2016 AUGUST

EHS & Sustainability Career Profiles and Skills for Success

0-5 Years: Early-career Professionals

Building Skills and Learning to Lead

In collaboration with AIHA® *Protecting Worker Health*

National Association for Environmental Management

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Letter from Executive Director

On behalf of NAEM, I am pleased to introduce the latest report in NAEM's comprehensive research series on how the EHS&S function is structured from an organizational design perspective.

Using a combination of quantitative data and qualitative insights, this report offers a detailed analysis of the education, skills and knowledge areas that EHS&S professionals need at each stage of their careers. This report also documents the success factors and outside influences that shape career paths, as well as the personal attributes that make EHS&S professionals unique among their peers. The result is a unique portrait of the profession that I believe belongs on the desk of all those responsible for designing and developing the EHS&S function today.

As the leading professional association for corporate EHS&S leaders, NAEM initiated this research to address our members' needs. Our goal was to provide our members with a profile of the professionals they should recruit or develop to build a healthy pipeline for succession. To do so, this report not only documents what EHS&S professionals do, but also how they think, how they behave and how they shape their internal culture to advance their goals.

Because no two companies or EHS&S professionals are the same, we do not make specific recommendations; we do, however, offer you information you can use to benchmark your own career progression or those of the employees on your team. The full report also offers more than 28 charts per profile that you can use to recruit, evaluate and develop your entire EHS&S staff.

I gratefully acknowledge the members of our advisory committee who helped to shape the questionnaire, and thank all those who participated in the research. I would also like to extend a special thanks to the American Industrial Hygiene Association (AIHA) for collaborating with us on the research. The generosity of time and knowledge from everyone involved in this project has helped advance our understanding of the profession and its value to this critical business function.

Sincerely,

Carol Singer Neuvelt
Executive Director
NAEM

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About NAEM

The National Association for Environmental Management (NAEM) empowers corporate leaders to advance environmental stewardship, create safe and healthy workplaces and promote global sustainability. As the largest professional community for EHS and sustainability decision-makers, we provide peer-led educational conferences, benchmarking research and an active network for sharing solutions to today's corporate EHS and sustainability management challenges. Visit NAEM online at www.naem.org.

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How to Use this Report

How to Use this Report

NAEM's EHS&S Career Profiles and Skills for Success report is designed to be an in-depth guide to those who are interested in advancing their own careers, and an essential resource for EHS&S hiring managers and training leaders. This is the first benchmark that comprehensively documents each step of the career path for corporate EHS&S managers as they rise to leadership positions.

What You'll Find Inside

Divided into five-year increments, this report combines quantitative and qualitative data to shed light on how professionals begin their career, position themselves for succession, and progress from manager, to leader, to decision-maker. It documents the core educational background, knowledge areas, skills and responsibilities for those at each stage of their career. Importantly it also demonstrates the importance of specific leadership attributes and personal behaviors to the success of leaders at all levels. The following is a snapshot of the main content areas included within this report:

- Job Titles
- Salaries
- Job Responsibilities (including Shared vs. 'Owned' Responsibilities)
- Professional Experiences Outside of EHS
- Degrees and Certifications
- Core Technical and Business Skills
- Core Technical and Business Knowledge Areas
- Key Leadership Attributes and Behaviors that Drive Success

How to Apply this Knowledge

This report will help you broaden your thinking beyond what is happening in your own organization by allowing you to benchmark your own or your team's skills and responsibilities against those of other professionals in the field. Specifically, you can use this report to:

- Write job descriptions
- Screen applicants for the right mix of skills
- Establish appropriate job titles
- Define job responsibilities
- Evaluate job performance
- Develop training programs
- Set salaries and pay increases
- Determine whether your EHS&S team members have the appropriate mix of skills and attributes
- Identify those with the most potential for succession

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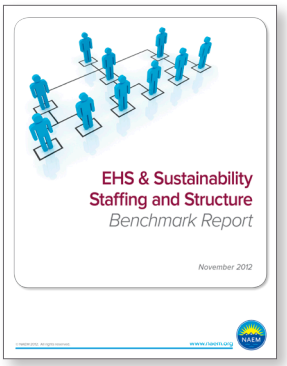
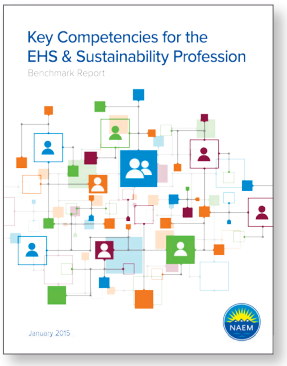
How to Use this Report

How to Find More Benchmarking on this Topic

NAEM's landmark series on the Management of the EHS&S function is a comprehensive research portfolio on how companies design, budget and staff their EHS&S function. If you are seeking to benchmark how your peers structure their departments, learn what the average headcount is for a company at the same risk level as yours or find out which core competencies most EHS&S professionals share, consider purchasing another publication from this suite today.



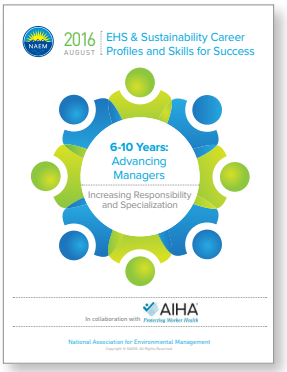
EHS & Sustainability Staffing and Structure is the most in-depth benchmark of the EHS&S function. It is the only benchmark that looks at EHS&S staffing and structure based on industry sector, level of risk and corporate revenue. The report includes the roles and responsibilities of the EHS and sustainability function as well as staffing levels, budgets and salaries.



Key Competencies for the EHS & Sustainability Profession was released in 2015 and looks at the skills, attributes and knowledge areas that are necessary to achieve the business objectives of the EHS&S function. *Key Competencies* provides a detailed portrait of the diverse capabilities of the EHS&S professionals who are leading a broad range of regulatory compliance and sustainability activities for their companies.

Find Out What Comes Next

If 0-5 years is your current career stage, consider buying the 6-10 years profile of the EHS Professional, which will show you:



- Skills and competencies that are most important as you move into the next stage of your career
- Themes that characterize the change in responsibility and oversight
- Professional certifications you might consider getting to prepare yourself for leadership
- The level of accountability and authority that those in the next career stage typically have

If you would like to purchase another publication from our Career Profile Series, use the discount code **CAREER** to save 50% off of any other segment in this Portfolio.
http://www.naem.org/?survey_2015_careerpr

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Methodology

Methodology

Survey Definitions

The following is a list of terms used throughout the benchmark study and the definitions associated with them.

EHS: Environment, health and safety

EHS&S: The term that is used to define the EHS and sustainability business function

Function: While many companies may use the term 'function' interchangeably with 'department,' this study defines 'function' as the role or purpose of the respondents themselves. In some companies, for example, the EHS function may reside in multiple departments

Level: The term level is used throughout the report to describe where respondents sit within their organizations. In addition, it is used to help define the extent of responsibility respondents have for activities they are involved in at their current position

Profiles: The five different career stages NAEM has defined, for the purpose of identifying distinct stages of a professional's career

Competencies: The general term which includes skills, knowledge areas, attributes and behaviors that help professionals to do their job

- ***Skills:*** The abilities of individuals, often gained through training. Within the report they are separated into technical, business and interpersonal spheres
- ***Knowledge Areas:*** The areas of expertise or specialization that individuals use in their work. They are separated into technical and business areas within the report
- ***Attributes:*** The qualities that individuals characteristically exhibit, as related to the performance and progression of their EHS&S function
- ***Behaviors:*** The actions that individuals take or exhibit, as related to the performance and progression of their EHS&S function

Key Responsibility Areas

The following is a list of definitions for the categories of responsibilities most common among EHS and sustainability professionals.

