

# Why Use a Safety Management System?



Inform safer day-to-day decisions  
with a systematic approach  
to safety management

Getty Images/MITRE

Around the world, many organizations with significant public safety responsibilities have adopted formal risk management approaches to continually improve safety. The Safety Management System (SMS), a proven systematic approach for managing risk, equips an organization to efficiently manage safety as part of its day-to-day operations. Key functions include detecting current and potential hazards, analyzing their possible impacts, mitigating the risk to an acceptable level, and monitoring the effectiveness of mitigations.

## Why Systematically Manage Risk?

Past accidents help us learn how to manage safety risk more effectively. Consider the explosion on the Deepwater Horizon in April 2010. This explosion directly resulted in 11 crew members losing their lives and billions of dollars in spending to clean up oil spilled into the Gulf of Mexico. Investigators traced this accident's cause to a series of mistakes that revealed an inadequate risk management approach. For example, the investigators learned that existing risk management processes did not identify or address risks created by late changes to the well design and procedures. Investigators also found that key decisions appear to have been made in an ad-hoc manner without sufficiently analyzing the risks. Overall, the investigation determined that systematic handling of hazards could have prevented the explosion.

## Real-world Benefits of SMS

- Increased operational performance and efficiency through more consistent operations, fewer interruptions, and reduced re-work.
- Increased employee availability due to fewer on-the-job injuries.
- Fewer customer injuries.
- Reduced property damage.
- Reduced insurance premiums.
- Increased management insight into what is really happening in the organization.

## Why Use a Safety Management System?

### SMS Systematically Strengthens Safety in Four Ways

A positive safety culture is foundational to SMS. It features accountability for one's actions and offers an environment in which individuals report errors or close calls without fear of reprimand.



#### (1) Safety Risk Management

Through safety risk management, an organization identifies safety hazards in its operation, products, or services. Representatives from across the organization assess the risk and measure it against what the organization has established as acceptable. If the risk is unacceptable, the team mitigates the risk through design changes to its systems, processes, procedures, and information flows. This is how the organization builds safety into everyday functions.

#### (2) Safety Assurance

Through safety assurance, an organization monitors its safety performance against its safety objectives. Safety assurance functions periodically measure the effectiveness of risk mitigations and ensure their implementation has not introduced new hazards.

#### (3) Safety Policy

Safety policy shapes how the organization conducts everyday business. The organization's leadership sets policy to define safety responsibilities, accountabilities, and authorities for all personnel, including that safety is a shared responsibility for all. Policy also encourages and rewards employees for identifying and reporting safety concerns. Leadership communicates the policy throughout the organization.

#### (4) Safety Promotion

Through safety promotion, an organization fosters a positive safety culture, provides safety training for all personnel, and communicates safety-related concerns and corrective actions taken.

### SMS Supports Safety Across Stakeholders

SMS advances safety through the end user and the public by offering compatibility among risk management techniques used by organizations you work with. These organizations range from parts makers and distributors to product manufacturers, operators, and regulators.

To learn more, contact [safetymanagement@mitre.org](mailto:safetymanagement@mitre.org).

#### Who benefits from SMS?

- Transportation
- Healthcare
- Defense
- Law Enforcement
- Energy
- Space
- Construction
- Chemicals
- Manufacturing

MITRE's mission-driven teams are dedicated to solving problems for a safer world. Through our public-private partnerships and federally funded R&D centers, we work across government and in partnership with industry to tackle challenges to the safety, stability, and well-being of our nation.