

# The Safe Journey of Dangerous Goods by Rail



# PURPOSE

- **To get a better understanding of:**
  - Transport Canada's regulatory regime:
    - Rail;
    - Transportation of Dangerous Goods;
  - What happens in an emergency situation involving a dangerous goods spill;
  - Rail safety within your communities.

# REGULATING RAIL SAFETY

- Canada has one of the largest railway networks in the world with over 41,000 kilometers of track.
- Under the *Railway Safety Act*, Transport Canada (TC) is responsible for developing, administering and overseeing regulatory requirements for the safety of the federal rail transportation system.
- TC monitors compliance through inspections and audits and takes necessary enforcement action as required.
- TC also regulates certain railway employees, road authorities, and adjacent land owners. TC can also direct private citizens to take a specific action if there are concerns about rail safety.



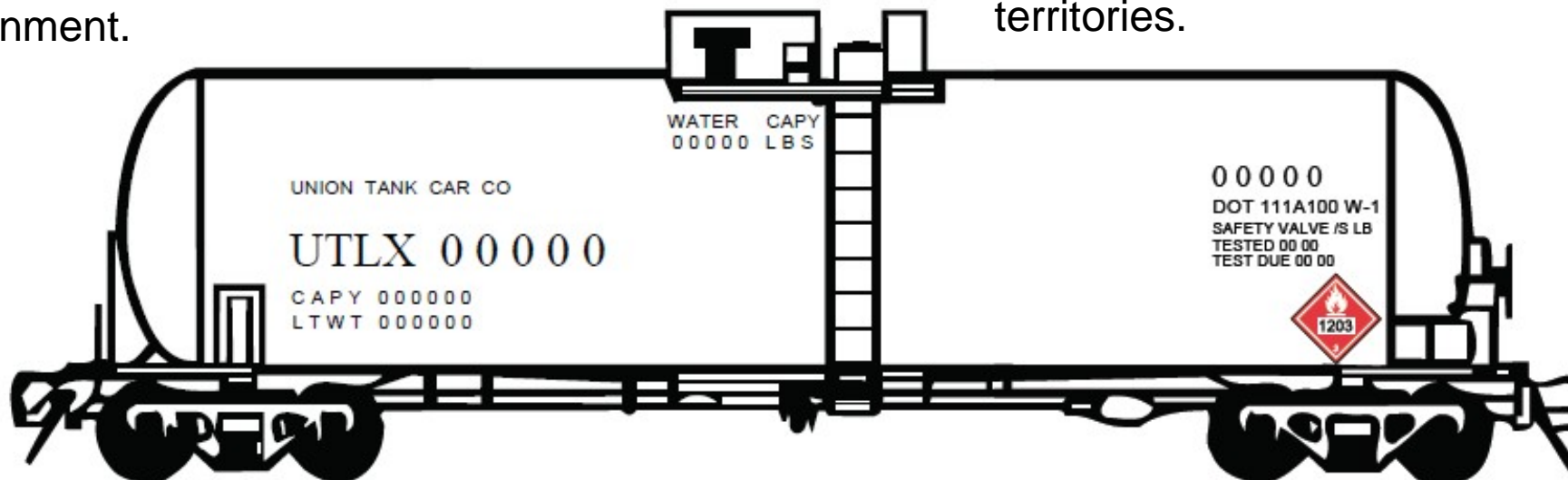


# REGULATING RAIL SAFETY CON'T

- The Rail Safety Program has 152 positions (as of May 2019) conducting inspections and monitoring the safety of rail operations across Canada.
- Approximately 33,000 inspections activities are conducted every year in the following main areas: track, equipment, signals, crossing, and operations.
- Inspections activities are planned annually, and adjusted as needed, based on risk and emerging issues/trends.
  - Risk indicators taken into account include: volumes of dangerous goods; accident rates; inspection results; analysis of industry data, etc.
- Transport Canada does not hesitate to take enforcement action should we find non-compliance to the *Railway Safety Act*.

