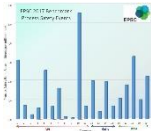# Process Safety Performance

EPSC Benchmarking Results

Piet Knijff (DSM; Chair EPSC Board) / Tijs Koerts (Operations Director EPSC)
Achema, June 2018, Frankfurt

EPSC
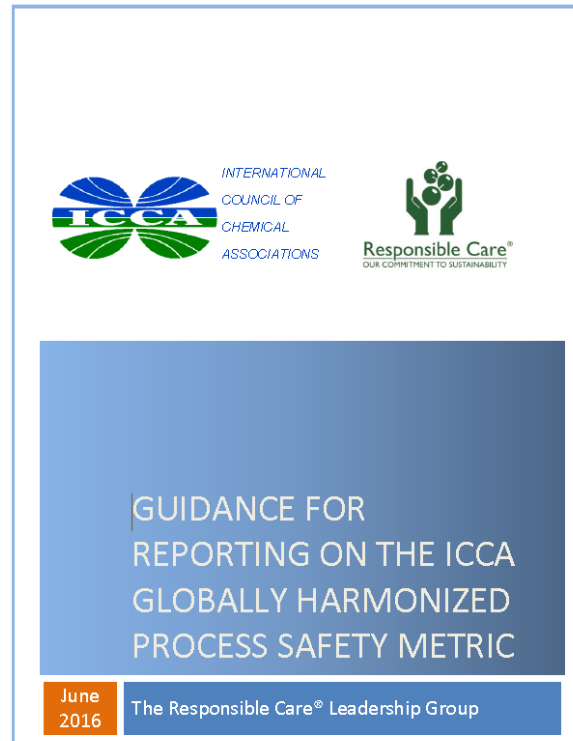
Process Safety Performance Benchmark

One slide that matters (?)

and before that…

Reporting performance

2020 Reporting: ICCA RCLG includes process safety as a mandatory metric in the KPI reporting program"
(2018/2019 optional reporting)

INTERNATIONAL
COUNCIL OF
CHEMICAL
ASSOCIATIONS

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

GUIDANCE FOR
REPORTING ON THE ICCA
GLOBALLY HARMONIZED
PROCESS SAFETY METRIC

June 2016 — The Responsible Care® Leadership Group

CEFIC GUIDANCE FOR REPORTING ON THE ICCA GLOBALLY HARMONISED PROCESS SAFETY METRIC

Responsible Care Leadership Group
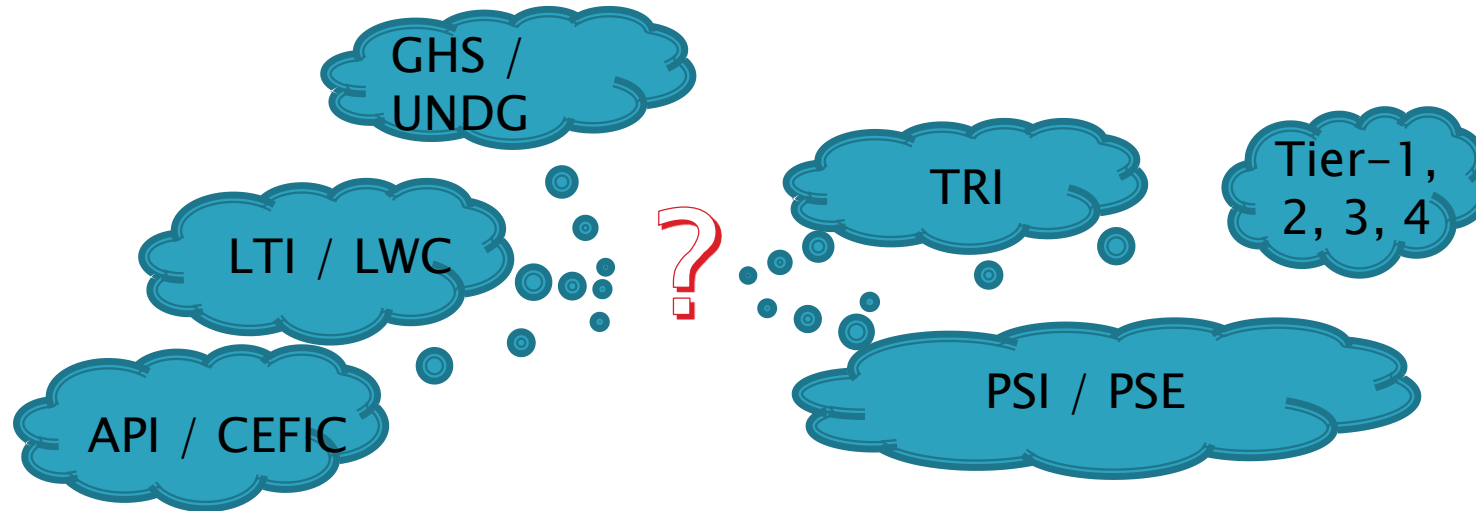
June 2016

cefic

energy API

ANSI / API RP-754

Process Safety Performance Indicators for the Refining & Petrochemical Industries

EPSC

How did we end up here?

