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ACHIEVING EXCELLENCE IN OPERATIONAL RISK MANAGEMENT

Complying with safety, quality and environmental regulations and standards is increasingly important yet difficult as organizations become more complex. This is causing organizations to place an emphasis on establishing a unified operational risk strategy for their risk assessment, incident management and management of change business processes.



Our Operational Risk Core Capabilities



Risk Assessment

Gain a better understanding of your risk exposure across sites and improve execution by better allocating resources to high-risk areas.



Management of Change

Reduce change complexity with best practices for initiation, evaluation, approval and startup of change management processes.



Incident Management

Capture, track, investigate, report and analyze incidents and near-miss events, and also control operational risks, improve safety performance and sustain learning.



Quality Risk

Create knowledge-driven, data-centric quality specifications and control plans that are consistent across the enterprise and help you effectively conduct proactive risk assessment methodologies such as Failure Modes and Effects Analysis (FEMA) and Fault Tree Analysis (FTA).







About Sphera

Sphera is the largest global provider of Integrated Risk Management software and information services with a focus on Environmental Health & Safety (EHS), Operational Risk and Product Stewardship. For more than 30 years, Sphera has advanced Operational Excellence by serving more than 3,000 customers and over 1 million individual users across 70-plus countries to create a safer, more sustainable and productive world.

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REALIZING OPERATIONAL EXCELLENCE Through Safety Culture and Leadership

Survey Results

The "Realizing Operational Excellence Through Safety Culture and Leadership" survey sponsored by Sphera® was launched in October 2018, and 508 Environmental Health & Safety (EHS) professionals took part in the survey.

Operational Excellence is frequently defined as the workplace philosophy where the combination of problem-solving, teamwork and leadership results in ongoing improvement in an operation. Under this model, employees are positive and empowered to do the right thing the right way—every time. As we know, accidents often have several root causes, but one of the most frequent of those causes is worker behavior. Therefore, strong safety leadership and culture is key to Operational Excellence.

In this survey, we examined how safety culture, leadership and EHS initiatives are driving Operational Excellence at organizations today. How does safety culture boost operations? Where could it be improved? How is the effect of safety performance on operational success measured?

We would like to extend our thanks to everyone who participated in the survey. Now, let's turn the page and find out what our respondents had to say about the link between safety culture and operations.

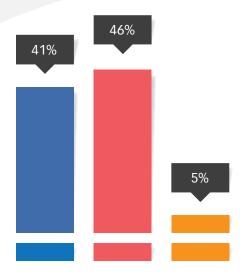
—Sphera and the EHS Daily Advisor Research Team

Note: All percentages have been rounded to the nearest whole percentage. For some questions, respondents were able to choose multiple answers. Detailed raw data from the survey's questions are available in the "Complete Survey Data Tables" section of the report beginning on Page 15.



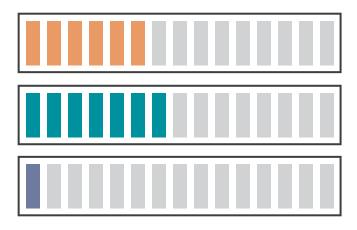
The Current State of Operations and Safety Culture

Survey participants clearly demonstrated the desire to constantly improve operations regardless of their current success.



- **41%** said that their operations are excellent, but they still strive for improvement.
- **46%** deemed their operations adequate and are seeking ways to improve.
- While **5%** described their operational efforts as inadequate or poor, they said they are trying very hard to improve the situation.

There was also a strong perception among respondents that EHS initiatives and safety culture are important factors that contribute to Operational Excellence.



- **42%** said that these initiatives and cultural efforts are considered indispensable to operations at all levels of the company.
- However, **44**% said that safety culture and EHS programs are considered indispensable at only certain levels of the company. For example, workers see the value but management does not or vice versa.
- Only **10%** of those polled indicated safety culture and EHS initiatives are generally considered irrelevant to Operational Excellence at their organizations.



Leadership and Engagement

Our survey participants' thoughts on what their organization would select as the single-most important contributor to Operational Excellence are noteworthy, and two factors stood out from the rest: **Integrity and/or respect** and **engaged effort** (each selected by 24% of respondents). These elements were more prized than profitability (12%) and timeliness/ speed (3%), illustrating the great value placed on leadership and engagement at organizations today.