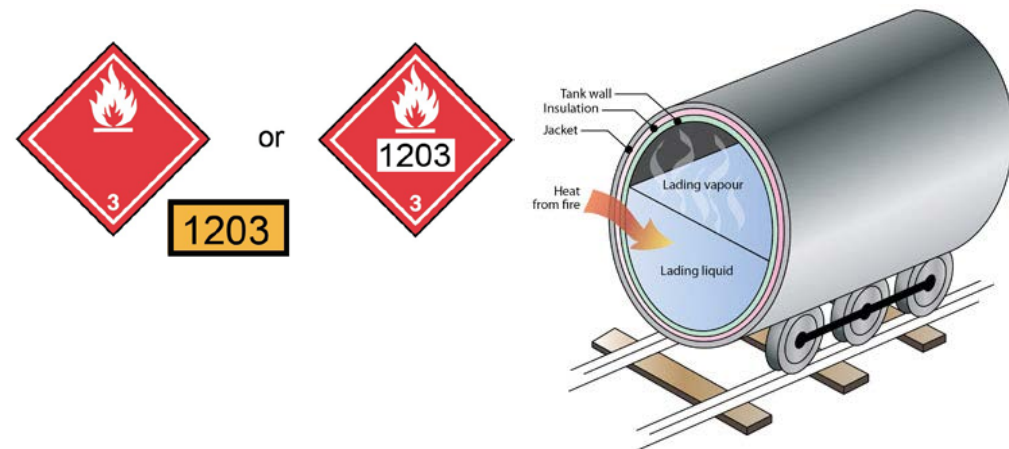
# TRANSPORTATION OF DANGEROUS GOODS PROGRAM

- *Transportation of Dangerous Goods Act, 1992* (TDG Act)
  - Promotes public safety during the transport of dangerous goods (DG) by rail, road, air and marine.
  - The act defines public safety as including protection for people, property, health and the environment.
- *Transportation of Dangerous Goods Regulations* (TDG Regulations)
  - The TDG Regulations establish the regulatory requirements for importing, handling, offering for transport and transporting DG by all transportation modes (excluding pipelines) within Canada. They are adopted by all provinces and territories.



# MANUFACTURER/LOADING LOCATION

- Before DGs on rail can be transported in Canada, the TDG Act and regulations require that:
  - DGs are properly classified and identified;
  - The DGs are kept in the correct “means of containment” built to the required standard
  - Proper safety marks or placards;
  - An emergency response assistance plan (ERAP) is in place if an incident happens (not required for all dangerous goods, but is required for transporting by rail flammable liquids such as crude oil, gasoline, aviation fuel, diesel and ethanol);
  - Proper shipping documents accompany the DG during transport; and;
  - Anyone who handles, offers for transport, imports or transports the dangerous goods is properly trained.



# MEANS OF DANGEROUS GOODS CONTAINMENT

- Containers for dangerous goods transport must be in compliance with a safety standard prescribed in the *TDG Regulations*
  - Under the Regulations, such containers are called “Standardized Means of Containment”.
- The consignor of each dangerous goods shipment must determine which containers are acceptable to use for the particular dangerous goods by consulting the TDG Regulations.



Flammable liquid tank car: DOT117J



Propane tank car: DOT112J





# BC RAILWAYS THROUGH MY COMMUNITY



Color	Company Name
Green	BCR BC Rail Ltd.
Green	BNSF Burlington Northern and Santa Fe Railway Co.
Blue	CN
Red	Canadian Pacific Railway
Orange	E & N Railway (1998) Ltd.
Purple	International Rail Road Systems Inc.
Brown	Kelowna Pacific Railway Ltd.
Yellow	Okanagan Valley Railway Company
Grey	Seaspan Coastal Intermodal Company
Pink	Southern Railway of British Columbia Ltd.
Light Blue	West Coast Express Ltd.
Dark Blue	White Pass & Yukon Route





