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OSHA AT 50

A Look into the Past, Present, and Future of America's Occupational Safety Advocate

Introduction

By definition, the Occupational Safety and Health Administration (OSHA) is a large regulatory agency of the United States Department of Labor. It was established in 1970 to protect workers, prevent occupational hazards, and ensure optimal working conditions through "setting and enforcing standards and providing training, outreach, education, and assistance."[i]

OSHA has become synonymous with workplace safety and health in the United States. Over the past 50 years, combined with safety and health professionals, enterprise stakeholders, unions, and advocates, the agency has had a sizeable effect on workplace safety. OSHA's latest statistics put worker deaths per day at 15, down from about 38 in its founding year.[ii] According to the Bureau of Labor Statistics (BLS), fatal work injuries in 2020 stood at 4,764, or 13 deaths per day on average— a significant number, but it is a 10.7% decrease from the previous year.[iii]

Since time immemorial, the precarious nature of work has ensured that the prevention of injury and death has always existed in some form or the other. As we celebrate the 50th anniversary of OSHA, it is important to know how the occupational safety and health movement began worldwide. Such a history will only highlight the connections between the concerns of workers past and present, and prepare us for a better, safer future.

We are not makers of history. We are made by history.

Martin Luther King, Jr.

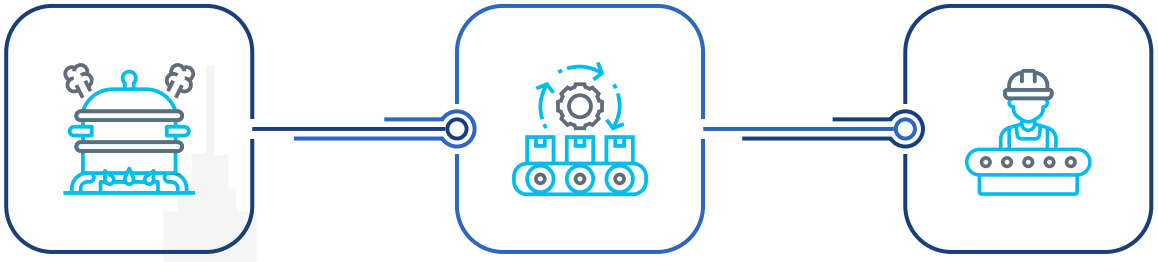
Charting the History of Occupational Safety and Health

The first documented mention of occupational health and safety lies in the Code of Hammurabi of the ancient Babylonian Empire, which included directions to deal with injuries, financial compensation against those who injured others, and the permissible fees for doctors.[iv]

Coming to more modern times, Paracelsus, the noted Swiss physician and philosopher of the German Renaissance, wrote the first significant treatise on miners' diseases, titled Von der Bergsucht oder Bergkranckheiten (On the Miners' Sickness and Other Miners' Diseases), in 1534.[v] As its name suggests, it discussed the illnesses of miners, and also those of metallurgists and smelter workers.

Moving to the start of the 18th century, we see the first instance of critical progress in workplace health and safety in the work of Bernardino Ramazzini. His work, the De Morbis Artificum Diatriba (Dissertation on Workers' Diseases), was the first book that specifically examined occupational illnesses and focused on preventing work-associated risks.[vi]

Around 1760, the Industrial Revolution ushered in an unprecedented change in the production of goods and the employment of workers. A number of key changes were suddenly prevalent:



Inorganic power (i.e. steam) and machines replaced humans and animals

New methods of production came into the picture, such as electrical grids and assembly lines

A division of labor emerged due to increased specialization of work

As positive as these factors were for production, they introduced a host of undesirable changes in the workplace. The use of machines and steam increased the possibility of fatal injuries. The new methods used to convert raw materials brought new risks of illnesses and injuries. And now that workers' roles were more specialized, it was highly likely that they would be more distracted without any variety in their work.