This value is further demonstrated by our participants' generally successful efforts at maintaining strong safety leadership at their businesses.



- **78%** either agree or strongly agree that safety leaders at their companies effectively manage change to maintain EHS compliance, strengthen culture and engagement, and drive Operational Excellence.
- **66%** agree or strongly agree that safety leaders and frontline workers within their organizations communicate well and are on the same page when it comes to both safety culture and operational performance.
- A total of 80% agree (41% strongly so) that their organizations' safety leaders are strong advocates of company safety culture and ensure management recognizes its value toward Operational Excellence.



Leadership and Engagement

Respondents devote a great deal of thought to their employees' engagement and its effect on overall safety culture.

71%

agree or strongly agree that employees at their companies feel empowered to take an active role in safety, including stop-work authority and input into both EHS and operations initiatives.

67%

agree or strongly agree that employees generally trust that company leaders (from supervisors through senior management) have their best interests in mind when it comes to safety and operational decisions.

64%

agree or strongly agree that employees are engaged not only in the day-to-day aspects of their job tasks but also in a greater safety culture and supporting present and future operational goals.

This attention to employee engagement across approximately two-thirds of our response pool is an indication of its high importance to Operational Excellence.



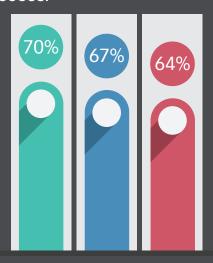
The Role of Behavior and Training

Survey participants' organizations use a variety of tools to analyze worker behaviors and their effects on Operational Excellence:

- Audits and/or inspections (74%)
- 2 Employee observations and/or suggestions (73%)
- 3 Job hazard analysis (JHA) (68%)
- Root-cause analysis (62%)
- Training frequency and participation rates (54%)



Most respondents also reported a high degree of success when it comes to their training programs and their impact on safety culture and operational success.



- **70%** agree or strongly agree that their organizations' training programs succeed in teaching employees how to do the right thing the right way every time.
- 67% agree or strongly agree that at their companies, safety training is treated by management and received by employees as equally as important as job-related (i.e., operational) training.
- 64% agree or strongly agree that behavioral and human factors (as they relate to training, safety culture and Operational Excellence) are appropriately taken into account at their companies.

Measurement and Methodologies

63% of survey participants characterize their EHS program as more proactive than reactive, meaning they put more of a focus on leading indicators, incident prevention, and effective training rather than a focus on lagging indicators where action is usually only taken after an incident or injury has occurred.

While there are many EHS key performance indicators (KPIs) that can be used to determine the impact of Environmental Health & Safety on overall Operational Excellence, here are the **top 10** being employed by our response pool:

1	Total number of injuries/illnesses: 64%
2	Near-miss reports: 63%
3	Audits or inspections: 62%
4	Total recordable incident rate (TRIR): 61 %
5	Employee observations or suggestions: 56%
6	Days away, restricted or transferred (DART) rate: 50%
7	Training frequency and participation rates: 49%
8	Root-cause analysis data: 46%
9	Number of workers' compensation claims: 41%
10	Number of corrective actions taken: 40%



Measurement and Methodologies

As Operational Excellence has become a key focus of organizations worldwide, several philosophies and methodologies have been created to address the issue. Our respondents employ some of these methods, and sometimes they employ more than one. Here are the **top 5** philosophies/methodologies being used at participants' organizations:

Key performance indicators (KPIs): 32%
5S methodology: 31%
Lean manufacturing/production/services: 29%
Kaizen: 22%
Six Sigma: 19%

The largest number of participants, however—a total of 41%—said that they do not use any of the methodologies listed in the question. Instead, they drive Operational Excellence with their own internal policies, procedures and culture.









Next Steps to Optimize Operations

The final question posed to survey participants was open-ended: "What is the most important thing that your EHS team is NOT doing right now that you believe must be done to optimize Operational Excellence at your organization?" Here are some select responses from the 364 participants who answered the question.

Some expressed concrete actions they want to take:

- "Stressing the importance of safety operations where it affects the company's bottom line."
- "Be present on the floor more."
- "Using leading safety indicators rather than lagging indicators."
- "Empowering senior staff to assist in new employee training as needed."
- "Utilizing technology (i.e., software) better."