# WHAT IS GOING THROUGH MY COMMUNITY BY RAIL



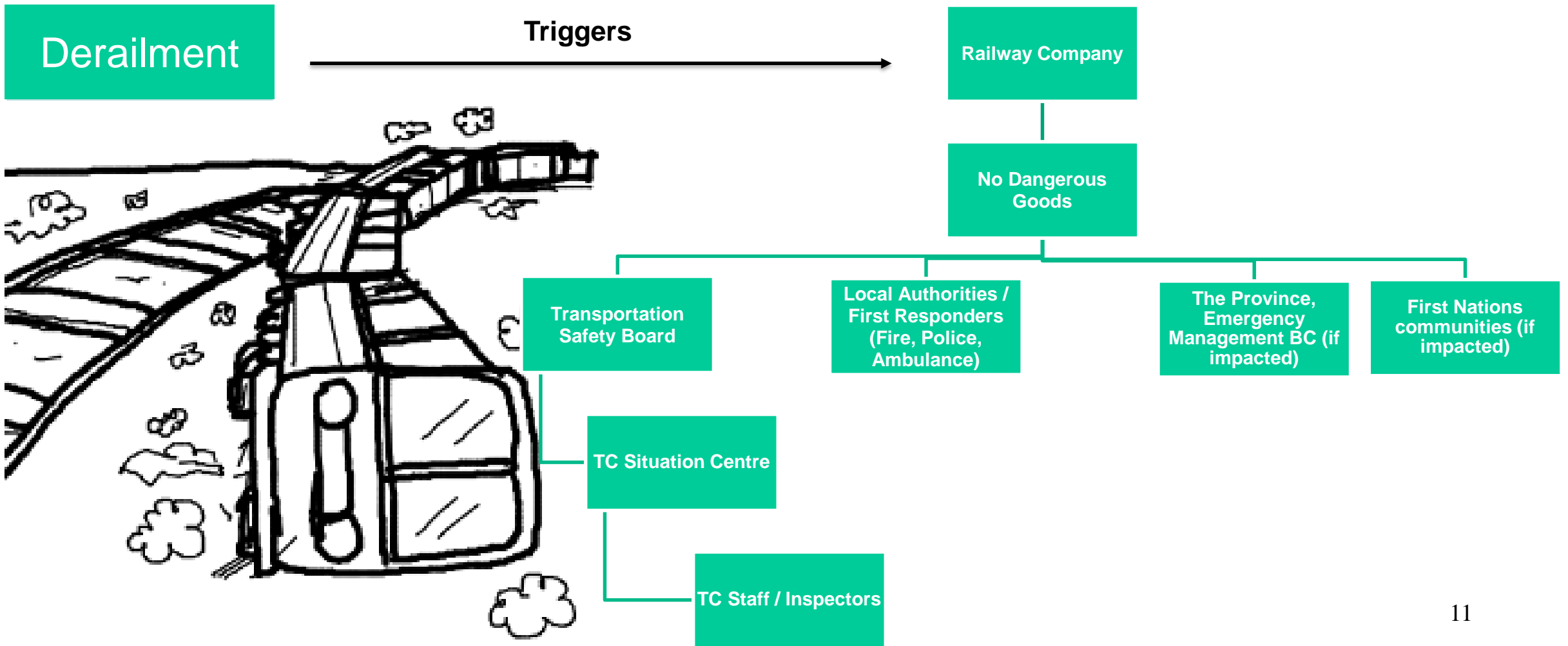
- In April 2016, the Minister of Transport issued Protective Direction 36 which provides registered communities access to comprehensive DG information provided by railway companies, including the volume and nature of DGs being transported by rail.
- Communities with a railway operating through them can use this information to assess risks, plan for emergencies and guide first responder training.
- The information enables communities to conduct proper risk assessments, emergency planning activities and help guide training needs of first responders.

# YOU ARE NOT ALONE!

- In the event of a dangerous goods incident:
  - Support begins immediately following a phone call to Transport Canada's 24 hours a day, 7 days a week emergency center called the Canadian Transport Emergency Centre (CANUTEC).
  - CANUTEC supports all communities before and during an incident involving DG. CANUTEC may be reached at:
    - **Telephone: 1-888-CANUTEC (226-8832) or 1-613-996-6666**
    - **On your mobile phone: \*666**
  - CANUTEC staff help emergency response personnel handle dangerous goods emergencies. They are experienced in interpreting technical information and providing advice to first responders.