Reporting on process safety performance is a must and

for several years we were struggling with different approaches in metrics → not efficient, → how to build trust?

Performance Reporting Standard

Main initiatives coordinated by Industry Associations:

API RP754 '*Process Safety Performance Indicators for the Refining and Petrochemical Industries*', 1st edition (2010), 2nd edition (2016)

Cefic '*Guidance on Process Safety Performance Indicators*', 2011, aligned with ICCA in 2016 edition

Harmonized in:

ICCA (International Council of Chemical Associations) '*Guidance for Reporting on the ICCA Globally Harmonized Process Safety Metric*', 2016

ICCA Reporting Standard

- Uniform classification criteria for scope, and impact on
  1) safety/human health,
  2) direct cost due to damage, and
  3) community impact

- Allows for 'release-only' events using either the 3 GHS-based thresholds, or the combined (28) API RP-754 **Tier 1 & 2** thresholds

- Represents not all there is to tell in process safety performance

EPSC

ICCA Reporting Criteria

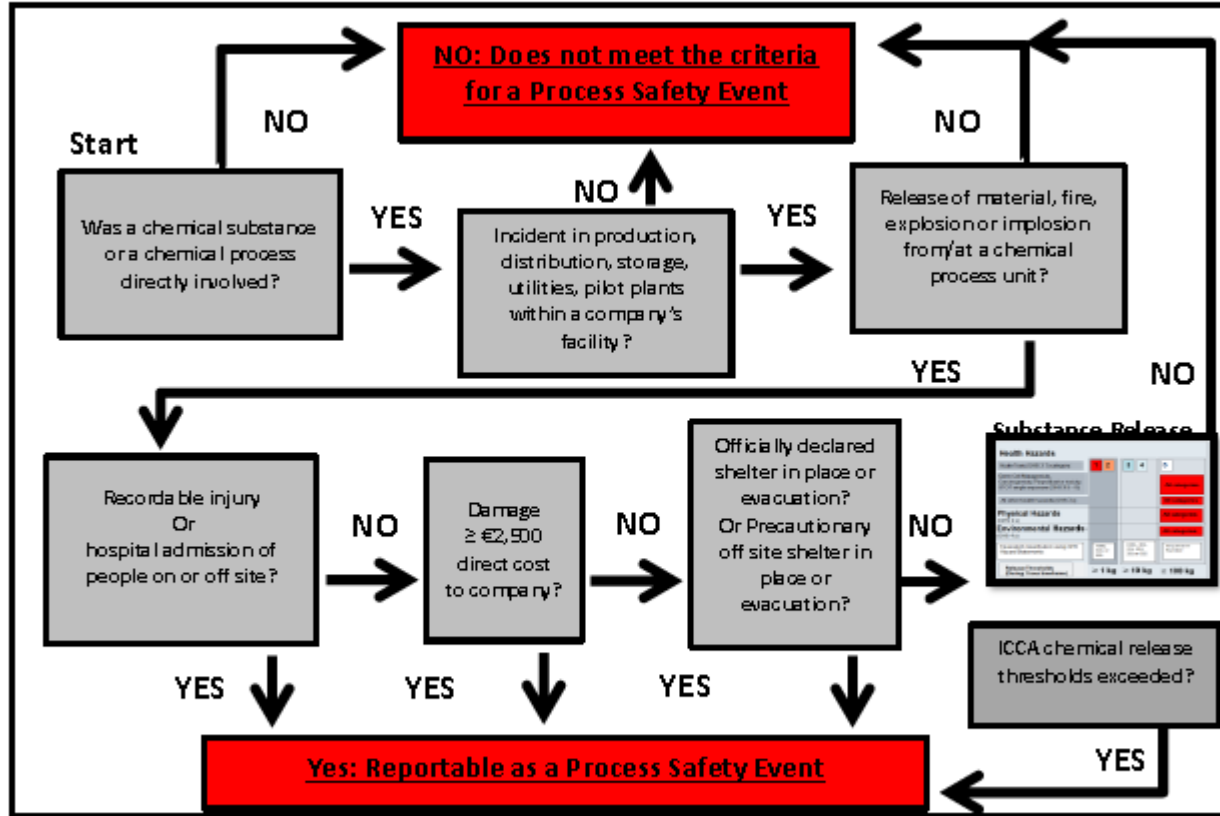Overview of ICCA Process Safety Event Criteria as a Flow Chart

