

Environment, Health & Safety

## Strategic Focus: Upskilling The Future EHS Professional

By Tom Brown  
With Bill Pennington

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Over the last three years, Verdantix has witnessed the corporate EHS function expand in scope and pivot away from traditional management approaches. Technology advancements, evolving safety practices, sustainability scrutiny and an increasing focus on total worker health are just some of the factors that are shaping the future EHS function. This report aims to assist corporate EHS leaders in upskilling their team members to perform effectively in the modern EHS function – and beyond. It details the trends impacting the future of EHS, the key competencies required of future EHS practitioners and the digital tools that can help EHS functions as they seek to upskill their team members.

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## Organizations mentioned

Assent, AVEVA, Benchmark Gensuite, Cority, Enablon, Enhesa, GOARC, Hexagon, HSI, iPoint-systems, LBC Tank Terminals, Pro-Sapien, Qlik, Sphera, US Bureau of Labor Statistics.

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## EHS professionals must adapt their skills to meet changing responsibilities

Since the COVID-19 pandemic, Verdantix has witnessed the corporate EHS function expand in scope and pivot away from traditional management approaches. As the practice evolves, EHS practitioners must also add to their skills to be successful in the future. This report details key aspects of the corporate EHS function that are set to change in future and the opportunities for EHS professionals to upskill themselves to optimize their performance.

### EHS priorities will change as the function becomes more intertwined with the wider business

The EHS function has historically been focused on the reactive management of incidents and on maintaining compliance. However, motivated by a swathe of internal and external drivers, recent years have seen EHS become a more integral cog within the corporate machine. As a result, the priorities of EHS professionals will continue to evolve accordingly (see [Verdantix Global Corporate Survey 2023: EHS Budgets, Priorities And Tech Preferences](#)).

In key transformative trends, EHS functions are:

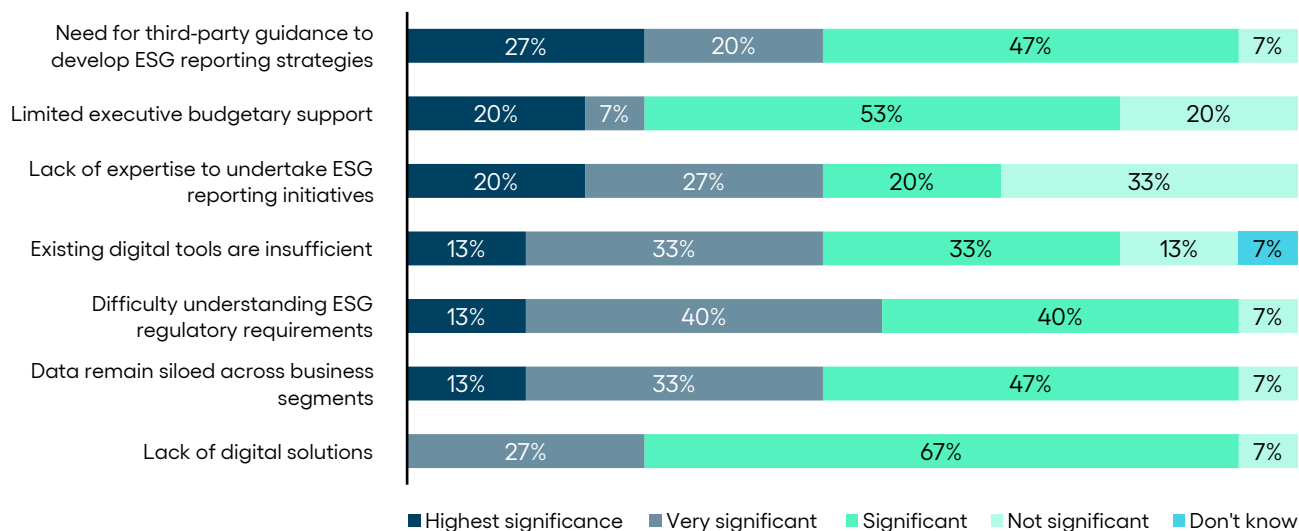
- **Consolidating digital systems to support data collection and management.**  
Tech stack consolidation has been at the heart of recent corporate EHS digital strategies, with the 2023 Verdantix survey seeing 55% of participants aiming to roll out a single global solution in the next two years. Tying EHS processes together within a single platform can drive numerous firm-wide benefits: reducing subscription cost, standardizing user experience and improving data aggregation (see [Verdantix Best Practices: Building The Business Case For EHS Platform Consolidation And Integration Projects](#)).
- **Placing importance on human capital and worker wellbeing.**  
Since emerging from the pandemic, global talent shortages have ensured that the retention of human capital and prioritization of employee wellbeing are two corporate directives growing in momentum. Despite the EHS function struggling with employee churn and competence gaps itself, it is expected to play a critical role in fostering the happy, healthy and safe work environment that is key to attracting and retaining talent. Delivering this requires EHS practitioners to develop a hyper-awareness of factors such as employee mental health and wellbeing, in addition to the safety impacts of stress and fatigue (see [Verdantix Strategic Focus: Making A Business Case For Total Worker Health](#)).
- **Preparing initiatives to support ESG and sustainability directives.**  
The last three years have seen firms rapidly draw up strategies to become more sustainable and increase their resilience to an array of nascent ESG risks. The EHS function, already well-versed in managing environmental data, has naturally played a leading role in developing ESG and sustainability strategies for many firms (see [Verdantix Strategic Focus: The Role of EHS Leaders In Implementing ESG Strategies](#)). Delivering this ESG strategy, however, is a hugely complex and resource-intensive challenge (see **Figure 1**).
- **Proactively addressing serious incidents and fatalities.**  
In the three post-pandemic iterations of the Verdantix global EHS survey, the reduction of serious incidents and fatalities (SIFs) is the top priority for EHS executives. The importance of addressing SIFs is paramount; according to the US Bureau of Labor Statistics, fatality rates have increased over the last decade, highlighting the ineffectiveness of traditional safety approaches. Technology has proved pivotal in proactive SIF reduction, affording firms the insights and tools needed to identify prominent hazards (see [Verdantix New Approaches to Reducing Serious Injuries, Fatalities and High Potential Events](#)). Take Enablon's integrated process safety management (PSM) solution, which leverages dynamic bowtie and barrier risk tools to dynamically recognize and rectify high potential risks (see [Verdantix Green Quadrant: Process Safety Management Software 2023](#)).



