# Rightsizing an EHS Workforce

## How Many Professionals Are Needed in Your Organization?

BY SAMANTHA CONNELL, TODD HOGUE, AND LAURENCE PEARLMAN

Think back on your career as an environmental health and safety professional. Have you ever been part of an overstaffed EHS team? You're likely shaking your head right now. As EHS professionals, and certainly as industrial hygienists, few of us have felt adequately staffed, let alone overstaffed. With many of us feeling understaffed at some point in our careers, how can it be that we haven't managed to find a solution? How do we not know the appropriate level of resources for EHS within an organization?

One could pour infinite resources into EHS, but at what point does the law of diminishing returns take over? Outside of consulting, EHS is not typically a revenue-generating discipline. Furthermore, some perceive EHS simply as an investment in cost avoidance. Companies grapple with identifying the "sweet spot" of investing in EHS resources to realize maximum value. One inherent problem with this is that it is not a simple accounting exercise. EHS value comes in direct and indirect forms. Companies can measure annual workers' compensation losses, regulatory fines, and other costs quite easily. However, a company's brand reputation can be enhanced, preserved, or eroded by its EHS performance. How do you quantify the value of a reputation?

Our company, a large chemical manufacturer specialized in an integrated approach to polyethylene terephthalate (PET) and fibers, recently completed an exercise to understand our EHS resources. Following are lessons learned from our experience as well as some approaches—each with their own advantages and limitations—to determining appropriate EHS staffing. (This isn't to say that the way we've done things is by any means a best practice, but we hope our experience will help you in your journey to rightsizing resources and building capabilities in your organization.) We learned that determining the ideal level of EHS resources is often more of an art than a science.

## OPTIONS FOR BENCHMARKING

Examples of circumstances in which organizations should review staffing include when employees' workloads are increasing or during times of company growth. Several options exist to benchmark your organization's resources against those of other companies.

**Zero-based staffing model.** This approach evaluates workload in detail. It involves listing both routine and non-routine tasks and carefully quantifying the amount of time required for each task. This method is often used as a comparator for current resources, but it is completely internally focused and doesn't provide a view of how peers are managing the same activities. For example, this approach would not capture whether some staff are doing a task in a more efficient way. In addition, zero-based staffing studies are labor intensive and are typically best applied to single locations or companies with very few locations.

**Comparing to external benchmarks.** Several EHS staffing benchmarks are available. While it may be tempting to find a benchmark and simply apply it to your organization across the board, it's important to remember that benchmarks aren't necessarily one-size-fits-all. Factors such as company size and budget, industry sector, and risk profile all play a role in benchmarking. Since every company is different, external benchmarks should be used as reference points rather than absolute targets. If your company's numbers differ greatly from external benchmarks, it should stimulate a conversation within the company rather than be seen as an automatic trigger for hiring.

When our company initiated an exercise to assess our EHS resources, we had some anecdotal indicators and gut feelings that parts of our business were understaffed with EHS professionals as some areas of our company had better EHS performance and more EHS maturity than others. We partnered with a consulting solutions company, Marsh Advisory, to lead our study, which is based on external benchmarks from two sources: the National Association for Environmental, Health, Safety, and Sustainability (EHS&S) Management (NAEM) "EHS&S Staffing, Structure, and Budget Report" and HSI, a for-profit company in the EHS technology and training space.

NAEM publishes its report on staffing, structure, and budget every few

years, most recently in 2020. The 2020 report provides analysis of survey responses from 150 companies across various industries and offers benchmarks of EHS resources by categories such as revenue, total number of employees, industry type, and risk. HSI's approach differs from NAEM's in that rather than surveying companies, HSI provides an all-encompassing equation to calculate the exact number of health and safety professionals an organization needs. One drawback to the equation is that it focuses only on health and safety professionals and excludes individuals working in environmental roles and other disciplines.

Resources for additional external benchmarks that our company did not use in our exercise include the Campus Safety, Health, and Environmental Management Association, also known as CSHEMA, and professional services firm Shirley Parsons' "EHS Talent Report."

**Benchmarking for industrial hygienists.** While many articles and blog posts explain why companies need an IH, the answer to the question "how many?" remains to be defined. Existing benchmarking exercises do not separate environmental, health, or safety functions; instead, these roles are either grouped into health and safety (as in HSI's calculation), EHS, or EHS&S (as NAEM does).

In collaboration with the International Occupational Hygiene Association, a member of the French Society for Occupational Hygienists (SOFHYT), Alessandro Sassi, attempted a benchmarking exercise for IH resources in 2021, but there were not enough respondents. A short summary of the data is published on the SOFHYT website.

### OUR EXPERIENCE AND FINDINGS

To set the scene, our company has grown tremendously and rapidly through acquisition. There are multiple business segments, each containing multiple verticals, which means there is a lot of diversity in terms of risk and EHS needs, specifically in IH. Some verticals have virtually no chemical risk but high ergonomic risks. Others have extremely high chemical risks, some industrial ergonomics risks, and heat stress risks. Noise concerns are a constant across the board.