Responsibilities: The activities that may be included in the role of an EHS and sustainability professional

- ***Prevention and Disposal:*** Knowledge and experience necessary to properly address the management of hazardous materials. This includes materials/emissions control/reduction, waste identification/disposal and emergency response, including remediation of environmental contamination

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Methodology

- ***Tracking and Monitoring:*** Familiarity with the requirements and techniques needed to quantify potential hazardous releases/exposures. This includes the ability to gather and present accurate data to respond to surveys and reports detailing emissions, use and exposures from products or operations, and the ability to utilize data management tools to their fullest capability

- ***Compliance:*** Being conversant with all regulations or other requirements applicable to operations or products. Able to apply that knowledge in developing/implementing audits and other compliance activities for operations or other areas of concern. Maintaining awareness and addresses ongoing advances in scientific understanding of workplace hazards and potential regulatory changes

- ***Health, Safety and Security:*** Broadly capable across several exposure control functions to facilitate development and implementation of training, control and emergency response programs that address applicable physical risks. This includes measurement/control of personnel exposures/risks and protection of company assets

- ***Energy Management:*** Technical competency in selecting and using equipment and/or procedures to measure, manage and reduce energy use

- ***Products and Purchasing:*** Being conversant in relevant aspects of product lifecycle requirements. This includes the knowledge needed to reduce environmental impacts of products and supplier operations

- ***Reporting, Strategies and Communications:*** Being able to understandably communicate environmental program elements to audiences with varying technical understanding and subject matter interest. This includes knowledge of appropriate metrics to both measure and project the impact of operations or products, and the ability to select and use data to develop control and planning strategies

- ***Fleet Management and Transportation:*** Being conversant with rules and technical aspects of vehicle use. This includes ensuring proper permits and licensing along with emissions reduction planning/implementation

Overview of Methodology

This report is based on quantitative and qualitative research that took place from August 2014 – May 2015. The quantitative survey was fielded to a broad audience of EHS&S professionals through the NAEM membership and network in collaboration with other organizations.

The responses to the survey and interviews were primarily drawn from in-house EHS&S professionals within U.S.-based companies; consultants and service providers were excluded. This report represents the input from 498 respondents who met the eligibility criteria.

Survey Development Process

In the spring of 2014, NAEM established an advisory committee of EHS&S leaders to help the association develop a new survey that reprised core concepts from NAEM's 2012 EHS and Sustainability Staffing and Structure benchmark. The advisory committee was composed of nine senior EHS&S leaders from a variety of industry sectors. Their input helped to define the objectives, guide question development and beta-test the initial draft questionnaire before it was launched to the broader audience of EHS&S professionals within corporations. In addition, the committee provided guidance and recommendations for analysis of the survey response data.

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Methodology

Survey Distribution

The survey was distributed through SurveyMonkey to members of the NAEM network, members of The Conference Board Chief EH&S Officers' Council, members of the World Environment Center and members of the American Industrial Hygiene Association (AIHA). The recipients were also encouraged to share the survey with colleagues in their function to capture input from those at different levels within an EHS organization.

The online survey was fielded by NAEM between August and September of 2014 and re-fielded by NAEM and AIHA between April and May of 2015 to gain a broader depth of respondents.

Collaboration with AIHA

Learning about industrial hygiene competencies and responsibilities adds depth to the NAEM research and better represents the profession, as NAEM members often focus their efforts on environmental and sustainability initiatives. In re-fielding the survey during the spring of 2015, NAEM partnered with the American Industrial Hygiene Association (AIHA) to ensure a better balance of environment, health, safety and sustainability professionals in the survey responses. Similar to NAEM members, the majority of AIHA members who responded to the survey are highly experienced professionals.

Outline of the Quantitative Survey

The online survey consisted of approximately 55 questions; the exact number answered depended upon self-identified responsibilities. The survey was broken into five sections covering:

- Company Demographics
- Individual Job Responsibilities
- Individual Skills, Knowledge Areas and Attributes
- Educational Background and Professional Experience
- Salaries and Bonus Potential

The survey asked respondents to indicate their level of involvement in 73 EHS&S activities. These responsibilities evolved from the list included in prior NAEM benchmarking and from suggestions from the advisory committee.

To parse the varying levels of responsibility EHS&S professionals have for each activity, respondents were asked to identify the extent to which the activities fall within their role. The five levels to choose from included:

- I am responsible but not involved with executing this activity
- I lead this activity and I am directly responsible
- I lead this activity but share responsibility with others
- I am involved without responsibility
- N/A

In addition, respondents were asked to self-assess their proficiency in 33 knowledge areas and 30 skills identified to be relevant to the EHS&S function.

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Methodology

Qualitative Interviews

In order to add context and depth to the survey data for this report, a discussion guide and questions were developed in partnership with corporate decision makers to conduct qualitative interviews with in-house EHS&S professionals.

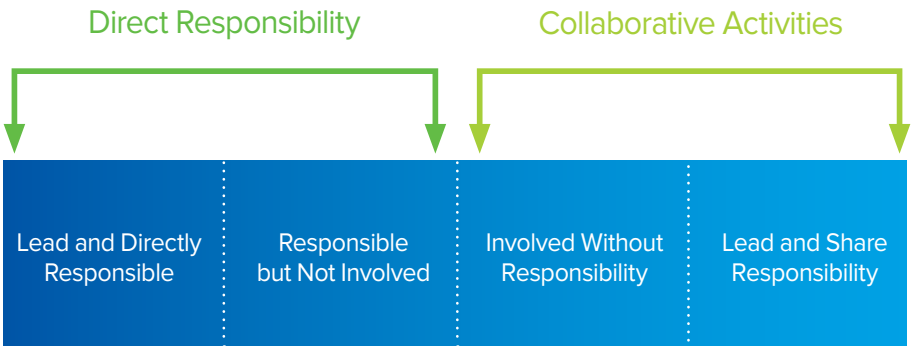
In total, NAEM conducted 15 one-on-one interviews. The participants came from a variety of industries, backgrounds and job titles, with three interviews conducted for each profile segment, based on their years of professional experience.

Analytical Approach

To capture the nuances of each EHS&S manager's role, we asked respondents to indicate their level of involvement with a set of detailed activities. We then categorized their responses in terms of 'responsibility' and 'collaboration'. The rubric for this categorization is reflected below.