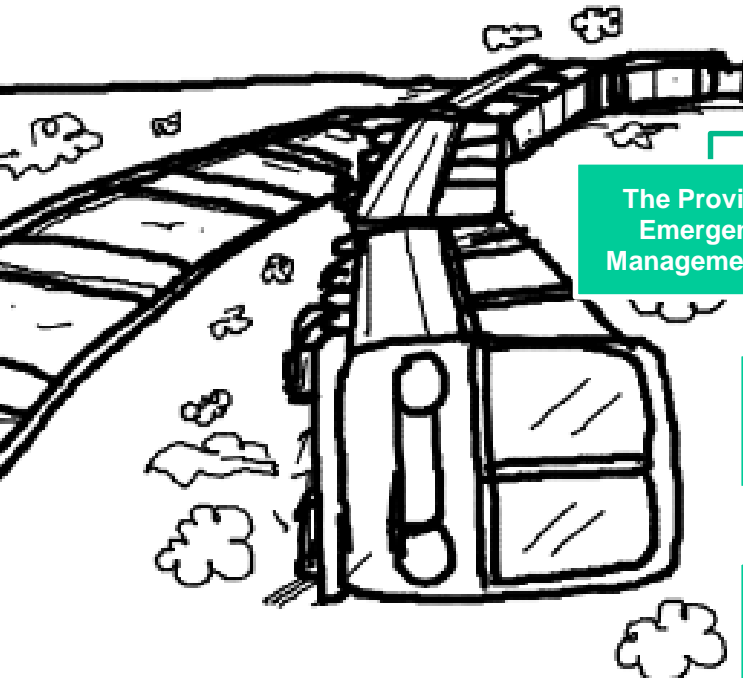
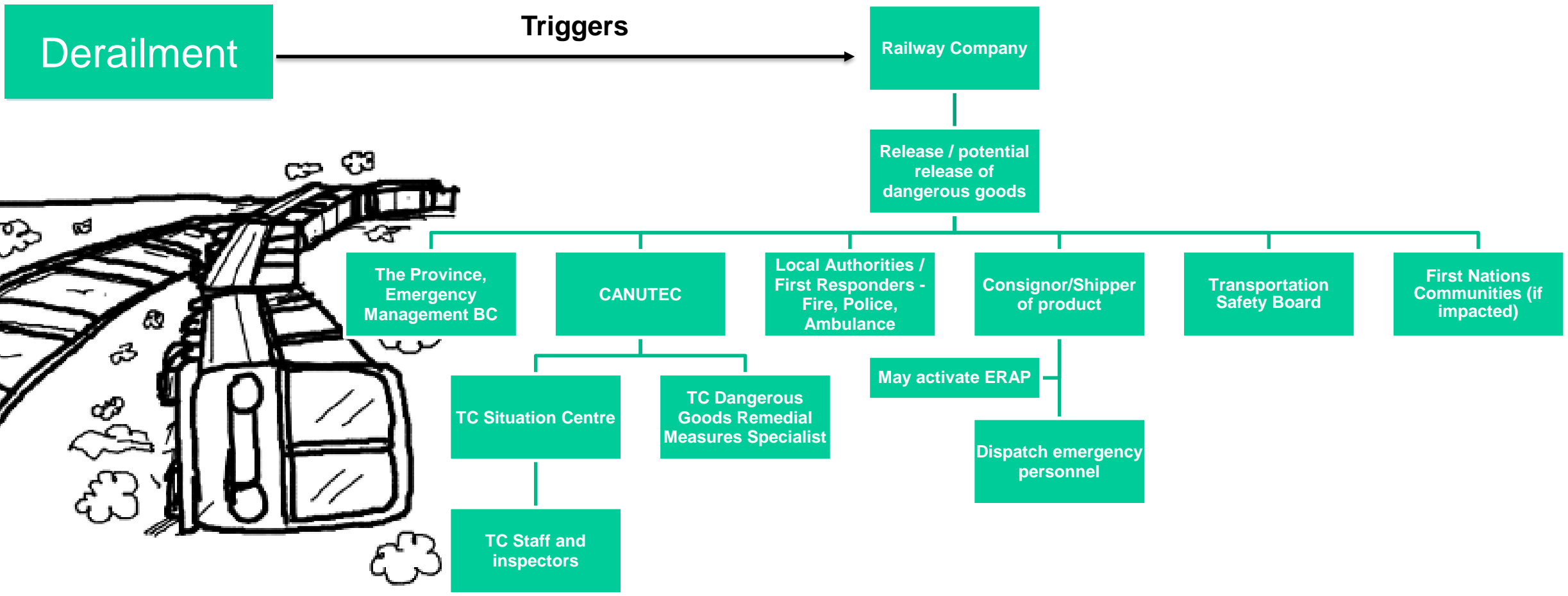
# ACCIDENTS NOT INVOLVING DANGEROUS GOODS







# ACCIDENTS INVOLVING DANGEROUS GOODS





# CANUTEC SERVICES

- The following services can be provided with one call to CANUTEC:
  - Emergency response advice;
  - DG hazards assessment;
  - Public safety advice and recommended evacuation distances;
  - First aid information;
  - Help in implementing an industry Emergency Response Assistance Plan (ERAP);
  - Access, following registration, to free comprehensive dangerous goods information (through Protective Direction 36);
  - Access to industry “real time” information from the “Ask Rail” application;
  - More services listed on the handout.