Others are looking into reassessing team and company priorities or procedures:

- "More consistency in organizational meetings along with communicating results to employees."
- "Safety is a shared responsibility for some, and they get distracted from proper execution and implementation. We need to better prioritize our efforts."
- "Integrating safety and health as part of how we work. It is still a separate issue, although line managers are starting to get involved and seeing the links with productivity."

And others expressed frustration at obstacles they are facing to maximize their company's safety culture and, by extension, Operational Excellence:

- "Our EHS team is attempting to do everything in their power; however, they are hindered by not having the proper authority."
- "Our EHS Team is inexperienced and [is] struggling to define problems and execute solutions. The team is fractured because they are not happy at having to deliver completed audits, Safety Report Cards and Daily Safety Share topics. They would rather attend meetings and just tell the operations teams what needs to be fixed instead of delivering a product that includes the audit results, photos of the issues and suggested corrective actions."
- "Hard to get union employees to comply when the union tells them not to do it."
- "We have 700 employees and 250,000 square feet of production ... and one person to do all the safety and environmental duties."



Survey Firmographics

The 508 participants in the Realizing Operational Excellence Through Safety Culture and Leadership Survey come from a wide variety of job positions, industries and company sizes. Here are some of the facts about the professionals in the response pool.

Job Title

45% of respondents characterized their job title as "Safety or EHS manager." Some of the other roles represented include:

- Safety or EHS director or executive (16%)
- Staff-level employee (12%)
- Operations manager (6%)
- Front-line supervisor (6%)
- HR or other manager (5%)

Company Size

Here are the represented organizational sizes by number of employees:

• 1–49 employees: **14**%

• 50–99 employees: **11%**

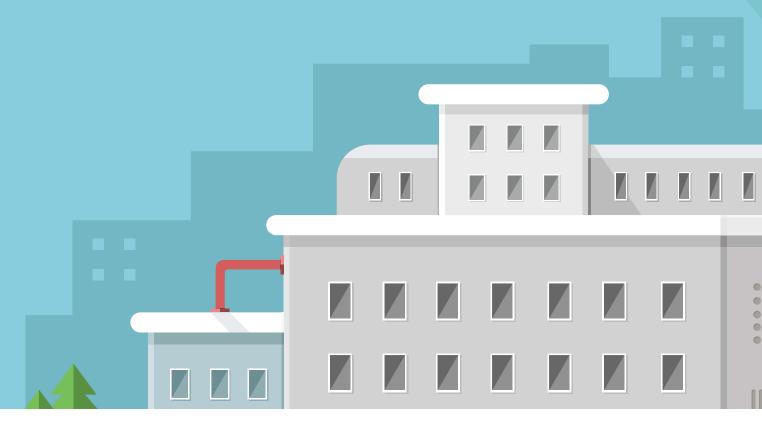
• 100-249 employees: 20%

• 250–499 employees: **15%**

• 500–999 employees: **13**%

• 1,000-4,999 employees: **17%**

• 5,000+ employees: **11%**





Survey Firmographics





Through Safety Culture and Leadership

Sponsored by





On the following pages you will find all the raw data from each question asked in the Realizing Operational Excellence Through Safety Culture and Leadership Survey. All percentages in these tables have been rounded off to the nearest hundredth of a percent, and specific "Other" responses have not been included due to space constraints.



Complete Survey Data Tables

Which of the following statements best describes the current state of operational success at your organization?			
Answer Choices	Responses (Percentage/Total Response Count)		
Our operations are excellent, but we still constantly strive for improvement.	40.99%	207	
Our operations are excellent, and we see no need to pursue further improvements.	3.96%	20	
Our operations are adequate, and we are seeking ways to improve.	45.54%	230	
Our operations are adequate, but we are fine with that and don't see any reason to strive for improvements.	0.99%	5	
Operational efforts are inadequate or poor, but we are trying very hard to improve the situation.	5.15%	26	
Operational efforts are inadequate or poor, and nobody seems interested in trying to improve anything.	3.37%	17	
	505		
	Skipped	3	

How are your company's safety culture and EHS initiatives viewed within the organization in relation to Operational Excellence?			
Answer Choices	Responses (Percentage/Total Response Coun		
Our EHS initiatives and safety culture are considered indispensable to Operational Excellence at all levels of our company.	42.32%	212	
Our EHS initiatives and safety culture are considered indispensable to Operational Excellence at certain levels of our company (e.g., workers see the value but management does not or vice versa), but not across the organization as a whole.	43.51%	218	
Safety culture and EHS initiatives are generally considered irrelevant to Operational Excellence at the company.	10.38%	52	
Safety culture and EHS initiatives are generally considered a hindrance to Operational Excellence at the company.	3.79%	19	
Answered		501	
	Skipped	7	