Level of Authority for EHS&S Activities

Figure 1



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Demographics

Demographics

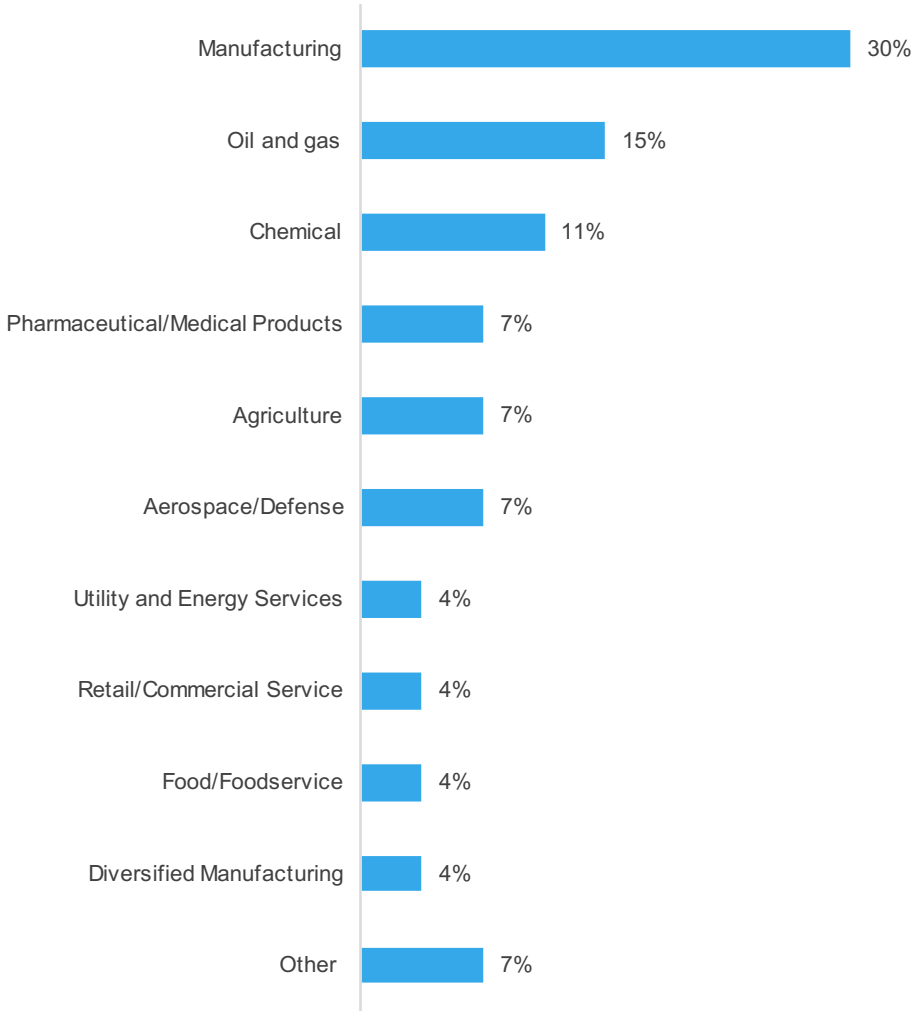
Please note that the company demographics charts have been edited to count each company only once. The individual demographics, account for the full respondent pool for this segment. The following section provides an overview of those survey respondents with less than five years of experience. Although the full survey had 498 responses overall, this section reflects the demographics for the 30 repondents at this career stage. The demographics provided are for both the companies they work for and for the individuals themselves.

Company Demographics

Diverse Representation of Industries

Because the survey audience included responses from more than one employee per company, the below chart has been refined to accurately reflect the range of industries represented among the survey audience. The largest segment of companies represented is the manufacturing sector, with a fairly consistent representation among the other industries. The base size for the following charts, therefore, were edited to count each company only once.

Industry
Figure 2



N=27

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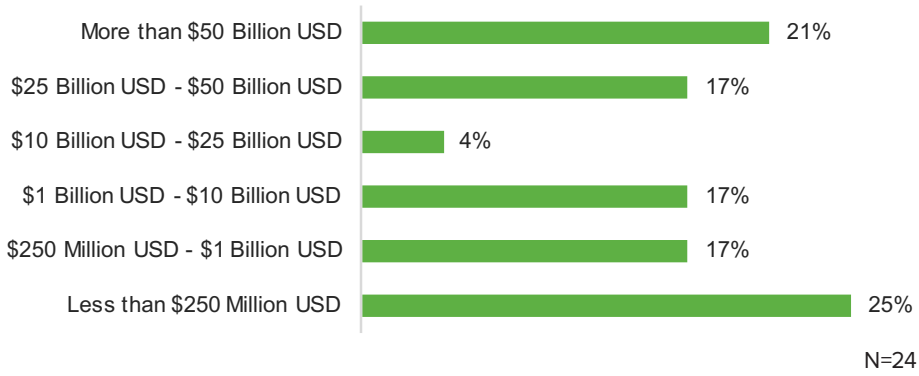
Demographics

Fairly Even Distribution among Companies of all Sizes

The annual revenues for the responding companies cover a broad range, from less than $250 million (25% of companies) to more than $50 billion (21%).

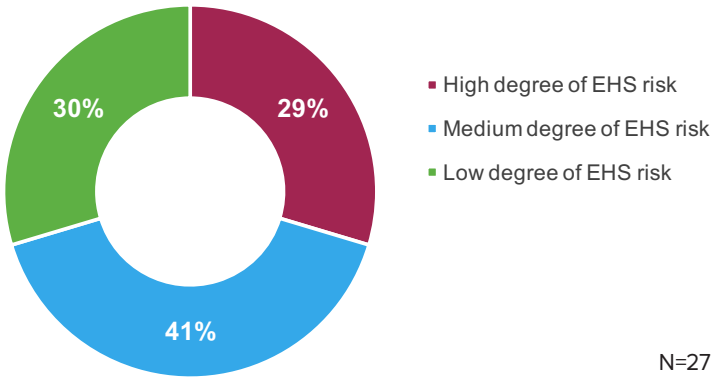
Annual Revenue
Figure 3



Most Respondents Work for Companies with Medium-Risk Operations

When asked to self-assess the degree of EHS risk at their companies, most respondents characterized their operations as 'medium risk' (41%).

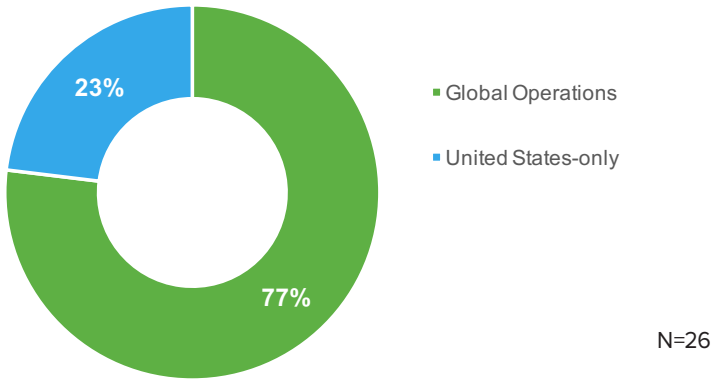
Company Risk
Figure 4



Respondents Work for Companies with Global Operations

While about one-quarter of responding companies have solely U.S. operations, most (77%) have global operations. Those who selected "Other" mostly operate in North America.

Company Operations
Figure 5



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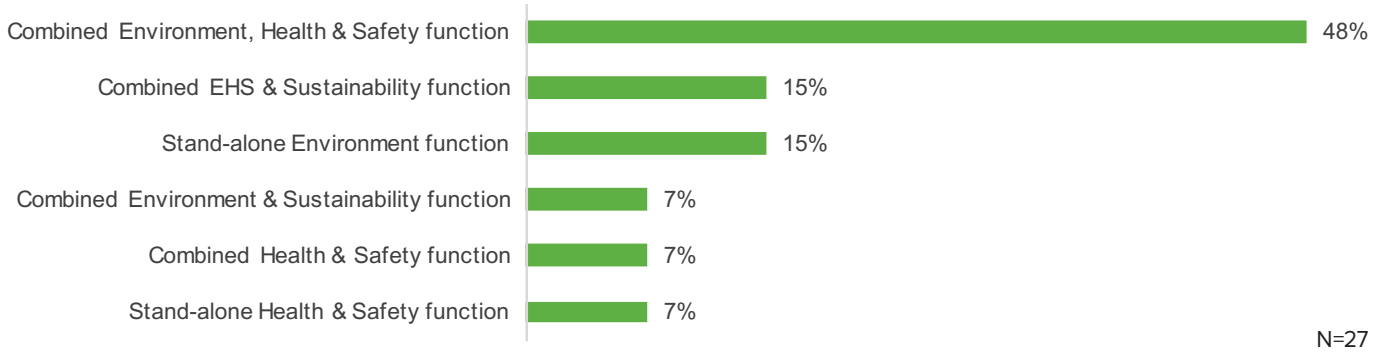
Demographics

Respondent Demographics

Most Respondents Work in a Combined EHS Function

Consistent with NAEM's 2012 benchmark on EHS & Sustainability staffing and structure, most respondents work within a function that combines environment, health and safety (48%).