# RAIL AND TDG SAFETY ACTIONS TAKEN AFTER LAC-MÉGANTIC

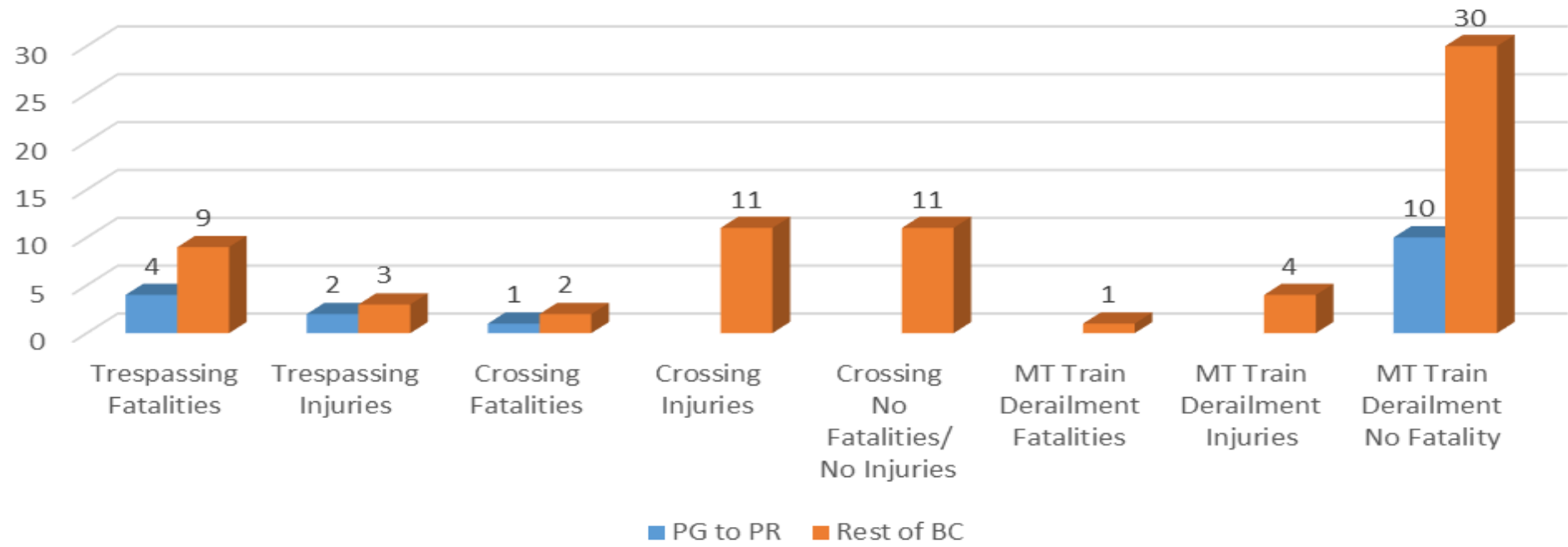
- Key Route/Key Train requirements established in 2016;
  - Speed restrictions for trains carrying dangerous goods
  - Requirement to include input from communities along Key Routes in Risk Assessments
- Strengthened requirements for securement of unattended trains;
- New authority to issue fines under the *Railway Safety Act*;
- Strengthened regulatory requirement for safety management;
- New liability and compensation requirements for railway operators;
- Improved tank car standard for flammable liquids;
- Information sharing requirements for railway operators with communities (PD 36); and
- More boots on the ground: more inspectors have been hired to monitor compliance and safety:
  - Tripled the number of inspectors conducting DG inspections, and
  - Tripled the number of DG inspections to 6000 per year.