In order to work toward a company-wide framework for EHS, we designed a survey to collect data from all company sites. In parallel, we collected organizational charts from all sites to learn how many responses to expect. We chose to use the NAEM and HSI benchmarks to create an acceptable range of EHS resources for our organization. But since HSI only considers health and safety professionals, we had to build in additional provisions to allow for full-time equivalents (FTEs) at each site for environmental tasks. We then listed what we consider to be EHS activities in our organization so we could later remove FTEs who do not cover these tasks. For example, quality, security, and product stewardship are a few examples of tasks not covered under EHS. Removing FTEs who cover these activities helped us ensure that we adequately counted the true number of EHS professionals and provided a better comparison to the benchmarks.

We followed the survey with a validation process. As the data was aggregated, we followed up with participating sites to clarify survey responses that appeared irregular. The results were ultimately compiled using several parameters to allow for further analysis of the data. These parameters included region, site location, business segment, and others.

After compiling the survey results, we compared them to EHS performance across the company's business units. We established criteria for EHS staffing outcomes as illustrated in the legend of Figure 1. To indicate EHS performance for each business unit, we developed a composite score comprising four performance indicators: safety, process safety, environmental management, and compliance. We scored business units on each performance indicator on a scale of 1 to 5. We assigned a score for safety based on each business unit's total recordable incident rate (TRIR) and lost-time incident frequency rate. Other factors contributing to the safety scores were significant injuries and fatalities. The process safety performance indicator was more subjective as we estimated program maturity for each business unit using the same numerical scale. For environmental management, we measured business unit performance based on the number of environmental permit exceedances and reportable quantity releases. Finally, if a business unit had any regulatory citations from agencies, these were factored into its compliance score. Our results from this exercise can be found in Figure 1.

| Business Unit | Business Unit EHS Performance | Business Unit EHS Staffing |
|---|---|---|

| Site | EHS Performance | Staffing |
| --- | --- | --- |
| A | | |
| B | | |
| C | | |
| D | | |
| E | | |
| F | | |
| G | | |
| H | | |

| Performance Legend | Rating | Staffing Legend |
| --- | --- | --- |
| Best in Class | | Meets or exceeds both NAEM and HSI benchmarks |
| Better Than Industry Average | | Meets either NAEM or HSI benchmarks |
| Industry Average | | Within 10 percent of lowest benchmark |
| Below Average | | Within 25 percent of lowest benchmark |
| Poor | | Greater than 25 percent away from lowest benchmark |

**Figure 1.** Results from benchmarking exercise conducted at a chemical manufacturing company with multiple sites worldwide, comparing EHS performance to staffing levels.

*Click or tap on the figure to open a larger version in your browser.*

It is evident that our suspicions were validated in this exercise: our EHS performance correlated very nicely with staffing levels. This seemingly strong association in our findings is not typical. Marsh conducted a study more than a decade ago that found little correlation between safety performance and number of EHS professionals. If anything, the study indicated that the more EHS resources you have, the worse performance gets! Marsh found that organizations that loaded up on EHS personnel disempowered line leaders from their safety responsibilities. When the EHS staff were present, things were good. When they left, safety performance got worse.

Marsh described their experience with an oil company in west Texas that ditched this "safety staff as cops" model and found that its culture quickly improved. When safety was fully owned by the line, the ratio of EHS personnel to staff plummeted—and so did TRIR. These results are achievable when EHS is deeply embedded in the culture of the organization. Firms that operate like this tend to have world-class safety performance over time.

Just as having more EHS professionals doesn't necessarily ensure world-class performance, complex EHS procedures are vulnerable to human error and often subvert their original purpose. For example, one of the authors of this article previously worked in companies that adopted elaborate procedures following major EHS incidents. One company required dozens of checks and reviews, including multiple second- and third-person verifications, to complete a confined space entry. This process was intended to add layers of protection but its unintended consequence was complacency. People who knew they were one of many checks in the system assumed that someone else would catch problems. Investigations usually concluded that verifications were either skipped or not performed properly.

So why were the results different in our study? Further research is needed to answer this question, but we believe that our EHS resources were much lower than those of the companies in the Marsh study and that our performance was affected. Our theory is that the Marsh study participants were likely near industry benchmarks, and, in many cases, heavily staffed with EHS professionals.

In some cases, as in ours, adding EHS resources may be the answer. In others, a potential solution may be to increase competencies within an organization. The AIHA publication "Core Competencies for the Practice of Industrial/Occupational Hygiene" provides a framework that organizations can follow to support professional development and ensure that EHS resources also have strong business acumen. Most EHS professionals don't have a business degree, and we often struggle to speak a language the company understands. To articulate our needs and help the business see the potential benefits, business acumen is vital.

Our ultimate goal is not to employ as many EHS professionals as possible, but to protect people and the environment as well as our organization's assets and reputation. While appropriate staffing levels are critical to the success of a business, measurable impact in EHS and a clear strategy accepted by both EHS and the line organization, or business leadership, are also important.

While the benchmarking study yielded valuable results for our company and we consider the project a success, several lessons we learned might help you as you assess EHS resources at your organization.

