



# **The Future Shines Bright for Engineering Insurance**

**Martin Thompson, President and CEO RSA Canada**

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## Let's fire up those neurons!

**1. In which year was the first engineering insurance company founded?**

- a) 1858      b) 1854      c) 1872      d) 1920

**2. The first engineering insurance company was called:**

- a) London Steam Assurance Co.    b) The Steam Boiler Assurance Co.    c) The Steam Inspectors' Assurance Co.

**3. In the 1850s, what was the approximate frequency of boiler explosions?**

- a) One per day      b) One every 10 days      c) One every 4 days      d) One every 20 days

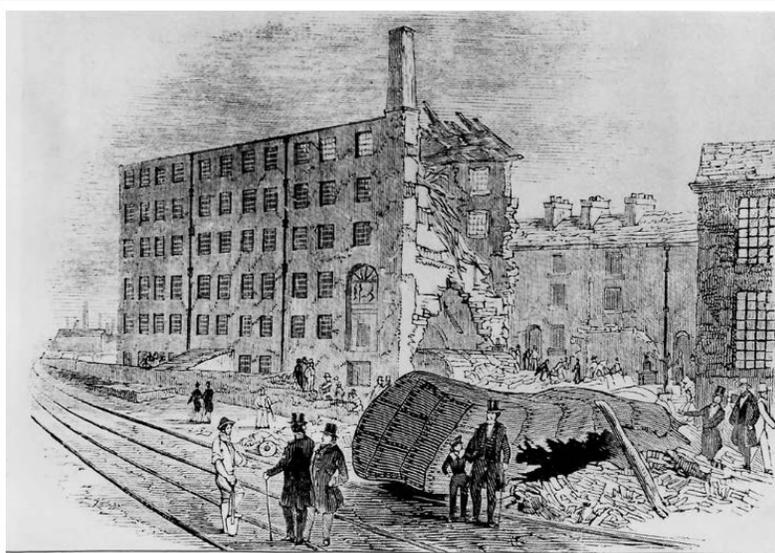
**4. The global engineering insurance premiums for 2017 as a % of total global commercial premiums is estimated to be:**

- a) 1%      b) 3%      c) 10%      d) 20%

# During the first industrial revolution, mechanization was made possible by steam power. Engineering insurance played a key role in making steam technology safer and more accessible.

**19<sup>th</sup> Century:** Boiler explosions were part of everyday life with one occurring every four days. The first engineering insurance company, The Steam Boiler Assurance Co., was founded in 1858.

**Today:** Boilers and pressure vessels have a broad range of applications. Frequency of failures are much lower.



The terrible scene of destruction at Rothwell & Kitts Newtown Mill following the explosion of a Waggon-type steam boiler.

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# As we move into Industry 4.0 and digital transformation, new technologies are creating new opportunities in engineering insurance.

## NEW METHODS

Metal foundry



3D Metal Printers



## BETTER LOSS PREVENTION

Generic and manual checklists



IoT – real time tracking and individualized cycles



## UNDERWRITING SOPHISTICATION

Individual experience and expertise



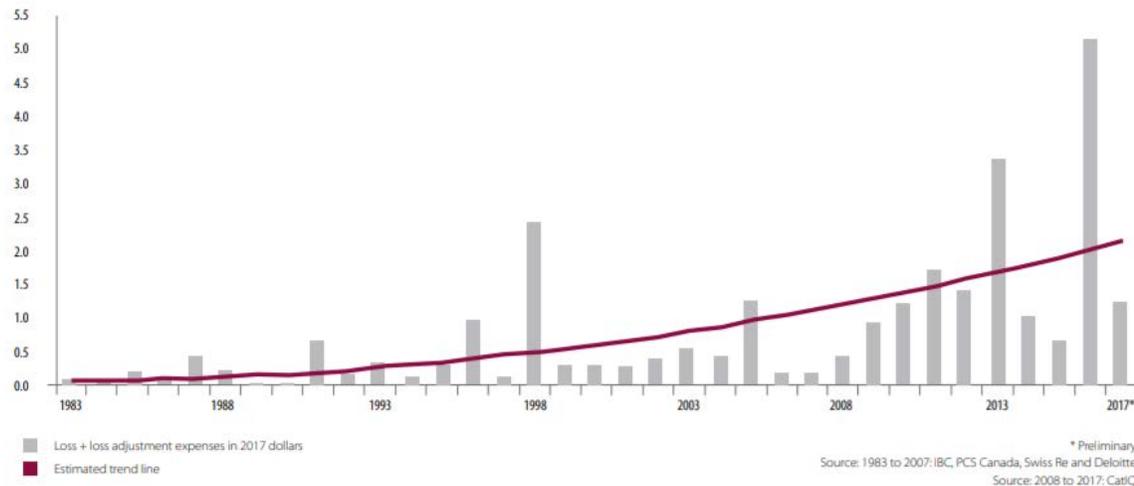
Experience and expertise supported by data modeling and AI



# As engineering insurance adapts to new technologies and novel designs, it can help advance more environmentally responsible options.

## Extreme weather and natural catastrophe events are increasing

CATASTROPHIC LOSSES IN CANADA IN \$000,000,000, 1983 TO 2017 AND TREND



Oil-fired and coal power plants



Natural gas



Solar



Hydro



Wind

# Engineering insurance can be a strong partner in facilitating investment in a more resilient and low carbon economy.

## Building a modern and resilient infrastructure

The Investing in Canada plan is committing more than

**\$180 billion**

over 12 years in infrastructure projects



## Developing smart cities and using technology for more sustainable communities.

Smart city technology investments in Canada projected to grow to

**\$2.8 billion**

in 2022

(International Data Group)



## Advancing clean energy

**\$56.3 billion**

GDP contribution in 2017

(Navius Research)



## Carbon capture and storage to help address climate change.

The carbon capture investment in Canada could reach

**\$4.5 billion**

(Natural Resources Canada)



**Thank you.**