# RAIL SAFETY IN THE NORTH: PG - PR

TSB Reportable Accidents/Incidents on Main Track (MT) Owned by CN - for 3-year total- 2016, 2017 & 2018

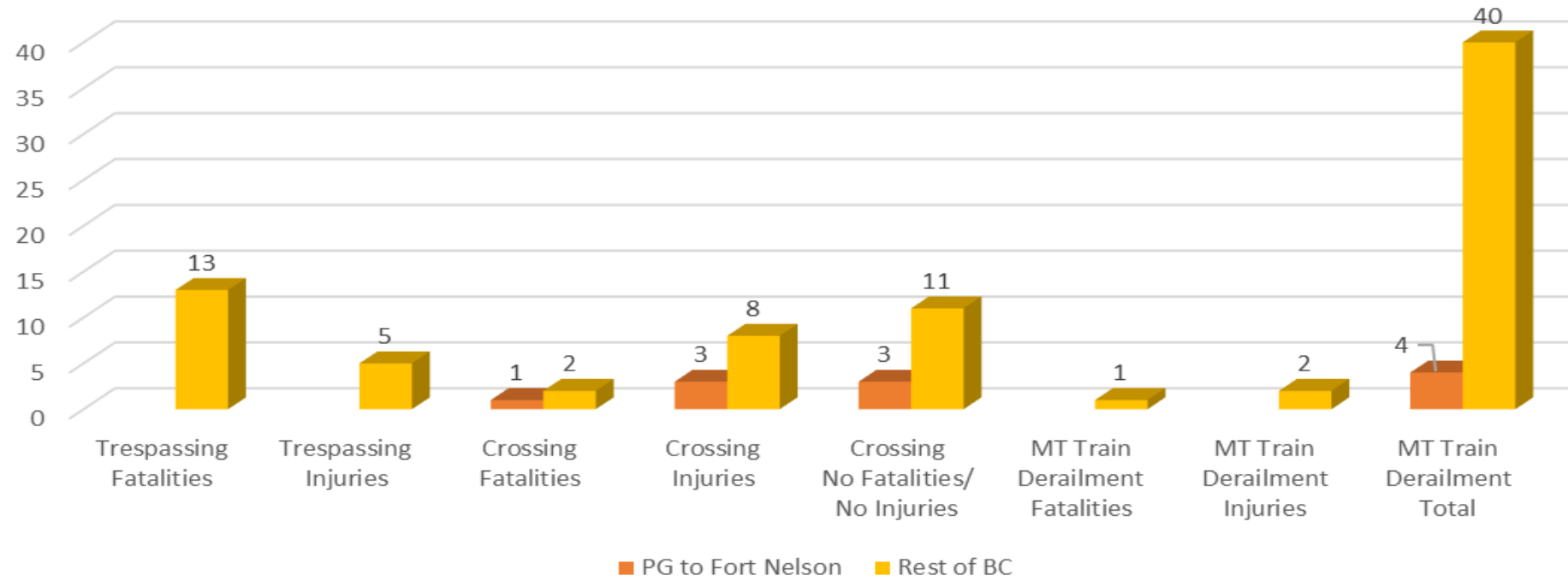


Territory	Trespassing Fatalities	Trespassing Injuries	Crossing Fatalities	Crossing Injuries	Crossing No Fatalities/No Injuries	MT Train Derailment Fatalities	MT Train Derailment Injuries	MT Train Derailment No Fatality	TOTAL	% DISTRIBUTION
PG to PR	4	2	1					10	17	19%
Rest of BC	9	3	2	11	11	1	4	30	71	81%
<b>GRAND TOTAL</b>									<b>88</b>	<b>100%</b>



# RAIL SAFETY IN THE NORTH: PG - FORT NELSON

TSB Reportable Accidents/Incidents on Main Track (MT) Owned by CN - for 3-year total- 2016, 2017 & 2018