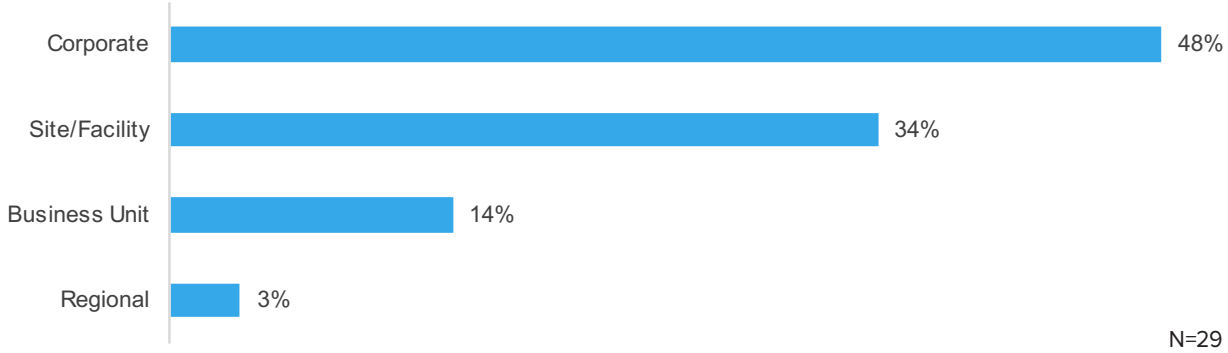
Repondent Function
Figure 6



Most Respondents work at the Corporate Level

Respondents at this level generally report to the corporate level of the EHS & S function (48%).

Where Repondent Sits
Figure 7



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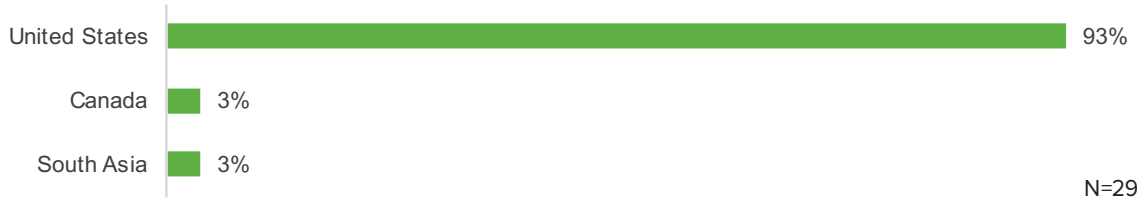
Demographics

Respondents are Primarily U.S.-based

Although most respondents' companies have global operations, the individuals represented in this survey tend to work in the United States (93%).

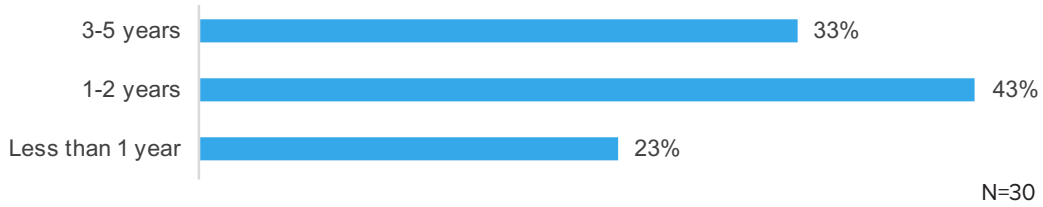
Repondent Geographic Location
Figure 8



Most Respondents in this Segment are New to their Roles

Given their short overall tenure in EHS&S, it is not surprising that those who fall within this segment are new to their roles.

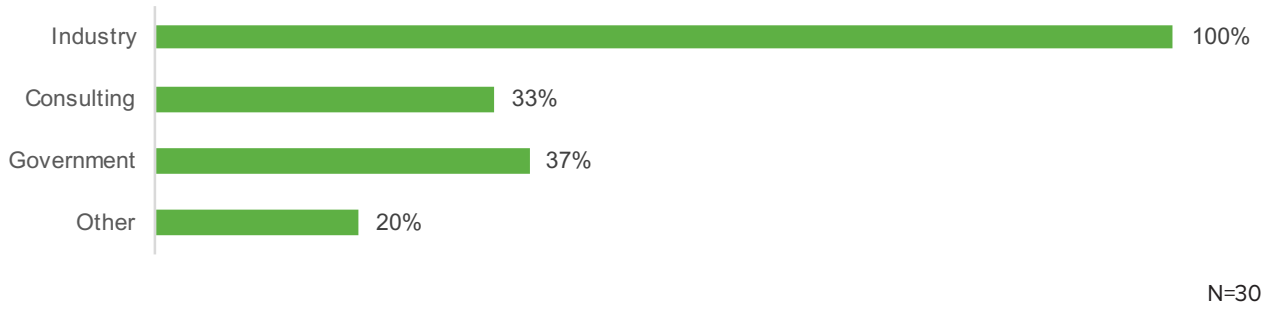
Years in Current Job
Figure 9



Respondents are Bringing a Variety of Experiences to their In-house Roles

EHS&S professionals often begin their careers in other areas of the field. Within this segment of the respondents, about a third also had prior experience in consulting (33%), while an additional 37 percent had worked within government.

Sector Experience
Figure 10



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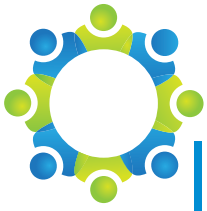

Introduction

Introduction

In documenting the stages of a corporate environment, health and safety, and sustainability (EHS&S) manager's career, the underlying hypothesis was that distinct changes in responsibilities, knowledge areas and skills would emerge based on the numbers of years of a professional's experience. The quantitative analysis revealed, however, that the core competencies remain largely the same over the course of a career. Instead, it is how EHS&S professionals apply those core competencies, demonstrate personal initiative, achieve their level of accountability and expand their sphere of influence that evolve over time.

While EHS professionals' careers do not likely advance in symmetrical phases, an analysis of the data based on years of experience does reveal shifts in respondents' responsibilities, the application of their skills and the focus of their professional development efforts.

The profiles of each career stage featured later in the report will provide a detailed analysis of how and when these subtle shifts take place, highlighting how professionals at each stage arrived at their current position, the defining characteristics of that stage of their career, their current role and responsibilities, the key knowledge areas and skills for their career stage and what awaits them in the next phase. These profiles represent each of five 'stages' of an EHS career, characterized as follows:

0-5 Years: Early Career Professionals: Building Skills and Learning to Lead
At the entry level, EHS professionals are focused on task-based work as they apply their foundational education in science or engineering and explore the opportunities of their new field. In addition to applying their technical knowledge, early professionals communicate their operational goals with coworkers and cooperate in their implementation. Some professionals in this career stage will seek a career boost from a graduate degree or certifications.

6-10 Years: Advancing Managers: Increasing Responsibility and Specialization
With proven experience of delivering and demonstrating basic leadership skills such as effective communications and influencing, EHS professionals start to gain increasing responsibility for program management. This is also a time when they may be completing graduate degrees or achieving a first round of certifications, as they start to specialize in the areas of strongest professional interest to themselves. At the same time, they may seek out mentoring to help them round out their business acumen or gain the executive visibility they will need to continue to advance along a management track.

11-15 Years: Emerging Leaders: Refining the Career Path and Expanding the Sphere of Influence
This career stage is marked by increasing responsibilities and broader involvement in EHS-related activities across the business. It is also a time when a split seems to take place between those with a stronger technical orientation and those who are pegged for succession, who will be presented with new management opportunities. Because there are more competent managers than available leadership positions, those who exhibited weaker leadership attributes or were less directed earlier in their careers may reach a period of 'career doldrums,' finding themselves without sufficient opportunities for advancement.

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16-20 Years: Advancing Leaders: Accountability with a Global Reach
Those who have actively invested in their professional growth and demonstrated continued leadership potential throughout their careers may start to gain accountability at this stage of their careers. They might be the head of a functional aspect of EHS (e.g. safety or environmental), or gain authority over the full function itself. In addition to having more direct authority, their role broadens to become increasingly strategic in nature and global in its scope.

