



# IRSC 2022

INTERNATIONAL RAILWAY  
SAFETY COUNCIL

SEVILLA, OCTOBER 16-21, 2022





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# What I will talk about

## IRSC

- Evolution of IRSC over the years
- Future of IRSC

## Accidents

- Case studies: Lac Megantic, Quebec and Guernsey, Saskatchewan

# IRSC Overall Intent

- Open forum, all to contribute
- Learn from safety investigations
- Forum for international experts to meet and discuss issues
- Positive achievements – break-out, tech visits
- Areas of concern - core group; Chatham House issue

# IRSC 1990-1999

- Inspired by JRE
- Countries with mature networks – Far East, Australasia, Europe, North America
- Presentations included TGVs, regional commuter lines, track, equipment and operational / signals issues
- Human factors and sms were identified during this period “man-machine interface”
- James Reason mentioned
- Papers v presentations
- Memorable moment - London 2000: Safety cost of TGV

# IRSC 2000-2009

- IRSC Tokyo 2001 postponed (September 11<sup>th</sup> attack)
- Developing countries and more (smaller) countries attending
- E.g. S. Africa, India, S. Korea, Ireland, Nordic countries
- 2003 Paris: Wider range of issues, including trespassing, vandalism, and worse
- Core Group rules established
- Railway associations - Sunday meeting
- Memorable moment: Mr. Kato, JRE, re future safety threats

# IRSC 2010-Present

- Regulators' Sunday meeting.
- Environmental themes increasing.
- Core group – too big now?
- Chatham House Rules being followed?
- First memorable moment JRE – IRSC not in their 25 year plan.
- Second memorable moment: Dublin air safety presentation – just before B737Max disasters.
- Presentations v papers.
- Covid-19 stalls conferences.

# Issues for future IRSCs

- Size of core group/ conference format
- Environmental issues / climate change
- Track / infrastructure issues
- Software issues?
- New technologies
- Safety communications and government and industry credibility





# Key Issues from three major Canadian accidents

- 2013 Lac Megantic QC: 47 fatalities - issues includes corporate culture, track and locomotive condition, operating procedures, safety management deficiencies, regulatory capture.....
- 2019/20 Guernsey SK: repeated regulator warnings but no action
- Were they predictable?
- 2019 Field Hill BC runaway: longer trains, poor equipment condition, decision to proceed in cold weather conditions

# Lac Mégantic, Québec, 6 July 2013



Source: CBC website



Source: Sûreté du Québec

- Runaway unmanned freight train
  - 72 wagons of light crude oil (6.7M litres)
- Derailed in town at 95+ km/h
- 59 wagons breached, 6M litres released
- 47 fatalities
- 2,000 evacuated

# Guernsey Saskatchewan, 2019/20



- Two derailments within two months in same area
- Non-signalled territory
- Oil wagons, both releases approx. 1.5M L
- Speeds above 55 km/h
- Wagons included modern designs
- Dept. of Transport – 2016/2019 warnings
- SMS – highly probable no risk analysis
- If risk analysis done, why the accidents?



# Field Hill BC 2019

News Headline: "Lawsuit claims TSB caved to threats by CP Rail and muzzled its lead investigator"



Sources: CPR and CBC News



# Conclusions

- Corporate, regulatory and investigative failures
- Regarding Lac Mégantic, Québec:
- CEO quote: “one-man crews are safer than two-man crews because there's less exposure for employee injury and less distraction”



Source: B Bosker

# Access to Information - the two most common results:

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**Document released under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information**

To: [Redacted]  
Cc: R19C0015 <R19C0015@bst-tsb.gc.ca>; Crawford, Don (Don.Crawford@tsb-bst.gc.ca) <Don.Crawford@tsb-bst.gc.ca>  
Subject: RE: [Redacted]

[Redacted]

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From: [Redacted] <[Redacted]@cpr.ca>  
Sent: Tuesday, January 7, 2020 04:17 PM  
To: LeBlanc, Robert <Robert.LeBlanc@tsb-bst.gc.ca>  
Subject: [Redacted]

[Redacted]

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From: LeBlanc, Robert  
Sent: Friday, December 6, 2019 03:59 PM  
To: [Redacted] <[Redacted]@cpr.ca>  
Cc: R19C0015 <R19C0015@bst-tsb.gc.ca>; Crawford, Don (Don.Crawford@tsb-bst.gc.ca) <Don.Crawford@tsb-bst.gc.ca>  
Subject: [Redacted]

[Redacted]

◀ 22 of 168 ▶

Pages 34 to / à 39  
are withheld pursuant to sections  
sont retenues en vertu des articles

19(1), 20(1)(b), 23

of the Access to Information Act  
de la Loi sur l'accès à l'information

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# So what can we do to improve safety?

- Use European Rail Agency suggested best practices:
- Trust and openness between industry, regulator and investigations agencies
- Be as open as possible
- Have teeth, and use them, plus:

Review the Nolan Principles (UK), which apply to any public office holder

Always be aware of Reason's philosophy (sense of unease)

and Westrum definitions of pathological organizations

## Transport Canada SMS audit results

- Only one fine paid in the last 13 years related to sms audits - \$9,000 CAD paid within a month.
- One assessed fine in 2021 - \$133,000CAD - under appeal by the railway.



# Areas to Think about

## IRSC Conference Format and Values

Similar safety issues, and superb discussions, over 30 years, but

- What is ideal core group size?
- Is there an ideal conference size?
- Are we as open as we used to be?
- How do we define success?

## Safety Professionals

- Ask how and why safety has improved over time
- Is a laissez-faire regulatory approach appropriate?
- When making changes, ask: what could go wrong?

# For Today's Sessions

- Important to understand the effects of specific cultures
- How do today's presentations fit the above?
- Remember: industry and regulatory agencies all have cultural issues
- Do IRSC conferences have them?
- SMS - at what cost, for what benefit?
- Don't believe your own publicity!

# Thank you!







[www.irsc2022.com](http://www.irsc2022.com)