For the United States, the movement toward occupational safety and health began during this time. It followed England's blueprint for industrial proliferation, which meant dangerous working conditions, long and backbreaking hours, and even the employment of children in mining and manufacturing. This encouraged processes and machinery that saved on labor costs, and were, therefore, sub-optimally designed. These developments happened under a regulatory and legal paradigm that discouraged employers to be concerned for the safety of their employees.

While England's Health and Morals of Apprentices Act passed into law in 1802, the US waited until the end of the Civil War to see any significant progress in the occupational safety and health movement[vii] Insurance saw a sudden growth, with a wider organizational presence, workers increasingly bought insurance or prioritized savings, and a few unions offered insurance to their members. Massachusetts introduced factory inspections in 1867, while in 1869 two key events took place— Pennsylvania mandated two exits in all mines and the BLS was established.

But it was the beginning of the 20th century, specifically around 1907, that saw a crucial development in the movement— the introduction of workers' compensation. Congress introduced an employers' liability law in 1908 which set the stage for recognizing the need for compensating workers for workplace injury or disease.[viii] Wisconsin, however, set the nation on its first important steps to meaningful workers' compensation when it passed the Workman's Compensation Act in 1911.[ix]

In 1912, the first meeting of the Cooperative Safety Congress took place, giving birth to the National Safety Council as we know it today. The two world wars that followed challenged perceptions of worker safety further, as employers struggled to cope without their enlisted employees.[x]

The Interwar period experienced greater safety outcomes after the institutionalization and legislation of workplace safety. Accident and fatality rates began dropping gradually in railroads, steelmaking, and manufacturing in general. Advancements in technology (such as electricity) and the decrease in labor turnover meant more experienced employees worked in more stable conditions. At times, safety still worsened when work hours increased and turnover increased. Small companies received the same insurance premiums regardless of their accident rates. In effect, the pattern of improvement in workplace safety was inconsistent. But on the whole, there was still progress. Injury rates in manufacturing declined by around 38% between 1926 and 1939. [xi] Just before the end of WWII, the country would also pass the Fair Labor Standards Act of 1938, which established a national minimum wage and placed limits on child labor, both for the very first time.[xii]

Following WWII, the US witnessed an unprecedented economic boom and turnover of labor. Improvements in technology and the prominence of insurance ensured that accident rates decreased in the long run. As the nation moved toward the 1960s, however, large-scale economic expansion led to dangerous working conditions yet again, and on an unprecedented scale. There was a need to enact legislation with a much broader impact, going beyond the preexisting laws and regulations that addressed the requirements of businesses, specific to organization size and industry.

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Workers' rights should be a central focus of development.

Joseph Stiglitz

OSHA: A History

Imagine one of the world's largest economies whose workers were facing increasingly adverse work environments, but hardly anyone outside these hazardous jobs was aware of their situation. They couldn't depend on public awareness and media coverage. The inconsistent pattern of improvements in safety wasn't ringing enough alarm bells. The growing environmental movement of the time had its hands full with rising pollution levels and didn't focus on the worsening working conditions. Even labor unions didn't organize many work stoppages or collective bargaining to gain better working conditions.

