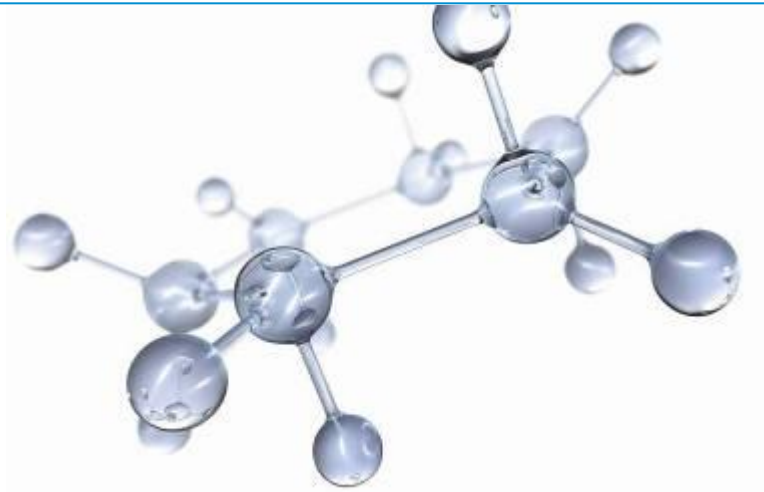
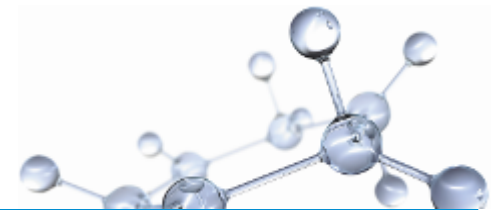


CEFIC Seminar Transport Risk Assessment
October 4th 2013



Indicative Scoring
of
Risk for
Incidents and Near Misses

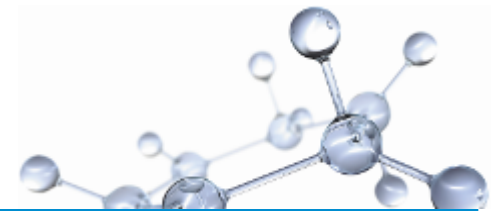
and how we learn from it



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Topics



Purpose

Risk

Scoring Factors

Example

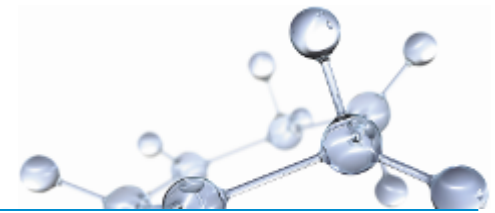
Indicative Risk Score

Performance Indicator

Learning from Incidents, Near Misses

Transport Safety Management

Indicative Scoring of Risk

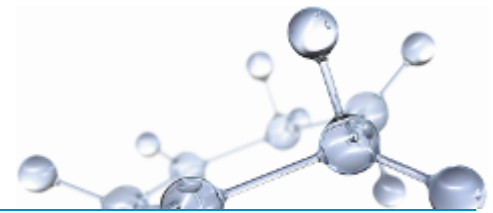


**a straightforward method of
assessing risk associated with an
incident, near miss, observation**

risk score to identify the
importance for
corrective actions and for
preventing (re-)occurrence

proactive

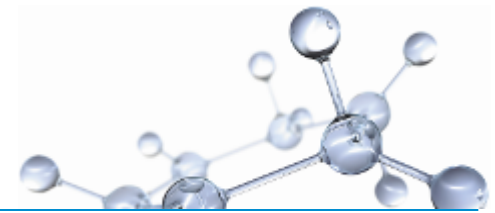
Risk



Where is risk higher ?