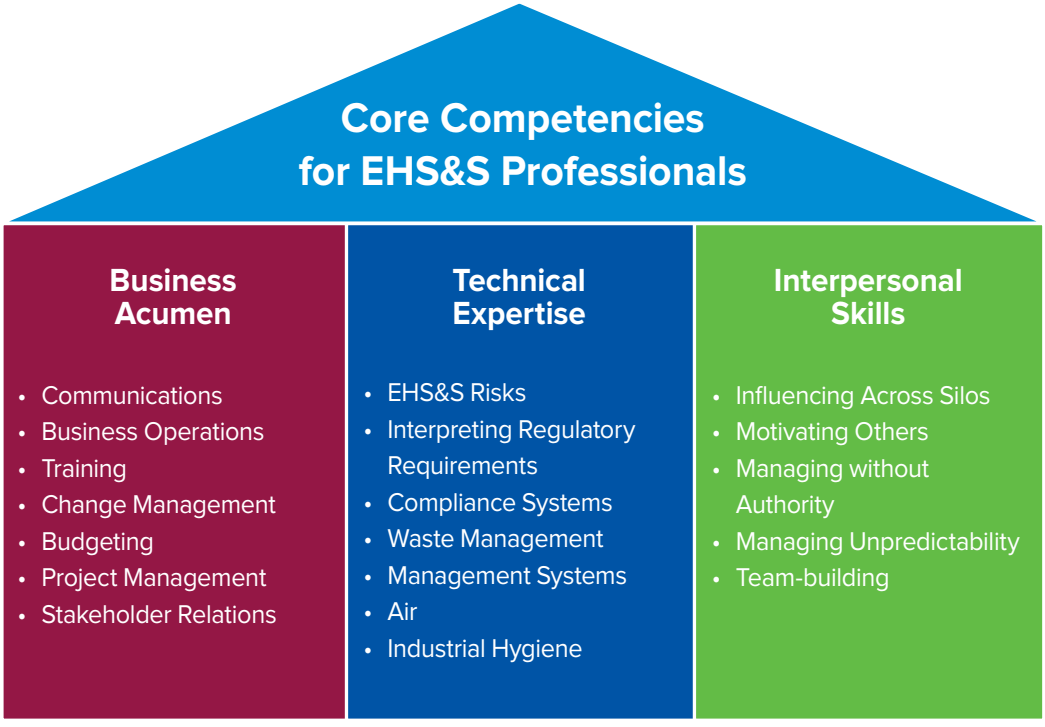
21+ Years: Experienced Decision Makers: Business Strategy and Legacy
At this stage, EHS leaders start to shift their focus to broad questions of business strategy and risk management from an EHS perspective. Those who have achieved these positions of leadership are likely also thinking about organizational design and succession planning as they consider how to add value to their companies during their remaining years at the helm.

The research also revealed a number of broad insights that apply to EHS professionals regardless of the career stage:

Successful EHS&S leaders are well-rounded professionals

One of the key findings of *EHS&S Career Profiles* is that it takes more than technical know-how to be a successful EHS&S professional. The most effective EHS&S professionals possess systemic thinking and communications skills to explain technical processes across departments, functions and geographic borders. Additionally, the EHS&S professional's ability to transition from a manager to a leader to a decision maker rests on business acumen, interpersonal skills and the ability to communicate effectively.

Core Competencies
Figure 11



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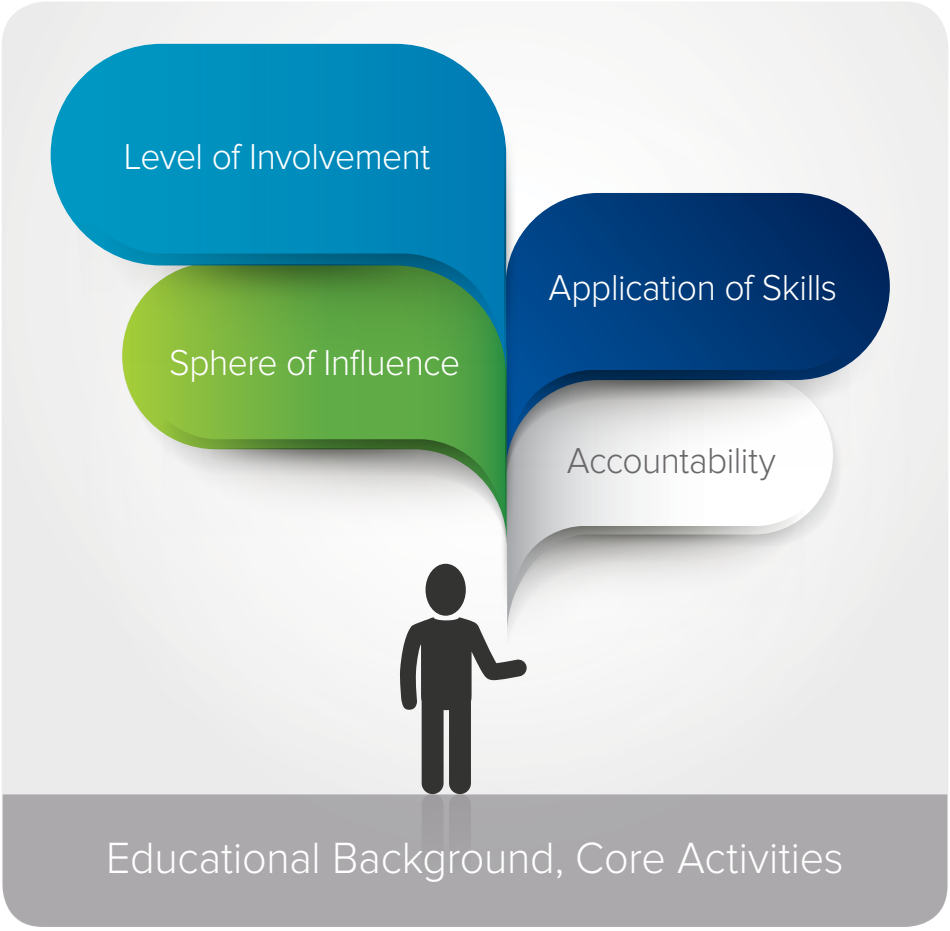
Introduction

As EHS&S managers advance, they apply their core competencies in different ways

Technical knowledge, business acumen and interpersonal skills are the three core aspects of an EHS professional's skill set. As they progress through their careers, there are differences in how EHS professionals apply their core competencies to their role, their involvement with activities outside of their core 'function,' their level of accountability for the outcomes and the scope of their sphere of influence.

How Core Competencies are Applied to EHS&S Roles
Figure 12



Collaboration is a key aspect of an EHS&S professional's job

As agents of change, EHS professionals are responsible for collaborating across functions to advance their programs. They do so, however, with limited direct authority except at the upper levels of management. Even then, the ability to collaborate, to communicate effectively and to be politically-savvy remain key skills as the sphere of their influence continues to broaden.

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Advanced degrees and certifications are valuable for demonstrating expertise or helping EHS professionals round out their skill sets

While most professionals in the field tend to have bachelor's degrees in engineering or the sciences, 51 percent of respondents also hold a master's degree, and another 57 percent have specialized certifications. For some, a certification may pave the pathway for more rapid advancement, as described by one interviewee: "If I wanted to move up quickly in the profession I needed to supplement that because I don't have years of experience - so how do I make myself stand out? How do I prove that I'm more worthy than somebody else? [The certification] was the ticket to it."

EHS managers need to be self-directed

With job descriptions that provide a breadth of latitude, EHS management roles are best-suited to self-starters who can identify opportunities for continuous improvement and drive value through leadership. The initiative and creative problem-solving they bring to their work often means that successful EHS professionals have carved out unique roles for themselves within their organizational structure that would not be easily filled by just any other candidate with a similar skill set.

