

Glossary – List of Terms and definitions

Terms	Definitions
Actual Risk (AR)	Actual risk exposure is directly correlated with safety barriers' performance and lies between the inherent and mitigated risk.
Bow-Tie	A diagram that visualizes the risk for evaluation in one easy to understand picture. The diagram is shaped like a bow-tie, creating a clear differentiation between proactive and reactive risk management.
Bayesian Network	A probabilistic graphical model (a type of statistical model) that represents a set of random variables and their conditional dependencies via a directed acyclic graph (DAG).
Major Accident Hazard (MAH)	“An occurrence (including in particular, a major emission, fire or explosion) resulting from uncontrolled developments in the course of the operation of any establishment and leading to serious danger to human health or the environment, immediate or delayed, inside or outside the establishment and involving one or more dangerous substances.
Hazard	Any source of potential damage, harm or adverse health effects on something or someone.
Mitigated Risk (MR)	Risk that is identified and moderated through application of proactive or reactive solution(s) that lessen the propensity or consequence of the identified risk. In this paper, mitigated risk is ranked considering Safety barriers are perfectly functional (100%).
Inherent Risk (IR)	Risk evaluated as a criterion for MAH identification considering “NO” safety barriers.

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Top Event	It is the moment when control is lost over the Hazard. There is no damage or negative impact yet, but it is imminent. This means that the top event is chosen just before events start causing actual damage.
Threat and Recovery Barriers	Barriers in the Bow-Tie that appear on both sides of the top event. Threat and Recovery barriers interrupt the scenario so that the threats do not result in a Loss of Control (the top event) or do not escalate into an actual impact (the consequences).
Risk	A combination of the probability (or likelihood) and the consequence of a negative outcome or loss.
Risk Assessment	Where the severity of the Hazard and its potential outcomes are considered in conjunction with other factors including the level of exposure and the numbers of persons exposed and the risk of that hazard being realized.
Risk Matrix	A matrix that is used during risk assessment to define the level of risk by considering the category of probability or likelihood against the category of consequence severity.
Safety barriers	Physical or non-physical means planned to prevent, control, or mitigate undesired events or accidents.