1. a leak that by chance did not result in a disaster
2. a leak that could not have got worse than a minor spill

Scoring Factors



- all observations
- all near misses
- all incidents

A. Actual Consequence

B. Potential Consequence

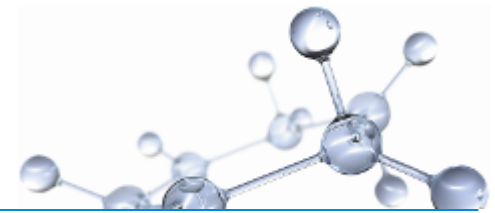
C. Lack of Safety Measures

Protective Barriers Present



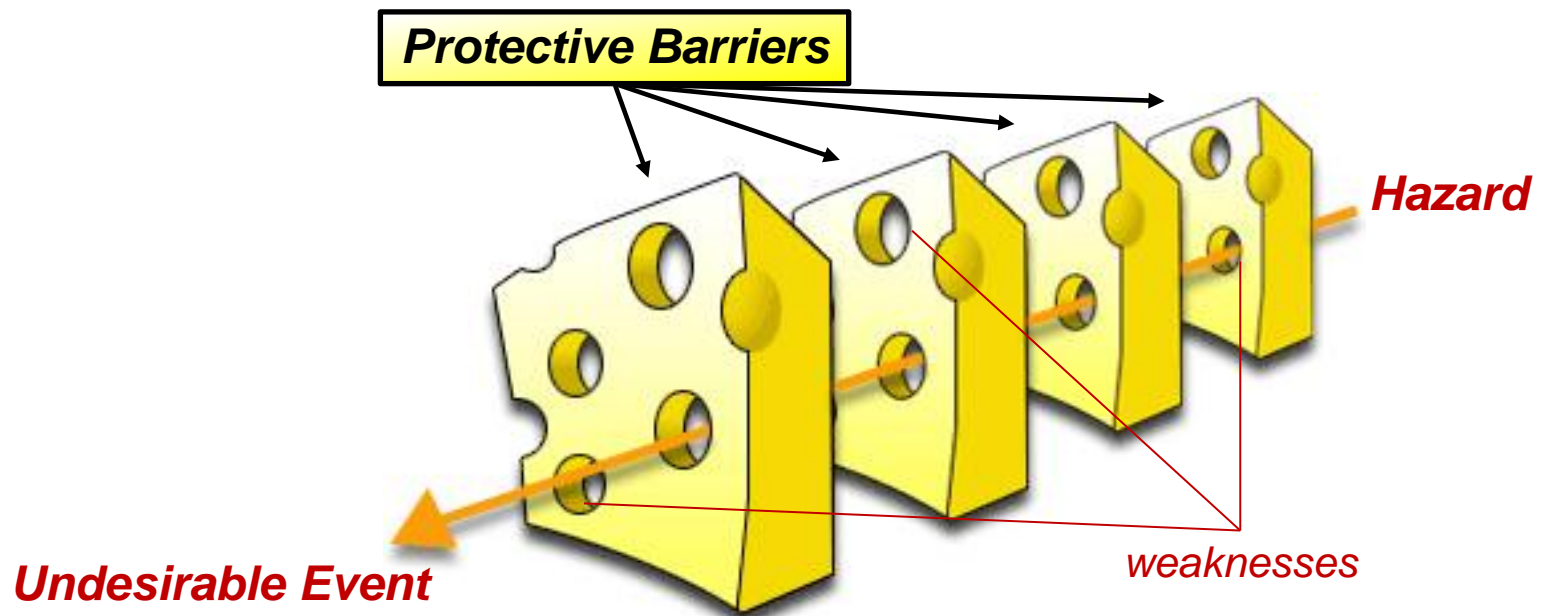
reversed

Scoring Factors

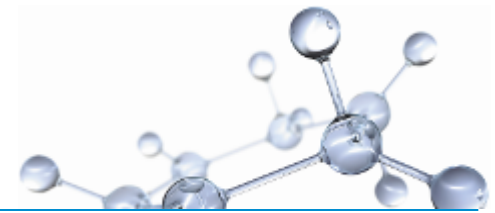


C. Lack of Safety Measures *preventing potential consequence*

Protective Barriers Present reversed
preventing potential consequence



Indicative Risk Score **example**

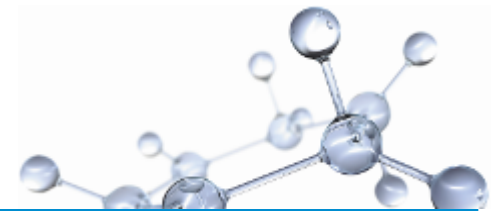


Class 3 Product Tank Truck Roll-Over

- 1 car trying to pass another in front of the truck driver on a 2-way road (2 lanes only)
- truck driver trying to avoid frontal collision, truck slips and rolling over
- truck driver rescued by fire brigade, injured, fractured arm, to the hospital for surgery
- spill: small leak on 1 compartment, estimated < 200 kg
- investigation: regular speed, no-driver fatigue (driving for 20 mins after 24 hours rest), ...

- **Actual Consequence** : Lost Time Injury
- **Potential Consequence** : “Fatal collision, truck roll-over and truck burning after large spill; fatal for car driver (for passenger) and for truck driver”
- **Protective Barriers Present** :
 - > “Trained and experienced driver capable to avoid frontal collision”
 - > “Robustness of truck tank”