Leaders tend to have a growth mindset

Regardless of their level within a company, those who expressed an interest in a leadership position also demonstrated a desire to master new skills and actively sought out new opportunities to learn. Indeed, one interview respondent summed up his leadership advice as follows: "Being naturally curious and always being in a learning mode," he said. "I think the biggest thing that prevents a lot of people from progressing in our field is that they think that if they get a certification then it's just stop, or they think that if they get a degree… now they own the world. They get into their role but they just kind of do it fast enough; they don't try to learn further. That's one piece and then the second thing I would say is always trying to push the limits or always trying to kick up the ambition levels."

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Career Stage Profile

0-5 Years: Early-career Professionals

Building Skills and Learning to Lead

Profile: 0-5 Years

In some fields, the early-career professional's role may be to execute tasks with limited autonomy to solve problems or influence change. This is not, however, the early path of an EHS&S professional.

While those at the beginning of their careers may have limited authority, what is striking about the data on early-career EHS&S professionals is the extent to which being a self-starter is important to their success, right from the beginning. There is a lot of latitude in the job descriptions, and within their first five years, early-career EHS&S professionals are allowed, and often expected, to identify problems, introduce process improvements and use their developing influencing skills to implement their ideas.

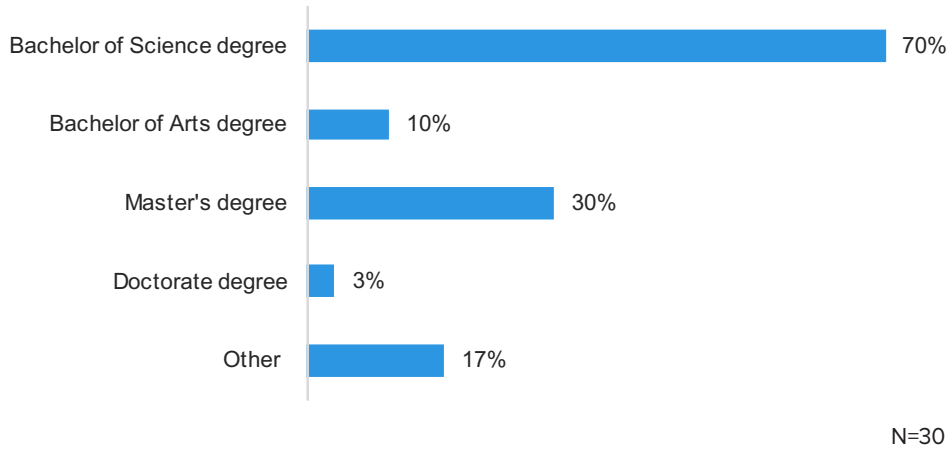
The first five years, therefore, are as much about developing the soft skills to advance along a management path as they are about honing the technical expertise to become recognized experts in one's discipline. In this profile, we'll explore how these early-career professionals get their start, the scope of their roles and responsibilities, the skills they develop early on and what they need to progress to the next level.

Education: A Strong Foundation in Science or Engineering

EHS&S professionals at this stage tend to share a strong foundation in science or engineering. Likewise, the vast majority (70%) of those with 0-5 years of experience have a Bachelor of Science degree (Figure 13), most commonly in environmental science (20%), biology (17%) or business (17%). The data demonstrate (Figure 14) that a variety of degrees in other technical areas are also common among early-career professionals, including: environmental engineering, biochemistry, chemical engineering, chemistry, information technology and mechanical engineering.

Education: 0-5 Years

Figure 13



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Profile: 0-5 Years

Bachelor's Degrees: 0-5 Years

Figure 14

Degree	Percentage
Environmental Science	20%
Biology	17%
Business	17%
Environmental Engineering	10%
Biochemistry	7%
Chemical Engineering	3%
Chemistry	3%
Civil Engineering	3%
Geology	3%
Information Technology	3%
Mechanical Engineering	3%
Other	40%

N = 30

While some early-career professionals may not have a clear goal in mind while pursuing their degree, those with an environmentally focused education may understand its potential application right from the start. As one interview participant explained: "I went into environmental science with the idea of doing something proactive with protecting the planet and protecting people."

It is less common to hold a master's degree at this career stage (Figure 13, 30%). Those who do hold a graduate degree, however, are most likely to be focused in a technical area, such as industrial hygiene (13%), environmental science (10%) or public health (7%).

Master's Degrees: 0-5 Years

Figure 15

Degree	Percentage
Industrial Hygiene	13%
Environmental Science	10%
Public Health	7%
Chemistry	3%
Management Technology	3%
Sustainability	3%
Other	13%

N = 30

The decision to pursue a graduate degree early on may reflect a desire to develop specialized expertise, or to introduce career opportunities that would not otherwise be available at the entry levels. As one interview participant described: "I worked for about a year at a water treatment facility in North Carolina and I was responsible for testing the water for microorganisms… then I went to graduate school because I knew there was no way in the world I was going to work in a laboratory. That's not my style."

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Profile: 0-5 Years

The Path to EHS&S: Utilizing a Science Degree for a Job in Industry

There are many paths to an EHS&S career, ranging from academic interest ("I took an environmental science AP course in high school and I really enjoyed it") to personal passion ("I always had a passion for the environment"), but according to qualitative interviews, most EHS&S professionals discovered the profession through academic programs or pure happenstance.

While formal academic EHS&S programs tend to be less common than other science-based degrees, those who pursued them seemed to enter their career equipped with hands-on experience, relevant skills and a clear understanding of what the profession entails.

One interview participant who earned an undergraduate degree in EHS, for example, had completed the equivalent of one full year of internships before graduation. For another interview participant, a series of co-ops, including one in EHS&S, led directly to a job offer while he was completing an undergraduate degree in Safety Technology and Engineering. Yet another interviewee, who completed a master's degree before entering the corporate world, described how she was introduced to the career through one of her classes: "They had a course on industrial ecology, and in that course we would visit businesses and manufacturing locations, and we would learn how products were made and the environmental impact of those products… through that course I met a lot of [EHS&S professionals]…I thought it was so cool that you could do environmental work in a company…I was like, 'OK, this is totally the job for me.'"

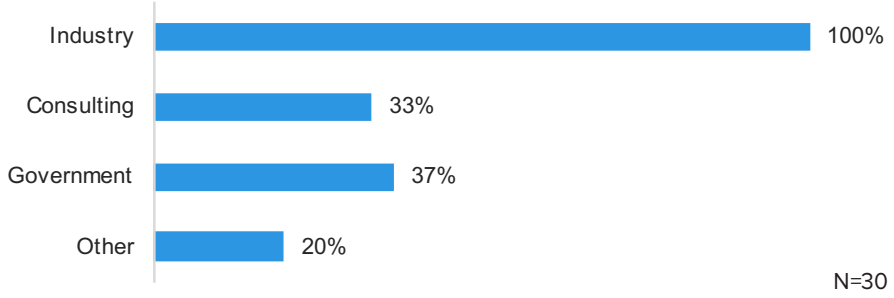
However, some reported that those who enter the EHS&S field are unaware of the career prior to getting hired based on their academic training. The circumstances that interview participants mentioned included everything from "It's not what I thought I would be doing, but it's rewarding and it's a good company" to "When I started…I was a blank slate," and "For reasons unbeknownst to me at the time, nobody wanted to hire a 24-year-old corporate sustainability officer."

Gaining EHS&S Experience through Consulting

According to the survey respondents overall, half of corporate EHS&S professionals will have worked as a consultant at some point, particularly at the early stages of their career (Figure 16, 33%). For those who are new to the profession, consulting provides an opportunity to apply their educational background and to hone specific technical skills, such as air permitting, Phase I assessments, groundwater sampling or remediation. Consulting also gives early-career professionals experience working on a variety of projects with clients from across industry sectors.

Sector Experience: 0-5 Years

Figure 16



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Profile: 0-5 Years

While consulting emphasizes deep technical expertise and specialized certifications, in-house EHS&S professionals need to rely more on the mix of technical and soft skills required of internal change-makers. In-house roles also may introduce nuances to decision making that consulting does not require. As one interview participant explained: "Most consultancies put people into functional areas, so 'I'm going to do air permitting 24/7.' That's great until you get into the 'real world' and your air permit may or may not conflict with your wastewater permit, which may have hazardous waste implications."