Figure 1

## Challenges EHS leaders must overcome to improve ESG performance

### How significant are the following barriers to improving ESG performance for EHS managers?



Note: Data labels are rounded to zero decimal places.

Source: Verdantix Global Corporate Survey 2023: EHS Budgets, Priorities and Tech Preferences

## Technology advancement is changing EHS best practices

Technology is transforming how firms manage elements of EHS. In 2023 Verdantix witnessed the prevalence of technology within EHS increase, and this is a trend that will only accelerate (see [Verdantix Market Insight: 10 Predictions For EHS Technology In 2024 And Beyond](#)). Advancements in technology have impacted the lives of EHS professionals by:

- **Streamlining administrative procedures across EHS operations.**

Adoption of EHS software is steadily increasing, with Verdantix forecasting this \$1.8 billion market to grow at a CAGR of 11.5% to reach \$3.1 billion by 2028 (see [Verdantix Market Size And Forecast: EHS Software 2022-2028 \(Global\)](#)). The efficiency and automation gained from digitizing EHS processes with software can sharply increase data collection capacity, whilst reducing the administrative burden placed on EHS professionals (see [Verdantix The Business Case For EHS Software](#)). Take bulk liquid chemicals storage firm LBC Tank Terminals, which realized a 370% increase in near-miss reporting by implementing Pro-Sapien's EHS software solution.

- **Applying analytics to identify trends within EHS data sets.**

Leveraging specialized management software, firms can collect far greater amounts of EHS data. Furthermore, if the software is configured correctly, these data outputs will be much more standardized than those garnered from 'paper and excel' processes. Increasing the quantity and quality of EHS data greatly expands the scope for firms to effectively analyse trends, to proactively assess safety risk (see [Verdantix Best Practices: Creating A Data-Driven EHSQ Programme](#)). However, although systems can break down data effectively, the answers are not simply handed out to practitioners – EHS professionals must therefore be well-versed in evaluating data trends, spotting high-value risk indicators, applying the appropriate context and strategizing for impactful change.



- **Offering mobility to connect employees closely with safety.**

No doubt accelerated by the pandemic, the switch to mobile-enabled EHS processes has been a top priority for many firms over the last five years. This was reflected in the Verdantix 2023 survey of EHS professionals, where 95% of respondents reported that their firm was using mobile EHS tools in some capacity. In addition to efficiently collecting EHS data on the scene, mobile tools allow professionals to project key safety information, updates and procedures across the workforce. Take, for example, the mobile control of work solutions offered by the likes of AVEVA, GOARC, Hexagon and Sphera, which can digitally optimize a firm's work permitting procedures, to ensure safe and efficient operations (see [Verdantix Strategic Focus: Getting Value From Control Of Work Software For Safe Operations](#)).

