

Hazard and consequence analysis for understanding accident scenarios

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Hazard and Consequence Analysis

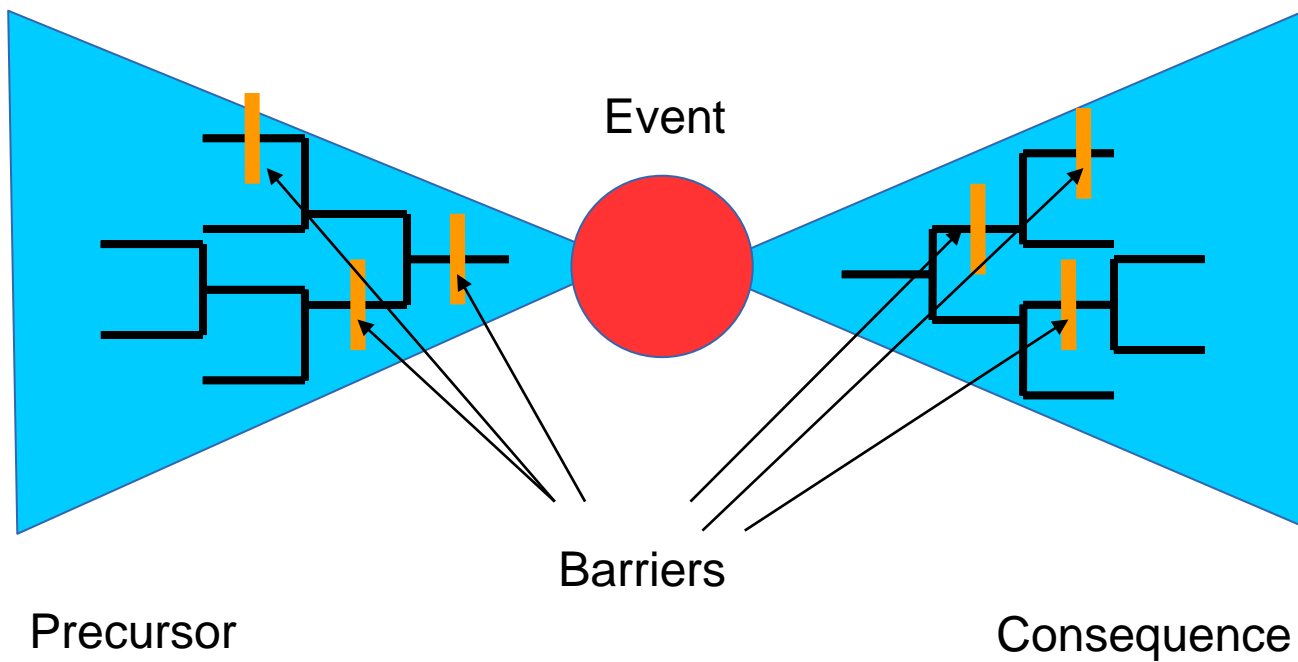
- HAZOP
- Fault Tree Analysis
- Bow-Tie Analysis

Several methods, all have advantages and disadvantages. No single solution.

Bow-Tie Analysis for the investigation of accidents

- Bow-Tie Analysis has three parts:
 - Precursors
 - Event
 - Consequences
- Opportunities to prevent precursors from leading to an event or to limit the consequences are shown as barriers.

Bow-Tie Analysis



Bow-Tie Analysis

- Investigation and documentation of consequences are important to understand what type of event has occurred.
 - Is it a single event or chain of events? e.g. Fire before explosion, or explosion before fire.
- Not only should the branches of the cause and consequence trees be analysed, but also the barriers which were in place as well as which of these functioned and which failed and which were bypassed