Lack of Safety Measures







Indicative Risk Score

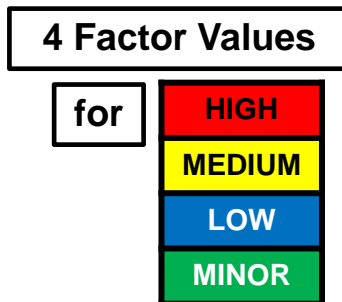
A. Actual Consequence Factor x B. Potential Consequence Factor x C. Barrier Factor (*Lack of Safety Measures Factor*)

Actual Consequence Factor

- severity  ⇒ factor 
- severity  ⇒ factor 

Potential Consequence Factor

- severity  ⇒ factor 
- severity  ⇒ factor 

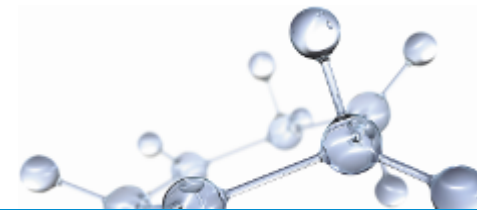


Protective Barrier Factor = # of barriers preventing escalation from actual to potential consequence

- # of barriers  ⇒ factor 
- # of barriers  ⇒ factor 

HIGH

Indicative Risk Score **example**



Class 3 Product Tank Truck Roll-Over

- 1 car trying to pass another in front of the truck driver on a 2-way road (2 lanes only)
- truck driver trying to avoid frontal collision, truck slips and rolling over
- truck driver rescued by fire brigade, injured, fractured arm, to the hospital for surgery
- spill: small leak on 1 compartment, estimated < 200 kg
- investigation: regular speed, no-driver fatigue (driving for 20 mins after 24 hours rest), ...

• Actual Consequence : Lost Time Injury

MEDIUM

• Potential Consequence : “Fatal collision, truck roll-over and truck burning after large spill; fatal for car driver (for passenger) and for truck driver”

HIGH

• Protective Barriers Present :

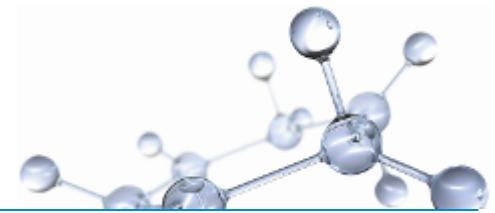
> “Trained and experienced driver capable to avoid frontal collision”

> “Robustness of truck tank”