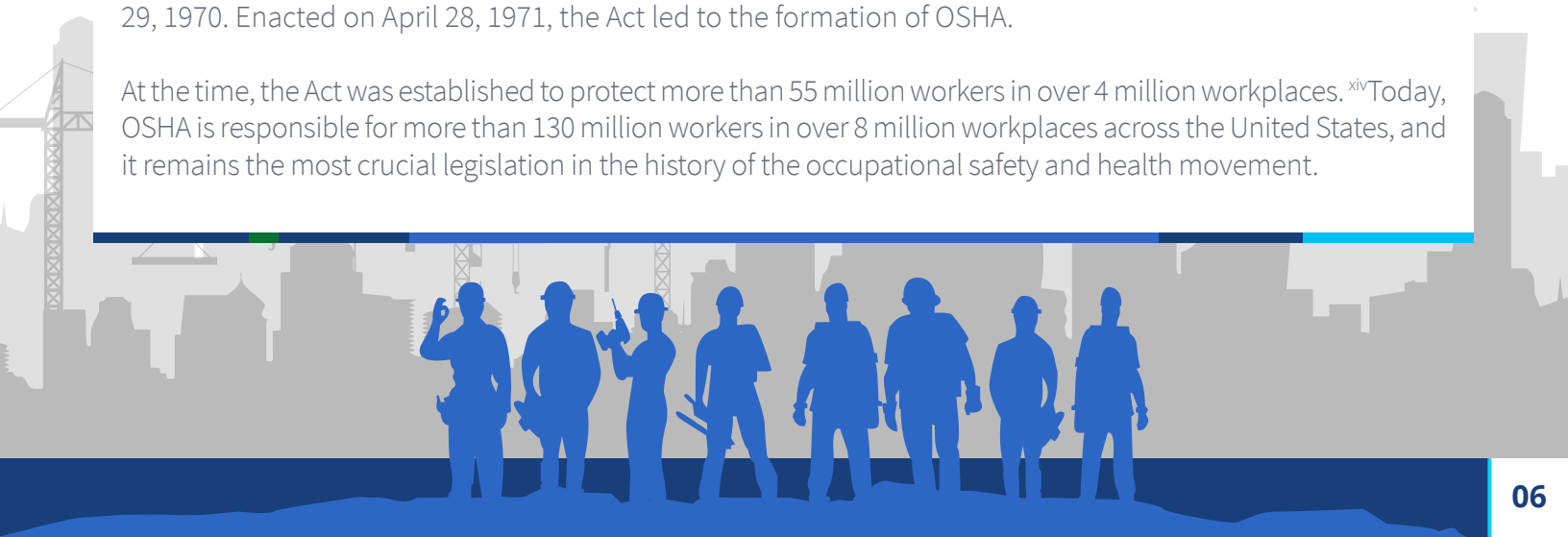
This was the prevailing situation in the United States in and around the 1960s. The origins of OSHA lie in the protests led by workers across the country facing unsafe workplaces. In the decades leading up to the Occupational Health and Safety Act, they refused new contracts, organized walkouts, strikes, and protests, and confronted not only their employers but also the union hierarchy.[xiii]

And unlike any other time in American history, a particular set of political circumstances ensured these workers had more say in driving a better future for themselves. With the Vietnam War still ongoing and 1969 being a presidential election year, the support of workers was vital to any decision in the upper echelons of the US political landscape.

The 1960s saw a number of laws passed to prioritize workplace safety and health, such as the Service Contract Act of 1965 and the Federal Coal Mine and Safety Act. But these laws only applied to workers in a limited number of industries.

It is in this scenario that the US Congress passed the Occupational Safety and Health (OSH) Act on December 29, 1970. Enacted on April 28, 1971, the Act led to the formation of OSHA.

At the time, the Act was established to protect more than 55 million workers in over 4 million workplaces. [xiv]Today, OSHA is responsible for more than 130 million workers in over 8 million workplaces across the United States, and it remains the most crucial legislation in the history of the occupational safety and health movement.