Table 1 – GHS Classification Table

*Releases of „None-hazardous materials (=no GHS code) are not reportable.
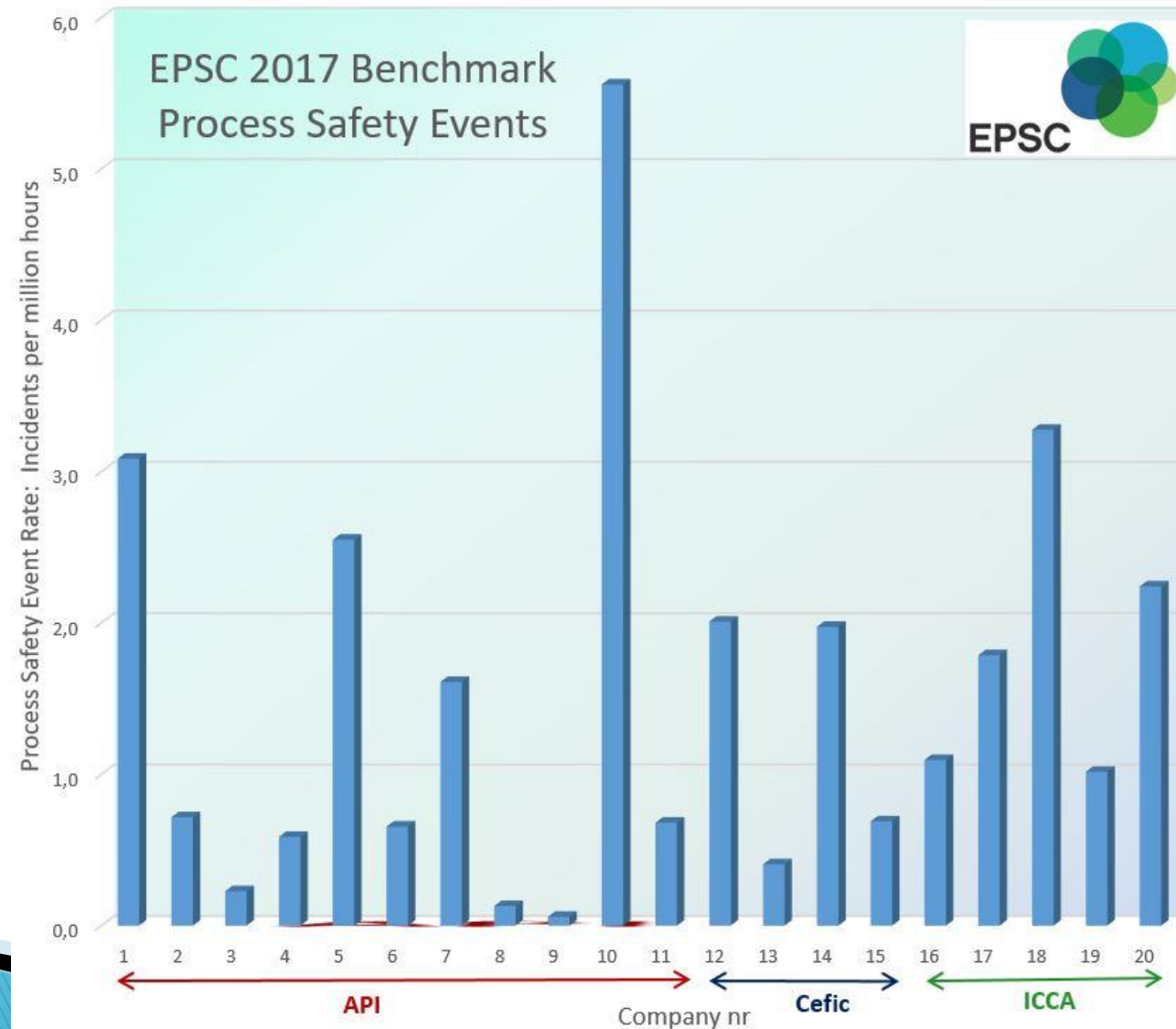
EPSC Performance Benchmark

Reason for action

- Limited (up-to-date) performance data available for benchmarking

- Availability in public domain is for some still a threshold

- Perfection ⟷ Progress

EPSC

EPSC Performance Benchmark

- EPSC decided October 2017 to collect performance data over 2017 for benchmarking purposes; results were shared in the EPSC Members Meeting April 2018

- Results are anonymized, each participating company knows its own score in the benchmark

- Most of the EPSC Members that have Operating Companies in Europe participated

EPSC Performance Benchmark Results

EPSC 2017 Benchmark Process Safety Events

EPSC Performance Benchmark Results

- 20 EPSC member companies participated and reported
  - 1002 process safety incidents meeting the threshold criteria, in 894 million working hours ($\approx$450 000 FTE incl. contractors)

- performance rate: 1.1 recordable PSE/million hrs

Standard	Rate	St. dev.
API	0.7	1.6
Cefic	1.5	0.7
ICCA	1.8	0.8
Overall	1.1	1.3

EPSC

Next steps

- One data point is only a start

- Enhance learning within EPSC community

ICCA Reporting Standard

- Uniform classification criteria for scope, and impact on
  1) safety/human health,
  2) direct cost due to damage, and
  3) community impact

- Allows for 'release-only' events using either the 3 GHS-based thresholds, or the combined (28) API RP-754 **Tier 1 & 2** thresholds