Lack of Safety Measures

LOW

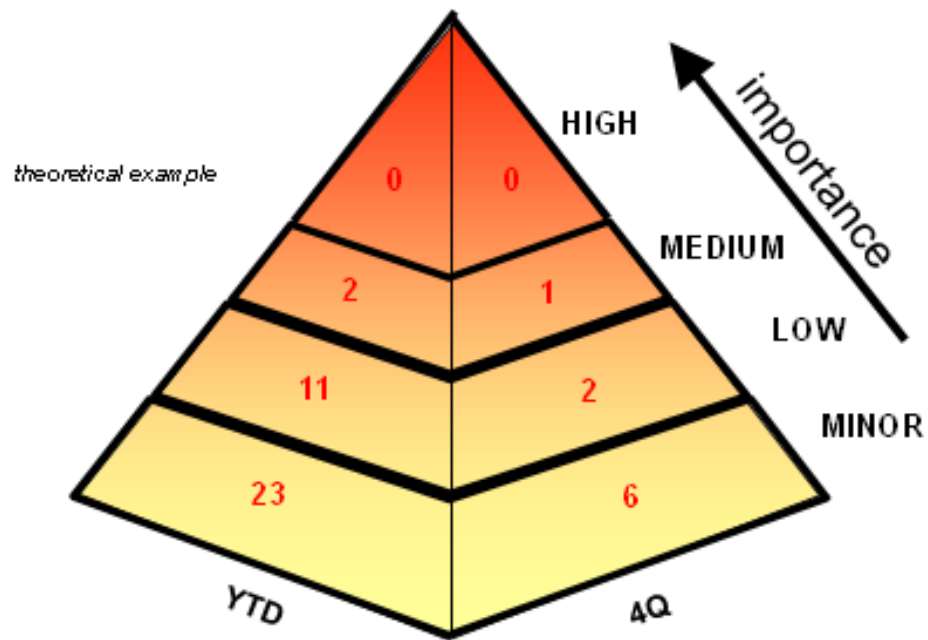
Performance Indicator



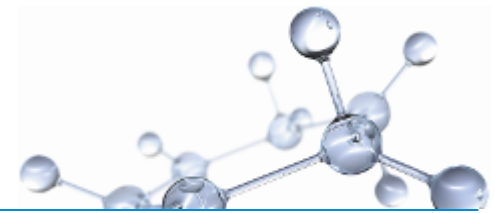
leading indicator
leading indicator
lagging or leading indicator

..... observations
..... near misses
..... incidents

PYRAMID
Incidents
Near Misses
Observations



Learning from Incidents, Near Misses



Indicative Risk Score = Importance

whether

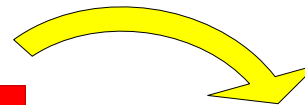
corrective, preventive actions have to be taken