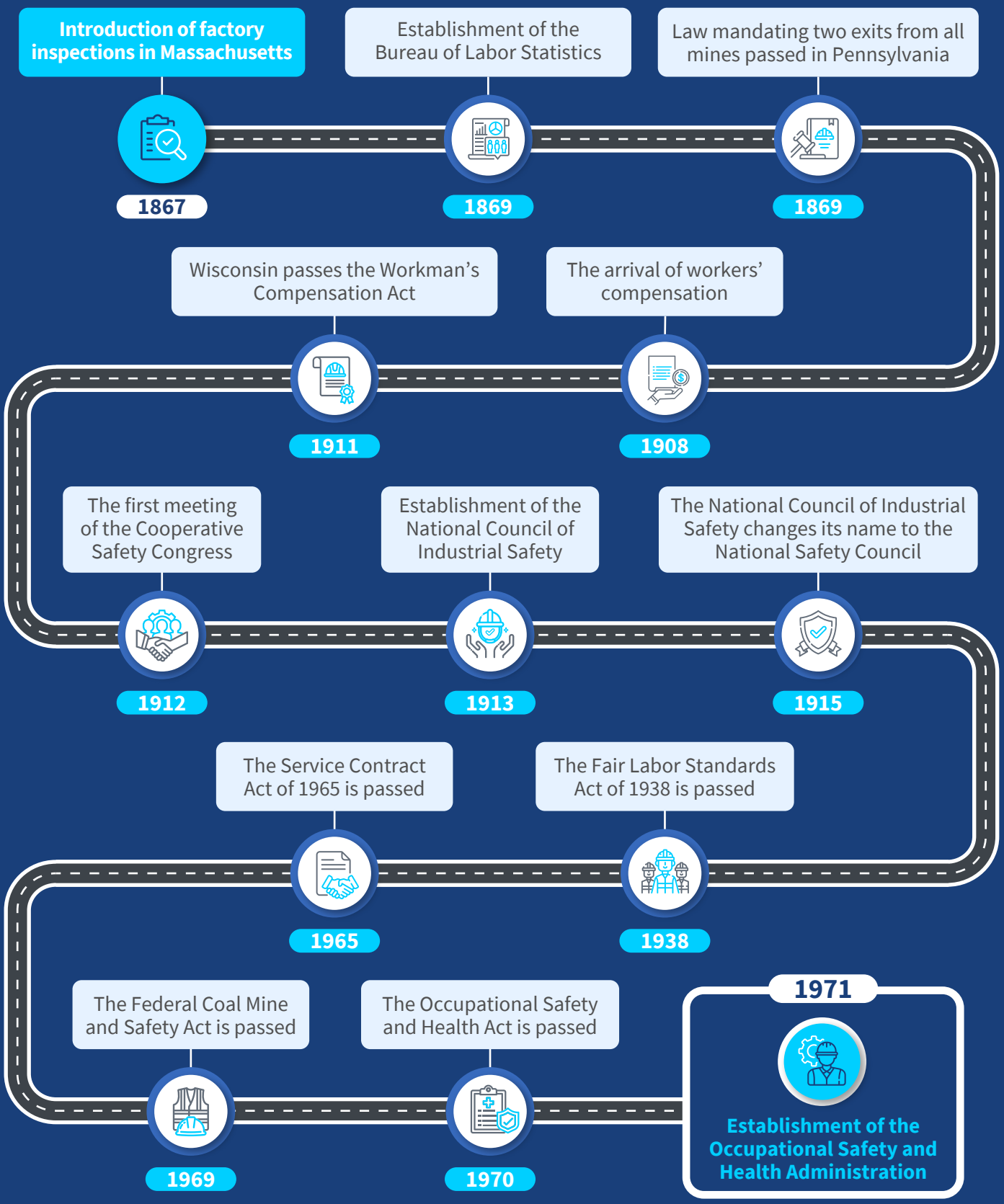


Figure 1: *A Timeline of Significant Events in the US Occupational Safety and Health Movement until the Formation of OSHA*

50 Years of Change

OSHA's 50th anniversary serves as a perfect time to look back on the many ways through which the agency successfully ensured the reduction of workplace injuries, illnesses, and deaths across the nation. After its establishment in 1971, OSHA issued a number of key regulations that proved crucial for workplace-related risks.

Throughout the 1970s, the agency implemented the first standards for lead, cotton dust, carcinogens, and asbestos— all abundant in American workplaces back then. OSHA's focus on providing proper training manifested in the OSHA Training Institute, established in this decade, along with provisions for safety and health training grants. [xv]OSHA also formed the On-Site Consultation Program during this time, which offered private and no-cost OSH services to small- and medium-sized businesses (SMBs) across the country. In addition, the agency provided protections for whistleblowers and worked with state governments to form State Plans, which are currently 22 in number.