Please indicate the degree to which you agree or disagree with the following statem regarding safety leadership:			atements		
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Safety leaders at our company effectively manage change in order to maintain EHS compliance, strengthen culture and engagement, and drive Operational Excellence.	35.25%	43.37%	12.08%	7.33%	1.98%
Safety leaders and frontline workers within the organization communicate well and are on the same page when it comes to both safety culture and operational performance.	25.05%	41.88%	19.24%	12.02%	1.80%
Our safety leaders are strong advocates of company safety culture and ensure management recognizes its value toward Operational Excellence.	41.27%	38.69%	12.70%	5.56%	1.79%
Answered		506			
				Skipped	2

Please indicate the degree to which you agree or disagree with the following stateme regarding employee engagement:				atements	
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Employees at our company feel empowered to take an active role in safety, including stop work authority and having input into both EHS and operations initiatives.	26.53%	43.56%	19.41%	8.71%	1.78%
Employees generally trust company leaders (from supervisors up through senior management) have their best interests in mind when it comes to safety and operational decisions.	23.51%	43.43%	19.12%	12.15%	1.79%
Employees are engaged not only in the day-to- day of their job tasks but also in a greater safety culture and supporting present and future opera- tional goals.	22.27%	42.35%	21.67%	12.13%	1.59%
		_	_	Answered	506
				Skipped	2



Complete Survey Data Tables

Please indicate the degree to which you agree or disagree with the following statements:					
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Our organization's training programs succeed in teaching employees how to do the right thing the right way every time.	25.27%	% 44.59% 17.83% 9.77%	9.77%	2.55%	
At our company, safety training is treated by management and received by employees as equally as important as job-related (i.e., operational) training.	29.21%	37.95%	19.19%	12.37%	1.28%
Behavioral and human factors (as they relate to training, safety culture, and Operational Excellence) are appropriately taken into account at our company.	26.38%	38.30%	21.06%	11.91%	2.34%
				Answered	473
				Skipped	35

Which of the following tools does your organization use to analyze worker behaviors and their effects on Operational Excellence? Check all that apply.			
Answer Choices	Responses (Percentage/Total Response Count)		
Root cause analysis	61.91%	291	
Risk analysis	51.70%	243	
Job hazard analysis (JHA)	68.30%	321	
Training frequency and participation rates	53.62%	252	
Audits and/or inspections	74.47%	350	
Employee observations and/or suggestions	72.98%	343	
Safety perception surveys	26.60%	125	
Employee engagement surveys	31.06%	146	
Supervisor or manager evaluations	46.38%	218	
None of the above—our organization makes little or no effort to analyze behavioral factors	5.74%	27	
Other (please specify)	5.53%	26	
	Answered	470	
	Skipped	38	



If you had to choose only one, which of the following do you believe your organization (not necessarily you personally) would select as the single most important contributor to Operational Excellence?

Answer Choices	Responses (Percentage/Total Response Count)	
Integrity and/or respect	23.99%	113
Quality of product	12.95%	61
Engaged effort	24.20%	114
Analytical thinking	1.91%	9
Proper training	17.41%	82
Profitability	12.31%	58
Discipline	4.46%	21
Timeliness or speed	2.76%	13
	471	
	37	

Overall, would you consider your organization's EHS program and culture to be more proactive (a focus on leading indicators, incident prevention, and effective training) or reactive (a focus on lagging indicators, where action is usually only taken after an incident or injury has occurred)?

Answer Choices	Responses (Percentage/Total Response Count)		
Proactive	62.50%	285	
Reactive	37.50%	171	
Answered		456	
Skipped		52	



Complete Survey Data Tables

Which of the following EHS key performance indicators (KPIs) are analyzed at your organization to determine the impact of environment, health, and safety on overall Operational Excellence? Check all that apply.