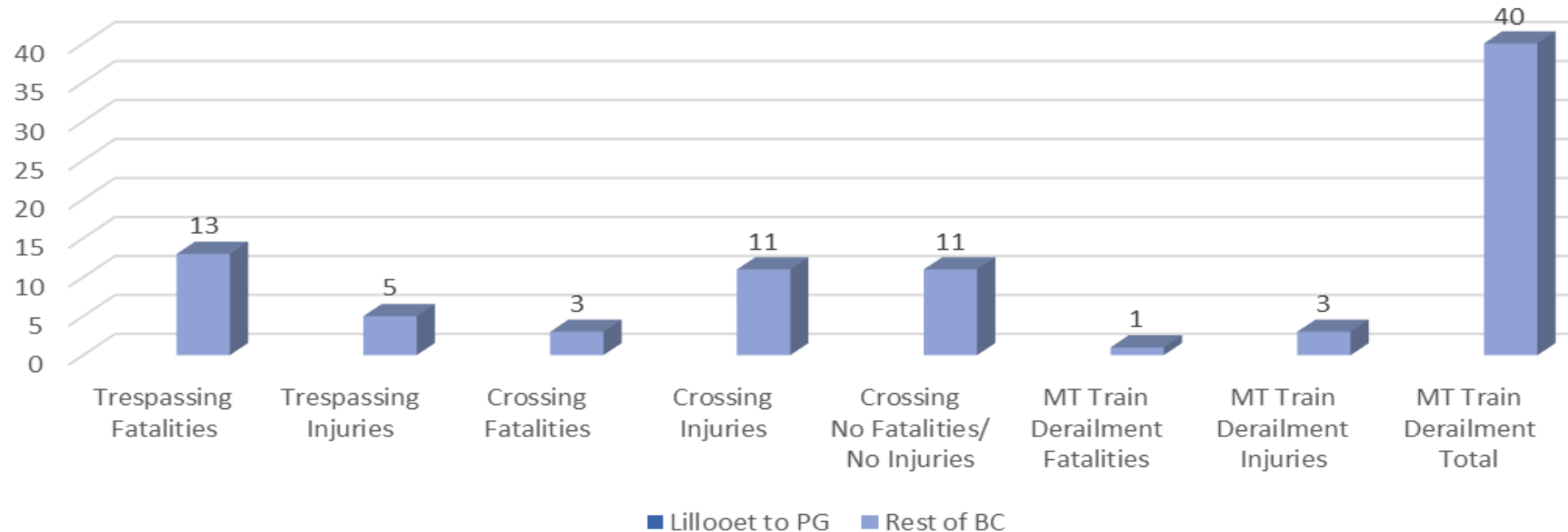
TSB Reportable Accidents/Incidents on Main Track Owned by CN for 2016, 2017 & 2018 Calendar Year as of April 23, 2019

Territory	Trespassing Fatalities	Trespassing Injuries	Crossing Fatalities	Crossing Injuries	Crossing No Fatalities/No Injuries	MT Train Derailment Fatalities	MT Train Derailment Injuries	MT Train Derailment Total	TOTAL REPORTED	% DISTRIBUTION
PG to Fort Nelson	0	0	1	3	3	0	0	4	8	9%
Rest of BC	13	5	2	8	11	1	2	40	79	91%
<b>GRAND TOTAL</b>									<b>87</b>	<b>100%</b>



# RAIL SAFETY IN THE NORTH: LILLOOET TO PG

TSB Reportable Accidents/Incidents on Main Track (MT) Owned by CN - for 3-year total- 2016, 2017 & 2018



TSB Reportable Accidents/Incidents on Main Track Owned by CN for 2016, 2017 & 2018 Calendar Years of April 23, 2019

Territory	Trespassing Fatalities	Trespassing Injuries	Crossing Fatalities	Crossing Injuries	Crossing No Fatalities/No Injuries	MT Train Derailment Fatalities	MT Train Derailment Injuries	MT Train Derailment Total	TOTAL REPORTED	% DISTRIBUTION
Lillooet to PG	0	0	0	0	0	0	0	0	0	0%
Rest of BC	13	5	3	11	11	1	3	40	87	100%
<b>GRAND TOTAL</b>									<b>87</b>	<b>100%</b>



# CROSSINGS IN MY COMMUNITY

- Improved safety standards to reduce crossing accidents
  - Under the new *Grade Crossing Regulations*, railway companies, road authorities (province, municipality, band council) and private owners of crossings – shared responsibility for safety at grade crossings.
- Rail Safety Improvement Program (RSIP)
  - Funding to improve rail safety in communities
- Operation Lifesaver
  - Raises awareness of hazards associated with rail traffic by educating the public





# THANK YOU!

Transport Canada – Surface – Pacific Region

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