- **Digitizing safety training and information dissemination.**

Ensuring workers are at the required level of safety competency is a non-negotiable for EHS teams. Traditionally, this process was completed up front, through classroom-based inductions and specialist training courses. As firms have become more digitized, an increasing amount of EHS training has migrated to online courses, with numerous specialist providers (see [Verdantix Buyer's Guide: EHS Training Solutions 2022](#)). Digital training makes learning more accessible across the workforce, giving EHS teams more opportunity to reinforce competency through periodic lessons, tests and microlearning activities.

## Upskilling the EHS professional for success

The EHS function has – and will continue to – evolve over the coming decade. Changing perceptions of the role of EHS within operations, the importance placed on ESG, and the impact of technology will all impact the job description of EHS practitioners. To adapt to the changing requirements placed on EHS teams, professionals will have to continually reinvent their skills.

## Driving future value within EHS requires a new palette of competencies

EHS practitioners will no doubt encounter several new challenges over the next decade; however, there will also be ample opportunity to make a greater impact within their firm. To deliver maximum value in the future, EHS practitioners, at every level of seniority, should look to reinvigorate their skillsets (see **Figure 2**). To prepare for the next decade, EHS professionals should:

- **Deliver value in the digital working environment by developing tech literacy.**

Digital tools, ranging from EHS management systems to wearable safety devices, have become central to corporate firms' efforts to manage and improve EHS performance (see [Verdantix Tech Roadmap: EHS Technologies 2023](#)). To digitize processes effectively, EHS executives must understand the capabilities available to them through technology. For example, leading EHS software vendors such as Cority, Enablon and Sphera can offer functionality across E, H and S, in addition to elements of quality, operational risk and sustainability (see [Verdantix Green Quadrant: EHS Software 2023](#)). Furthermore, EHS professionals must become proficient at using the tools implemented by their firms. This may not entail learning how to code, but will involve being able to effectively analyse data sets, create reports and understand the opportunities offered by new technology such as AI, to improve EHS practices.



Figure 2

Examples of key skills for the future EHS professional, by seniority level

		Competency		
		Technology proficiency	Critical thinking	Effective communication
Seniority level	EHS executives	<ul style="list-style-type: none"> <li>Become well-versed in the EHS technology market</li> <li>Recognize firm's scope for digital transformation</li> <li>Align with IT to understand technology implementation challenges</li> </ul>	<ul style="list-style-type: none"> <li>Align with operational teams to tackle complex safety challenges</li> <li>Build robust business cases for EHS investment</li> <li>Oversee strategy for enacting EHS improvements</li> </ul>	<ul style="list-style-type: none"> <li>Champion the critical importance of EHS across the firm</li> <li>Convince large-budget stakeholders to endorse EHS projects</li> <li>Communicate effectively with the C-Suite to raise the profile of EHS issues</li> </ul>
	Regional EHS management	<ul style="list-style-type: none"> <li>Understand limitations of incumbent EHS systems</li> <li>Be adept at operating dashboarding tools to oversee performance</li> <li>Work closely with IT to deliver systems configuration and updates</li> </ul>	<ul style="list-style-type: none"> <li>Work around regional EHS challenges</li> <li>Strategize and propose effective remedies in line with local EHS regulation</li> <li>Factor in nuanced regional context to EHS thinking, e.g. on culture</li> </ul>	<ul style="list-style-type: none"> <li>Speak local languages</li> <li>Brief EHS professionals on new responsibilities in ESG, total worker health, etc.</li> <li>Embed EHS initiatives amongst on-site stakeholders</li> </ul>
	EHS practitioner	<ul style="list-style-type: none"> <li>Have deep competency in the EHS systems used</li> <li>Upskill others on digital EHS tools</li> <li>Work alongside system admins to monitor data quality</li> <li>Create and analyse EHS reports efficiently</li> </ul>	<ul style="list-style-type: none"> <li>Think clearly during stressful scenarios</li> <li>Identify site-level risks and develop bespoke safety procedures</li> <li>Help employees through personal challenges, e.g. on health/wellness</li> </ul>	<ul style="list-style-type: none"> <li>Compel employees to engage in good safety practices</li> <li>Give effective instructions during emergencies</li> <li>Communicate in an open, approachable fashion</li> </ul>