**Asking people to judge their own competencies is very subjective in a global company.** Our goal was not only to count the number of EHS professionals in our organization but to collect quality data to assist in building our communities of practice and auditing teams. We asked several questions related to employees' backgrounds and levels of experience. For example, we asked employees about different EHS-related skills and prompted them to tell us whether the skills were new to them or if they were competent or recognized experts in certain areas. Unfortunately, these types of questions provoked unintended subjective responses. Even certifications and training can vary globally. Follow-up was often necessary to understand what the certifications or training entailed.

**Don't overcomplicate benchmarking projects.** In an attempt to collect the previously mentioned data on employees' backgrounds, our survey became far too complex, which complicated data collection and review.

**Site visits and personal interviews are important, and depending on your goals, a single survey likely won't cover everything.** We found that site visits, phone calls, and interviews are the best way to get this type of information. A survey can be a starting point, but interviews allow you to account for any cultural differences and varying perspectives across sites. For example, one site might consider a safety coordinator who completes fire extinguisher inspections and participates on the emergency response team to be an EHS professional. In other cultures or at other sites, this role might be considered part of production or a technician-level safety role. Basing a benchmarking exercise only on job titles might make some sites appear overstaffed. Talking with site personnel, in addition to clarifying roles throughout the organization, will allow you to better count and allocate your resources.

**Each company is unique, which makes it difficult to apply one factor across the board.** For instance, our company has three major business segments that can be broken down into strategic verticals. Each of the verticals has a different risk profile, which needed to be considered when applying different benchmarks (or factors within benchmarks). While we are considered a chemical manufacturer, not every part of our business operates under that risk profile or requires the same level of EHS resources. We considered this carefully, applying different factors to each vertical and sometimes even to different sites within the same vertical in order to build an honest business case.

**Shared resources are a reality and may also be counted.** Shared resources might include "double-hatted" roles in which staff perform EHS tasks as well as tasks in operations, quality, or human resources, for example. Some of these roles are adequate for the site where they are located. Counting them accurately may be difficult; breaking down daily work into percentages of time and ultimately an FTE is not an easy concept for everyone.

**Solutions can be creative.** You may not always need a fully staffed EHS organization for every site. Regional roles within business units or resources from larger sites that support smaller sites might be sufficient for what your company needs.

**Benchmarking staffing levels is one piece of the puzzle.** Measuring competencies of EHS staff is another. Not all FTEs are created equal, so it is necessary to set the standard for technical capabilities within an organization. Since EHS training and certifications vary worldwide, it can be useful to define standard roles, job profiles, and accepted or necessary training to achieve the desired capabilities in an EHS organization.

*Synergist* readers may be most interested in our results related to IH benchmarking. On an anticlimactic note, after working on this project for approximately a year, we have ideas about our IH needs and how to move forward, but no concrete answers regarding how many people to hire, what backgrounds they should have, or where to put them. Again, this exercise is more of an art than a science. Our goal as an organization is to standardize something that isn't necessarily standardizable. We aren't interested in applying one EHS staffing ratio across our organization but rather continuing a risk-based approach and first filling gaps in areas where we've identified risks that do not currently have dedicated resources.

We are also working on a strategy to build capabilities within our organization, which includes training, networking, building communities of practice, and involving site personnel in the development of governance standards and auditing. In short, we are seeking organic growth via the programs listed above and filling other gaps with more dedicated IH resources that can support business units, regions, or large sites.

## ASK YOURSELF

Following are some final questions to consider regarding EHS staffing levels at your organization.

**Are you compliant?** Your organization must be able to resource appropriately to maintain compliance.

**Can you achieve your safety strategy?** Ensure that resources are allocated and organized to achieve objectives (in other words, you can't have "champagne aspirations" on "beer budgets").

**Are you appropriately resourced to manage your risks?** High-risk operations require increased competence, capability, and capacity.

**How mature is your organization?** As the line organization increasingly "owns" safety, the organization as a whole may need less capacity but more capability and competence.

**How capable is your EHS team?** As you assess your skills, you may need to add staff to build short- or long-term capacity.

**What is your organizational model?** How you think about organizing affects staffing needs. For example, shared resources, regional structures, and business unit organizations must be addressed.

**What is your safety strategy?** EHS resourcing may vary depending on your safety strategy. Think about being operationally excellent (or "there's one right way of doing things"), innovative (or focused on the latest in EHS technologies, equipment, and best practices), or customer centric (you customize approaches to safety for each business unit in the company).

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Send feedback to *The Synergist*.

## RESOURCES

Campus Safety, Health, and Environmental Management Association: "Benchmarking."

French Society for Occupational Hygienists (SOFHYT): "Benchmark in Industrial Hygiene."

HSI Health and Safety Institute Blog: "How Many Safety Pros Do You Need to Hire?"

National Association for Environmental, Health, Safety, and Sustainability (EHS&S) Management: "2020 EHS&S Staffing, Structure, and Budget Report" (2020).

Shirley Parsons: "EHS Talent Report 2019" (2019).