Answer Choices	Responses (Percentage/Total Response Count)	
Near-miss reports	62.80%	287
Number of corrective actions taken	40.48%	185
Days away, restricted, or transferred (DART) rate	50.33%	230
Employee observations or suggestions	56.02%	256
Total recordable incident rate (TRIR)	60.83%	278
Training frequency and participation rates	48.58%	222
Workers' comp experience modification rate (EMR)	35.89%	164
Number of workers' comp claims	41.14%	188
Audits or inspections	61.93%	283
Root cause analysis data	45.51%	208
Total number of injuries/illnesses	64.33%	294
Number of safety committee meetings and participation rates	39.39%	180
We don't track any KPIs for the purpose of measuring Operational Excellence	8.32%	38
Other (please specify)	2.41%	11
	Answered	457
	Skipped	51

methodologies? Check all that apply.	onal Excellence	philosophies/
Answer Choices		oonses al Response Count)
Lean manufacturing/production/services	28 92%	129

(Fercentage/Total Respons		i kesponse count)
Lean manufacturing/production/services	28.92%	129
Six Sigma	19.06%	85
5S methodology	30.72%	137
Scientific management	6.05%	27
Kaizen	21.97%	98
OKAPI method	2.47%	11
Specific, Measureable, Achievable, Relevant, and Timely (SMART) KPIs	32.06%	143
Flawless Execution (FLEX) methodology	4.04%	18
Plan-Brief-Execute-Debrief (PBED)	3.81%	17
Hoshin kanri	2.24%	10
None of the above—we drive Operational Excellence with our own internal policies, procedures, and culture	41.03%	183
Other (please specify)	4.26%	19
	Answered	446
	Skipped	62





What is the most important thing that your EHS team is NOT doing right now that you believe must be done to optimize Operational Excellence at your organization?

364	Answered (open-ended question)	
144	Skipped	

Which of the following best characterizes your job title?				
Answer Choices	Responses (Percentage/Total Response Count)			
Safety or EHS manager	44.77%	201		
Safety or EHS director or executive	15.59%	70		
Operations manager	5.79%	26		
Operations director or executive	3.56%	16		
HR or other manager	5.35%	24		
HR or other director or executive	2.23%	10		
Consultant or contractor	4.68%	21		
Front-line supervisor	6.01%	27		
Staff-level employee	12.03%	54		
	Answered	449		
	Skipped	59		

Please indicate your company size:				
Answer Choices	Responses (Percentage/Total Response Count)			
1–49 employees	13.53%	61		
50–99 employees	10.86%	49		
100–249 employees	19.96%	90		
250–499 employees	14.63%	66		
500–999 employees	13.30%	60		
1,000–4,999 employees	16.85%	76		
5,000+ employees	10.86%	49		
Answered		451		
	Skipped	57		



Complete Survey Data Tables

Answer Choices		Responses (Percentage/Total Response Count)	
Chemical production	3.79%	17	
Manufacturing	32.07%	144	
Construction	16.04%	72	
Mining	1.56%	7	
Agriculture	0.89%	4	
Distribution/warehousing	1.78%	8	
Oil & Gas	4.90%	22	
Utilities or energy	4.90%	22	
Retail trade	0.67%	3	
Education	3.34%	15	
Government or public administration	6.01%	27	
Consultant	3.12%	14	
Transportation	3.34%	15	
Health care	5.35%	24	
Hospitality or food service	1.11%	5	
Other (please specify)	11.14%	50	
	Answered	449	
	59		





Survey Methodology

EHS Daily Advisor surveys are designed by our in-house team of EHS experts. Once survey questions and distractors are determined and tested, the survey is ported to the SurveyMonkey® platform. Our survey population base is the 200,000 or so customers of our parent company, BLR®. Customers are notified of the survey through emails. They then click a link to take them to the survey.

Surveys typically stay open for three weeks to one month, although data show that most responses are received within a few days of the announcement of the availability of the survey. Surveys may stay open longer than normal for further data collection.

Analysis is usually straightforward, reporting on responses and percentages of those responses rounded off to the nearest tenth of a percent. We strive to present data in clear, easy-to-understand charts and tables. With open-ended questions, we mention the most frequently encountered entries, using our judgment as to which responses may be grouped together.





About Sphera

Sphera is the largest global provider of Integrated Risk Management software and information services with a focus on Environmental Health & Safety (EHS), Operational Risk and Product Stewardship. For more than 30 years, Sphera has advanced Operational Excellence by serving more than 3,000 customers and over 1 million individual users across 70-plus countries to create a safer, more sustainable and productive world.



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