On February 26, 1980, the US Supreme Court passed a monumental decision that confirmed the right of workers to refuse unsafe work[xvi]. Across the 1980s, OSHA issued standards that would strengthen this context, such as standards providing transparency for employees to be aware of their chemical exposure and for employers to provide medical and exposure records of their workers. The agency established Voluntary Protection Programs (VPPs) to recognize employers who have effectively maintained illness and injury rates below BLS averages[xvii]. OSHA also implemented standards for noise, hazardous energy, trenching, flammable grain dust, and safety testing and accreditation of workplace equipment.

As OSHA entered its third decade, it implemented the Process Safety Management (PSM) standard in 1992 in response to Congress passing the Clean Air Act Amendment in 1990[xviii]. The PSM standard specifically dealt with the manufacturing of explosive substances, flammable liquids, and gases, as well as 137 other dangerous substances to ensure their proper identification, evaluation, and control. OSHA issued additional standards for protecting workers against toxic and hazardous substances, falls, fires, bloodborne pathogens, long shoring, marine terminals, and working in cramped spaces. OSHA's training imperative found a focus through its first OSHA Education Centers. The agency also furthered collaboration with employers, workers, and other stakeholders via its Strategic Partnership Program to boost, identify, and help partner efforts to establish safer workplaces.[xix]

With the world stepping into the 21st century, OSHA continued to collaborate with its federal, state, and local partners to safeguard recovery workers after the events of 9/11 and Hurricane Katrina. It also passed new standards to protect construction workers in steel erection and avoid exposure to hexavalent chromium.

In the wake of the Deepwater Horizon catastrophe in 2010, OSHA assisted workers in performing cleanup and response tasks. [xx]Across the decade, it issued new standards for working in cramped spaces, along with cranes, silica dust, and the classification and labeling of occupational chemicals. In 2012, OSHA began collaborating with the National Institute for Occupational Safety and Health and the National Occupational Research Agenda on its Fall Prevention Campaign. The campaign sought to increase awareness across the construction industry to address its foremost cause of death.