As another participant described it, the difference between consulting and industry work is similar to the difference between being a surgeon and a family practitioner: One physician comes in to address a specific need, while the other oversees the day-to-day health of the patient.

Roles and Responsibilities

Depending on their entry point into the profession (industry, consulting and government), early-career EHS&S professionals are likely to be assigned responsibilities that are more technical in nature, as reflected in the most common titles in the 0-5 stage, including: hygienist, engineer, technician and specialist (Figure 17). These roles might include doing chemical management, working as a member of a facility-level EHS staff managing water permits, assisting with remediation or doing process engineering.

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Profile: 0-5 Years

The full scope of responsibilities at this level (Figure 18) tends to be very broad with an emphasis on using technical skills to complete day-to-day tasks, manage processes and solve problems. As one respondent described: "I've got a lot of responsibilities or a lot of tasks that I do and not a lot of actual managerial responsibilities as far as ownership of programs and policies—not officially, anyways."

Respondent Leads and Shares Responsibility or is Directly Responsible: 0-5 Years

Figure 18

Responsibility	Percentage
Reporting to meet internal and external requirements	66%
Health and safety compliance	59%
Information management	52%
Regulatory tracking	52%
Health and safety training	52%
Incident and safety management	52%
Employee engagement	52%
EHS management information systems	48%
Auditing	48%
Environmental compliance	48%
Risk management	48%

N = 29

The interviews shed light on the activities the aformentioned responsibilities entail. When it comes to reporting, one interview participant said, "I do all of our regulatory reports, the Tier 2, SIP, SPCC inspections, PRI, hazardous waste," while another said, "I manage all of our sustainability metrics and reporting on an internal and on a corporate level."

Additionally, information management at this career stage might involve data entry, but also data analysis and process improvement. "I've created a lot of tracking metrics and spreadsheets for managing the data," remarked one interviewee.

Another key area that interviewees described was incident investigations and audits, which include routine safety audits, incident investigations, corrective actions and creating continuous improvement programs to reduce safety risks. For one interview participant, these programs were focused on "reducing the number of dropped objects, reducing the number of hand injuries as well as a lot of assurance projects."

On the environmental compliance side, early-career responsibilities include "physical emissions testing for our air permit, secondary containment inspections and all that environmental fun stuff." For another interviewee, a portion of the first five years of her career was dedicated to environmental audits: "I had responsibility for the global audit program…which impacted all of the business units."

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Profile: 0-5 Years

It's worth noting that in addition to task-focused areas, early-career professionals are driving process improvements within their sphere of influence. The following is an example of this early leadership in action that emerged from a regulatory requirement that the interviewee was responsible for managing: "I knew there was a problem and I didn't do anything about it for a long time. I finally just one day said, 'You know, I'm going to take the initiative and go ahead and tackle it.'…I've read numerous papers from all the big research and regulatory agencies and engineering firms to broaden my knowledge base…I knew that we can do better…so I just took that initiative and worked to solve the problem."

Knowledge Areas and Skills

EHS&S professionals have a skill set that demonstrates the importance of combining technical competence, business management knowledge and the ability to influence others.

Technical Knowledge Areas and Skills

As the foundation of the EHS&S professional's skill set, the technical knowledge areas and skills that survey respondents identified as most important to their role relate directly to academic training in science (e.g., "chemistry," 28%) and engineering (e.g., "engineering concepts," 24%) or to their core responsibilities.

Top Technical Knowledge Areas and Skills: 0-5 Years

Figure 19

Technical Knowledge	Percentage
Environment, health and safety risks	55%
Regulatory compliance systems	52%
Industrial hygiene	31%
Chemistry	28%
Behavioral safety	24%
Engineering concepts	24%
Waste management	24%
	N = 29

Technical Skill	Percentage
Interpreting regulatory requirements	59%
Training	41%
Auditing	38%
Risk assessment	38%
Written communications	38%
Oral communications	34%
Quantitative analysis	34%
	N = 29

These concepts may include conducting an ergonomic assessment, doing an emissions calculation or having knowledge of permitting. "I couldn't stick anybody in my role if they don't know what an air permit is and they don't know how to do an air emissions calculation," one interview participant said.

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Profile: 0-5 Years

Mastering this technical knowledge is critical to developing the competency to do the job well, as one interview participant explained: "The thing that really helped going into my first job was being able to speak to some of the technical aspects of environmental, or health and safety…I think it's very beneficial having some kind of technical background in the field."

Technical competence also translates into the credibility they need to be effective. "The technical skills are important to have people trust that what I'm telling them is the right option to move forward with," an interviewee explained. Another interviewee echoed that by saying, "If I get something wrong…I can lose a lot of trust."

It's noteworthy that even for those in a technical role, written communications (38%) and oral communications (34%) are as important as quantitative analysis (34%).

These skills likely are combined in the day-to-day role, which may call on early-career professionals to conduct analyses and communicate the results throughout the organization. "[I] was always doing a lot of data analysis of charts," one interviewee said. "You have to simplify it to make a presentation and say, 'OK, this is what I looked at, this is what it means and here are some thoughts I have about what we can do about it.'"

Business Knowledge Areas and Skills

When we start to look at the top business knowledge and skills, those that rise to the top likewise echo the key responsibilities (training, 83%) or the scope of the early-career professional's role, namely change management (53%), program management (53%) and project management (50%).

Top Business Knowledge Areas and Skills: 0-5 Years

Figure 20

Business Knowledge	Percentage
Communications	83%
Training	83%
Business operations	70%
Budgeting	37%
Stakeholder relations	17%
Marketing	10%
Finance	7%
	N = 30

Business Skill	Percentage
Decision making	67%
Change management	53%
Program management	53%
Project management	50%
Policy development	33%
Timeline management	30%
Vendor management	20%
	N = 30

Of cardinal importance is knowledge of communications, which 83 percent of respondents identified as key. What this means to early-career EHS&S professionals emerged from the interviews as well: Participants described giving presentations, participating in weekly "report out" meetings, creating FAQs to communicate regulatory updates and conducting trainings for employees.

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Profile: 0-5 Years

Knowledge of business management areas such as budgeting and finance may help early-career professionals make better decisions. "You can understand the technical details, but until you've worked at a plant level and understood the nuances of things that will throw you off…you can have all the training in the world but then you start realizing, 'What? I didn't even realize that that was possible,'" one interviewee said.

Business knowledge also enables burgeoning EHS professionals to influence internal processes: "I want to be able to talk to them and have an intelligent discussion regarding things like operating costs and capital expenditures, and I need to understand the purchasing models and how the business works," one interview participant said.

Interpersonal Skills

As demonstrated by the survey data as well as the interviews, leadership skills make up an important pillar of an EHS&S manager's skill set – as critical to the effectiveness of early-career professionals as it is for those with more management responsibilities. One interview participant described it this way: "When I got into the workforce, it became kind of a real eye-opener that, wow, just having the technical skills isn't enough to accomplish the jobs that you need to accomplish. You really need to have a far greater understanding of how to communicate and influence other people to accomplish your job."

Top Interpersonal Skills: 0-5 Years

Figure 21

Interpersonal Skill	Percentage
Motivating others	70%
Influencing across silos	60%
Managing without authority	53%
Influencing upward	50%
Managing unpredictability	37%
Team-building	27%
Conflict management	23%

N = 30

Motivating others (70%) tops the list of important interpersonal skills, which enable EHS&S professionals to advance process changes and implement program improvements. "I have to understand their values as well as what drives them to want to get their work done," one interview participant said. "[I just can't say] 'This is what we have to do because the regulation says so or our company requires it.' I usually have to go farther beyond that and really build that relationship and have their values align with my values of the project."

