of the other areas, it's recognized that downstream is a different business from upstream. For

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Chevron**

QUESTION & ANSWER SESSION

“What you might want to do, depending on the size of the organization, is pilot [a safety management system]This way, you have...feedback and input.”

- Jim Johnson
National Safety Council

example, they have fixed facilities like refineries, whereas we're constantly growing. We're about 75% of the organization. That's part of the governance model. I sit with my peer from Global Downstream on an almost monthly basis and talk about where we are. We collaborate as much as we can. We have a corporate vice president of HES that brings us all together and demands that we work together and be the same where we can.

Audience Member: If your company is very diversified, do you start with one aspect of safety or do you try to take a general approach and begin work on all elements at once?

Johnson: In some respects, it would be best to try to approach the key elements of risk reduction, such as the leadership component and safety management systems, first. What you might want to do, depending on the size of the organization, would be to attempt to pilot it, if you will, in order to work with management and some of the employees and workers as you define the system and develop the processes. This way, you have their feedback and input. You can experience it that way before kicking it out broadly across the whole organization.

Morris: Everything we do going forward now is risk-based. Where's our highest risk, full stop. I think the pilot's a great idea. I wish I'd have thought of it a long time ago. I think getting it out and trying to penetrate a particular part of the business and a particular aspect of the system is the best way to "ground-truth" it and figure out whether or not you can port it to the other parts of the business. I'd base it on risk, however you determine it.

Audience Member: Buzz, you discussed the groundwork of a global organization in a management system. You took an organization that was decentralized and moved more toward a centralized model. **Would you have been able to take a program like this and then decentralize it?**

Morris: That's a good question. I think we're still

pretty decentralized. What I tried to convince people of was that setting standards and having a common methodology, especially in the HES area, is not rocket science. We know how to do this. I've tried to convince people that we can still do centralized planning and have decentralized execution. We have to set some boundary conditions, however. That way, people can operate within this space for HES and save all their creativity for making more money, getting better agreements, or whatever their focus is. It goes back to governance. I didn't address a lot of our governance structure, but you have to set up some sort of center or hub of excellence from which to provide oversight or it won't get done.

Every one of our processes has a sponsor and an advisor at every level in the organization. If global upstream has a process to meet corporate expectations, I have an advisor sitting on my staff whose job it is to work with that process annually and tell us what's going right and what's not. That is a minimum. It's made it really easy to do manpower planning and staffing and things of that nature. Now I can simply say, "What don't you want done?" It's pretty clear. It's right there. That's what this person does. We did whatever anyone asked us to before. Now, we run the management system.

Audience Member: Regarding governance, can you explain a little about what types of positions are within this governance group, and who decides who is going to be a part of it?

Morris: We took my peers from the other segments of the organization and built a Corporate Health, Environment, and Safety Steering Committee. We then took line executives from each of those lines and put them into what we called an Operational Excellence Governance Board at the corporation. We also have another steering committee that handles reliability and efficiency. They're probably five years behind us in the evolution because health, environment, and safety are simply more developed in our business than that

QUESTION & ANSWER SESSION

is. The governance group is presided over by our corporate vice president. My boss is actually on the highest level board. I recommend to him and he endorses. We had to set up a clear decision rights matrix about which level of governance has rights to do what. We can do things like approve a health, environment, and safety process or standard. If we're going to change a strategy or policy aspect, however, it has to go to the higher level of governance. That's corporate-wide. In the upstream, we've emulated the same thing all the way down. The business units have a governance structure. The Global Upstream and Gas sector, which is several operating companies, has a structure, and so forth. It's not easy, but I think it's a pre-requisite. You have to decide how you're going to decide.

Audience Member: It seems like it's empowering to managers.

Morris: Absolutely. It gives them a say. What's really cool about what's happening now is that we're starting to get data from our management system. If there's anything my business leaders love, it is data. They want data-driven activity, not just emotive activity. This space gets very emotional very fast. If any of you have worked in this space very long, you know that as soon as there's a fatality or something very bad happens, everyone wants to change course. There's a big problem. We've got to do something about it. This governance system has really helped us stay steady. Thank you for the question. I wish I had all day to talk about it. I really have a lot of

passion for it.

Balkema: All right. That concludes our Session today. Let's give our two speakers one more round of applause. Thank you, Jim and Buzz, and thank you all for a great day today.



With a vision to make our world safer, the National Safety Council (www.nsc.org) aims to educate and influence people in order to prevent accidental injury and death. The NSC's Congress & Expo (www.congress.nsc.org) is the world's largest annual gathering of EHS professionals. It provides access to the products, trends, experts, education, and networking opportunities needed to drive business forward.



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