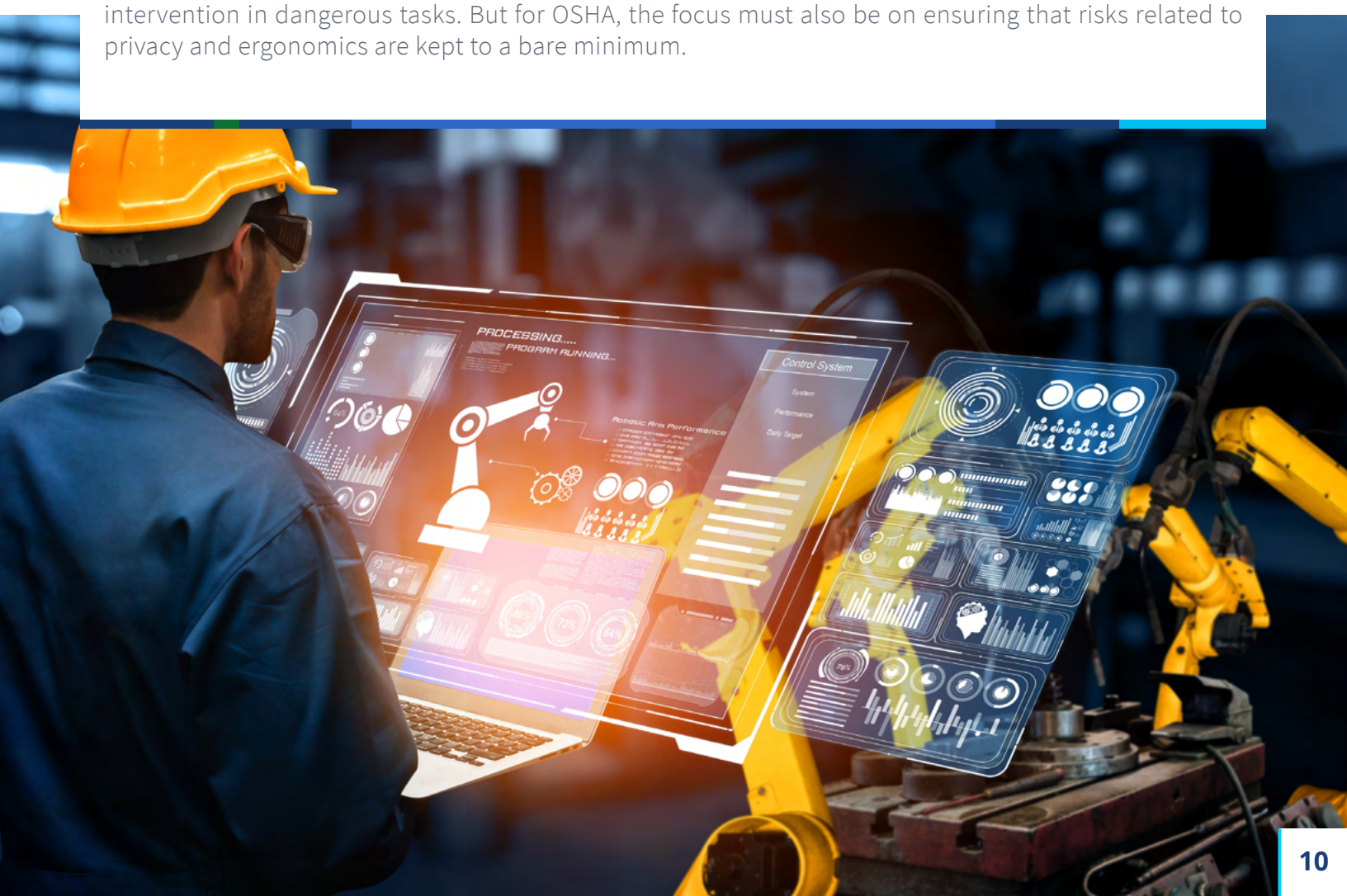
The factory of the future will have only two employees, a man and a dog. The man will be there to feed the dog. The dog will be there to keep the man from touching the equipment.

Warren G. Bennis

An OSHA-Led Future

Even as the American workforce faced an unparalleled challenge in the form of COVID-19, the crisis also saw the rise of digitalization at a rapid pace. Technology undoubtedly has the primary role to play in OSHA for the years to come, yet for any implementation to be meaningful, it has to drive not just effective change but also transcend and redefine human function.

At present, we see the use of artificial intelligence, machine learning, robotic process automation, robotics, and indeed, the Industry 4.0 paradigm, holding remarkable potential for reducing human intervention in dangerous tasks. But for OSHA, the focus must also be on ensuring that risks related to privacy and ergonomics are kept to a bare minimum.



In the midst of climate change, sustainable development is also a priority, with the rise of green industry and, consequently, the need for low-carbon sectors. While OSHA is primed to build on its imperative of sustainability, care must also be given to eliminating new risks from chemicals in recycling and the use of specific materials.

The workforce is constantly changing as well. Any feasible future of OSH needs to tackle gaps in age and gender in the labor market. There will also be a need to maintain adequate oversight across all work settings, whether onsite or remote, to monitor possible medical conditions in employees.

For OSHA, the need to adopt a multidisciplinary approach to OSH management and incorporate OSH into general education takes precedence. While OSHA's current standards and regulations remain extremely valid for the dynamic world of work, significant steps in protecting workers in the future can come from these two ways— bringing multiple disciplines such as law, public health, engineering, and technology together; and encouraging a longer assimilation of OSH into the general public curriculum. In addition, OSHA's partnerships with governments at all levels as well as partner organizations hold incidences of future dialogue in good stead to tackle occupational risks and challenges not yet known.

The last 50 years have seen a transformation of American workplaces for the better. With OSHA at the helm, the next 50 years promise to bring forth cutting-edge developments which will ensure every worker's right to safety and health.

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