The ability to influence, both across silos (60%) and upward in the organization (50%), is also a core skill, as described by one interviewee: "If I wasn't able to understand how to influence different people, I don't feel that I personally or [my company] as an organization would be successful within their EHS function. If we had a goal of zero incidents, zero spills, zero everything and we can't influence other people to help us try to achieve that goal…it would kind of be just rolling the dice."

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Another interview participant described the influencing process in the context of building rapport with those who work within his facility: "We're out on the floor quite a bit and we'll stop and talk and just have casual conversations with people whether we see something right or wrong…I reach out, build friendships and relationships with a lot of people to kind of build their trust and, if there is an issue, it makes it a lot easier later on to get them to open up and work with [me]. You don't want to shove an idea down their throat for how to fix something …you want to lead them to develop something that's a good solution for everybody, and having a good relationship with every person, whether they're a supervisor or the operator, really is the only way that I know to effectively do that."

A related skill, managing without authority (Figure 21, 53%), makes use of influencing savvy and also rises to the top of the list of importance, according to survey respondents and interviewees. "I think it's kind of an EHS model to use this leading without authority," one interviewee said. "I do not think it is anything new, but to try to persuade people without really being deceptive, but helping them to come to the conclusion that you want them to."

Getting to the Next Career Stage

If each stage of a career is characterized by a different perspective, the first five years are about learning the skills needed to advance and explore what the EHS&S profession is all about. For those who came into the field with prior experience through academic internships or consulting, there may be fewer surprises about the day-to-day realities, but the interviews revealed the decisions that early-career professionals are already starting to make at this stage.

Perhaps the biggest decision is whether they wish to pursue a career in EHS&S. Some of these decisions may be driven by salary potential or the aspects of the job for which they have an affinity.

Those who like the environmental focus of the work might be more inclined to continue, while those who enjoy the problem-solving and process efficiency aspects might be more inclined to move into an operations role, as one interview participant described: "There's a lot of real, low-hanging fruit just to make the whole company more efficient. That's more exciting."

Early-career professionals are also open to allowing their professional interests to evolve. Interviewees described their variety of options for putting their skill sets to use, including outside the corporate context by working for a non-governmental organization.

Those who plan to remain in EHS&S are also starting to consider whether they prefer the technical aspects of the job or program management. While credentials are less common among professionals at this level, those who want to advance in the profession are likely spending this early-career stage pursuing these credentials or starting to apply to graduate programs.

Depending on the path they choose, the next career stage might be dedicated more to specialization, earning increased authority over programs and involvement with strategy, as EHS&S professionals start to shed some of the emphasis on the foundational technical tasks associated with their early-career role.

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Profile: 0-5 Years

The following table summarizes the responsibilities and competencies that are more important to professionals at this level than to others at other stages of their careers.

Important Competencies During 0-5 Years

Figure 22

Responsibilities

- Product compliance
- Environmental compliance
- Employee volunteerism
- Auditing
- Other pollution prevention
- Permitting
- Lab standard compliance

Knowledge

Technical
- Regulatory compliance systems
- Engineering concepts
- Chemistry
- Environmental science
- Air

Business
- Training

Skills

Technical
- Training
- Quantitative analysis
- Oral communications
- Interpreting technical concepts into accessible language
- Process safety management

Business
- Policy development
- Vendor management
- Decision making
- Timeline management
- Change management

Interpersonal
- Motivating others
- Managing unpredictability

Attributes

- Creative
- Objective
- Sense of humor

Behaviors

- Action-oriented
- Long-term thinker
- Systems thinker
- Provides constructive criticism

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Profile: 0-5 Years

As EHS&S professionals advance, new skills will gain importance. To help provide guidance to those who are seeking advancement, the following chart summarizes the responsibilities and competencies that will be important at the next stage.

Important Competencies for Progressing to 6-10 Years

Figure 23

Responsibilities

- Setting sustainability goals
- Identifying key performance indicators for EHS
- Sustainability strategy
- Setting EHS goals
- Greenhouse gas reduction strategies
- Procurement standards
- Building energy efficiency
- External marketing communications
- Product stewardship

Knowledge

Technical
- Management systems
- ESG reporting protocols
- Environment, health and safety risks
- Industrial hygiene
- Climate change

Business
- Stakeholder relations
- Budgeting
- Finance

Skills

Technical
- Risk assessment
- Written communication
- Oral communication

Business
- Strategic planning
- Program management
- Hiring and staffing

Interpersonal
- Managing others
- Conflict management

Attributes

- Accountable
- Approachable
- Flexible

Behaviors

- Consider stakeholder interests and concerns
- Customer service-oriented

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Profile: 0-5 Years

Supplemental Information

The full survey included questions on respondents' education, professional background, salary, and the behaviors and attributes that are critical to success in their role. Below are supplementary figures for professionals with 0-5 years of experience.

Salary: 0-5 Years

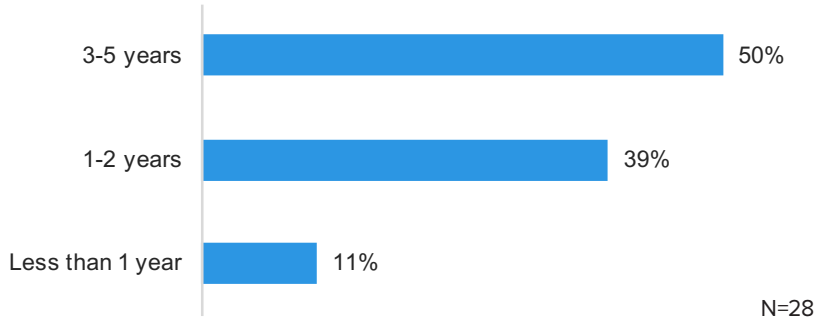
Figure 24

25th Percentile	50th Percentile	75th Percentile	100th Percentile	Average
$55,000	$65,500	$71,750	$99,000	$63,123

N = 18

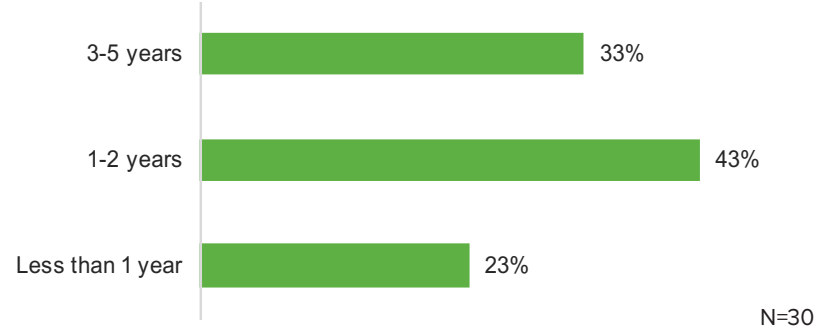
Years in an EHS&S Role: 0-5 Years

Figure 25



Years in Current Job: 0-5 Years

Figure 26



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Profile: 0-5 Years

Top Certifications: 0-5 Years

Figure 27

Certification	Percentage
Six Sigma Green Belt	13%
CES – Certified Environmental Scientist	3%
Other	3%

N = 30

Most Critical Behaviors and Attributes for Being Effective in Current Role: 0-5 Years

Figure 28

Behavior	Percentage
Action-oriented	55%
Attention to detail	48%
Positive attitude	41%
Long-term thinker	38%
Systems thinker	38%
Multi-tasking	34%
Considers stakeholder interests and concerns	24%
Provides constructive criticism	24%
Customer service-oriented	21%
Good listener	21%
Deals well with ambiguity	17%
Business acumen	14%
Delegates	14%
Compromises	7%

N = 29

Attribute	Percentage
Collaborative	47%
Committed	47%
Approachable	40%
Respectful	40%
Accountable	37%
Creative	37%
Ethical	37%
Objective	30%
Trustworthy	27%
Sense of humor	20%
Flexible	17%
Patient	17%
Self-aware	10%
Compassionate	3%

N = 30

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