further analysis is required

incident scenario unknown, assess > **risk assessment**

incident scenario known, re-visit / re-assess > **risk assessment**

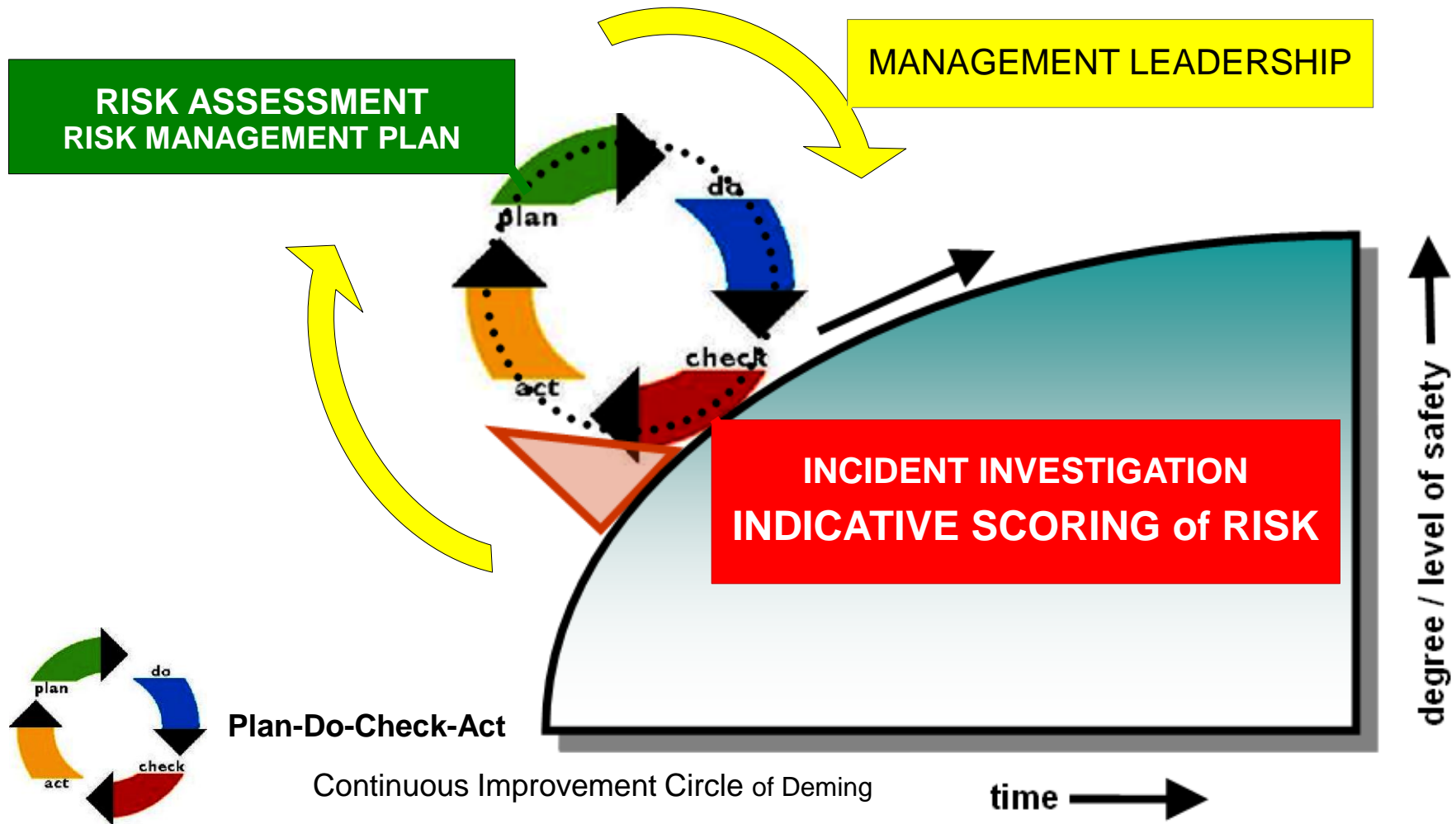
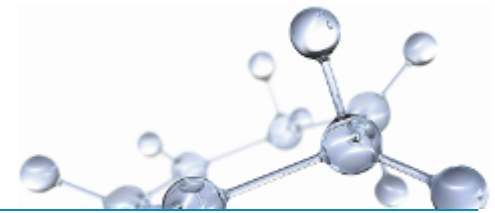
**INCIDENT INVESTIGATION
INDICATIVE SCORING of RISK**



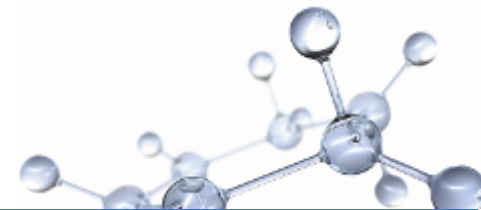
Yellow	Red	Red	Red
Blue	Yellow	Red	Red
Green	Blue	Yellow	Yellow
Green	Green	Blue	Yellow

**RISK ASSESSMENT
RISK MANAGEMENT PLAN**

Transport Safety Management



THANK YOU !



Learning from incidents and near misses
is part of an
organization's
continuously improving
safety management.

QUESTIONS?

More information

“Nieuwe aanpak incidentanalyse bij ExxonMobil”

“ExxonMobil instaure une nouvelle méthode d'analyse des incidents”

*PreventFocus 5 - 2008
www.prevent.be*