Source: Verdantix analysis

- Apply critical thinking methods to overcome complex EHS challenges.**

Since the pandemic, corporate EHS has transcended its lagging, compliance-centric focus to become a more tech-enabled function with a prominent role in corporate risk resilience (see [Verdantix The Future Of The EHS Function](#)). Evolving the corporate EHS practice is no easy task; EHS professionals do not have the budget to continuously throw technology at challenges in the hope that something sticks. Instead, improving EHS within a firm involves heavy strategic business planning that balances people, technology and processes (see [Verdantix Strategic Focus: Three Critical Steps To Complete For A Successful EHS Software Project](#)). EHS practitioners must blend technical understanding, business acumen and an understanding of human factors to develop a well-rounded plan for EHS improvements.

- Enact wholesale change by communicating effectively.**

Whilst the evolution of the EHS function has prompted changes to management styles, core elements remain constant. One that is especially relevant is the fact that strong EHS performance continues to be contingent on maintaining good EHS buy-in. Getting employees to proactively engage with safety initiatives is tough, and relies on EHS professionals to champion their importance. Whether through connecting with a junior employee to check their wellbeing, laying out standard safe operating procedures to a group of contractors, or pitching a widescale digital safety investment to a board of C-Level executives, it is more vital than ever for EHS professionals to be excellent communicators.





## Tools to support EHS training and skills development

EHS professionals face challenges in upskilling themselves to deliver value within their future working environments. Fortunately, there are a number of tools available to practitioners to assist with this and to bolster the network of operational individuals that are vital to maintaining EHS excellence. Notable tools to support the development of the EHS function are:

- **Digital soft skills courses offered by EHS training providers.**

As EHS professionals begin to play a more prominent role in initiatives such as total worker health, process resilience and business risk management, there is a need to add new strings to their bows. Targeted training is vital to help EHS professionals upgrade their skillsets, especially with regard to difficult personal topics such as mental health and wellbeing (see [Verdantix Strategic Focus: Supporting Worker Mental Health And Wellbeing In The Digital Age](#)). Prominent digital EHS learning content providers have invested in adding wider portfolios of training topics; take HSI, for instance, which has built out a robust library of 'business skills' courses, with soft skills topics covering the likes of business acumen, communication, leadership, health and wellness.

- **AI applications to manage ever larger EHS data sets.**

Whilst digital solutions make it easier to collect data in greater volumes, it can be a challenge to manage quality. To ensure data can drive proactive insight, EHS professionals must develop a nuanced understanding of the system, to validate that data are complete and categorized correctly. EHS software systems leverage AI to minimize the work effort required to sanitize collected data. Take, for example, Benchmark Gensuite's solution: using a language model, its integrated AI Advisor tool assists frontline workers, through prompts and description rating scores, to promote quality data capture, and helps EHS leaders identify potentially serious incidents within large data sets.

- **Software functionality to promote EHS knowledge-sharing across a business.**

Uncovering meaningful EHS findings is an often laborious task involving aggregating, analysing and reporting on large data sets. Factoring in the intensive compliance tasks that EHS professionals also have on their plate, and challenges with employee churn, there is frequently little time left for proactive risk evaluation and action. When a behaviour trend is identified, a lesson learnt, or best practice established, it should therefore be a priority to share it across the business. The majority of EHS software vendors help this process with robust dashboarding capabilities to dissect data. Consider Cority, whose advanced business intelligence (BI) tool was developed through joint innovation relationships with CorAnalytics and Qlik.

- **Regulatory solutions from EHS content providers, to keep on top of compliance risk.**

EHS professionals face difficulties in keeping on top of a regulatory landscape that is in a continuous state of flux. The challenge has been heightened in recent years, with incoming ESG directives such as the EU Corporate Sustainability Reporting Directive (CSRD), the Global Reporting Initiative (GRI) and the German Supply Chain Act, coinciding with wholesale revisions to product compliance REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) and RoHS (Restriction of Hazardous Substances) regulation. To keep on top of a myriad of relevant regulatory updates, many firms turn to EHS content providers such as Enhesa, or product compliance vendors such as Assent or iPoint-systems. Verdantix expects the product compliance and EHS regulatory content market to grow by a CAGR of 13.4%, to reach \$1.46 billion in 2028 (see [Verdantix Market Size And Forecast: Product Compliance & EHS Regulatory Content 2022-2028 \(Global\)](#)).





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