

WELCOME TO CANADA

BIENVENUE AU CANADA



Serge Desgagnés



Agenda



Canadian market

Criteria



Population



GDP



**Trade
balance**



**Natural
resources**



Currency



Population



Population of 36 million (38th in the world)



0.48% of the World



Last 10 years + 10.6% vs
World + 25.15%



3.4 People/ km² vs
World 49 People/Km²

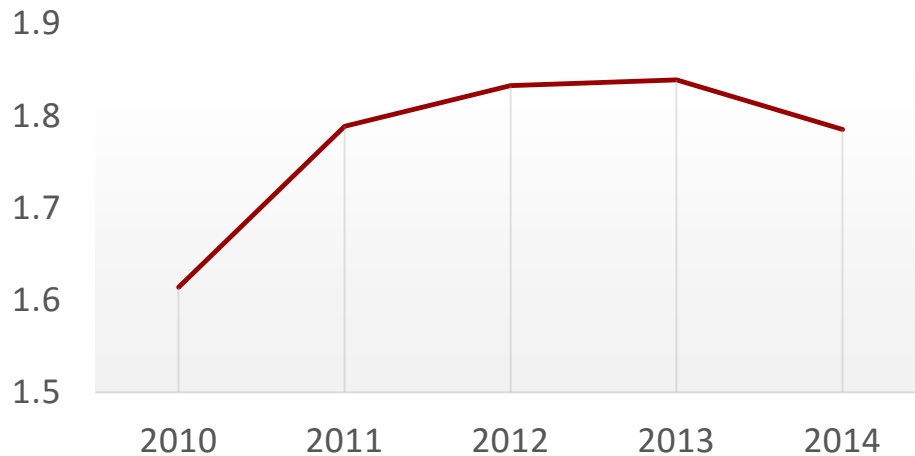


2.29 % of the World GDP

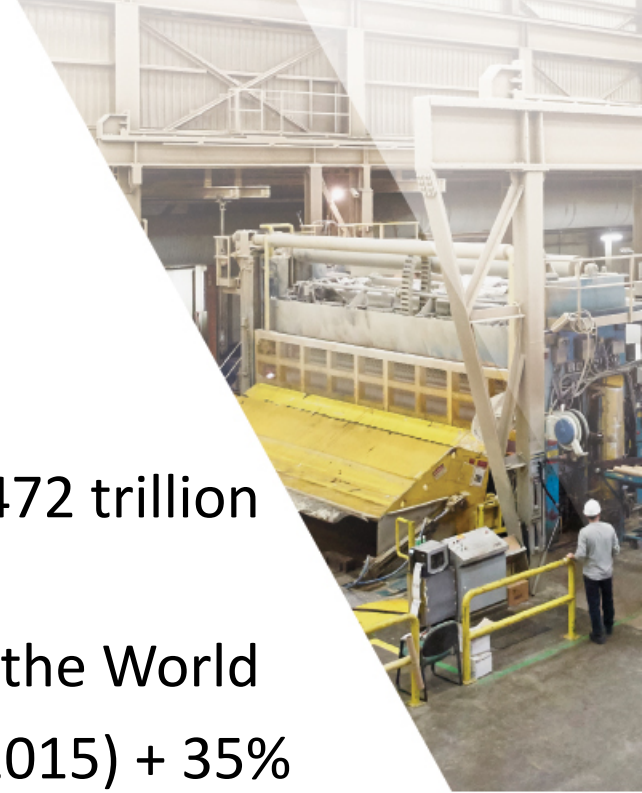


Canadian GDP

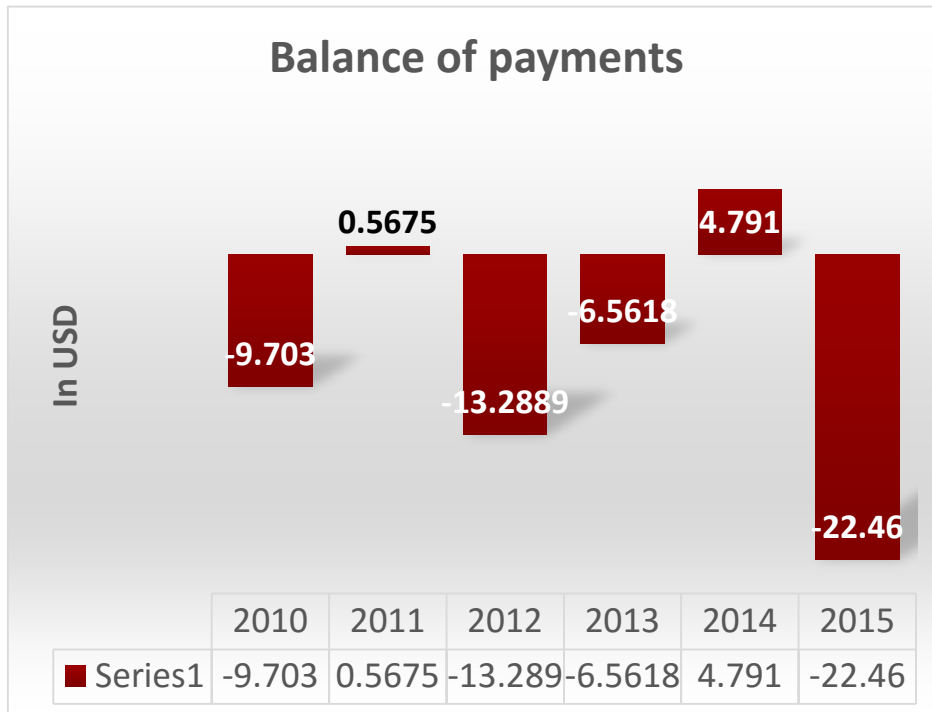
GDP evolution



- GDP 1.472 trillion USD
- 10th in the World
- (2005-2015) + 35% vs World at + 45%
- 20th for GDP per capita



Trade Balance



- Negative trade balance of \$22 billion in 2015
- Positive trade balance of \$62 billion in 2005
- Still positive with USA at \$34 billion in 2015

Forest industry in Canada



In 2013 Canadian forest is
1.25% of GDP



Revenue of 19,8 billion CAD



Forests are 45% of
Canada's surface



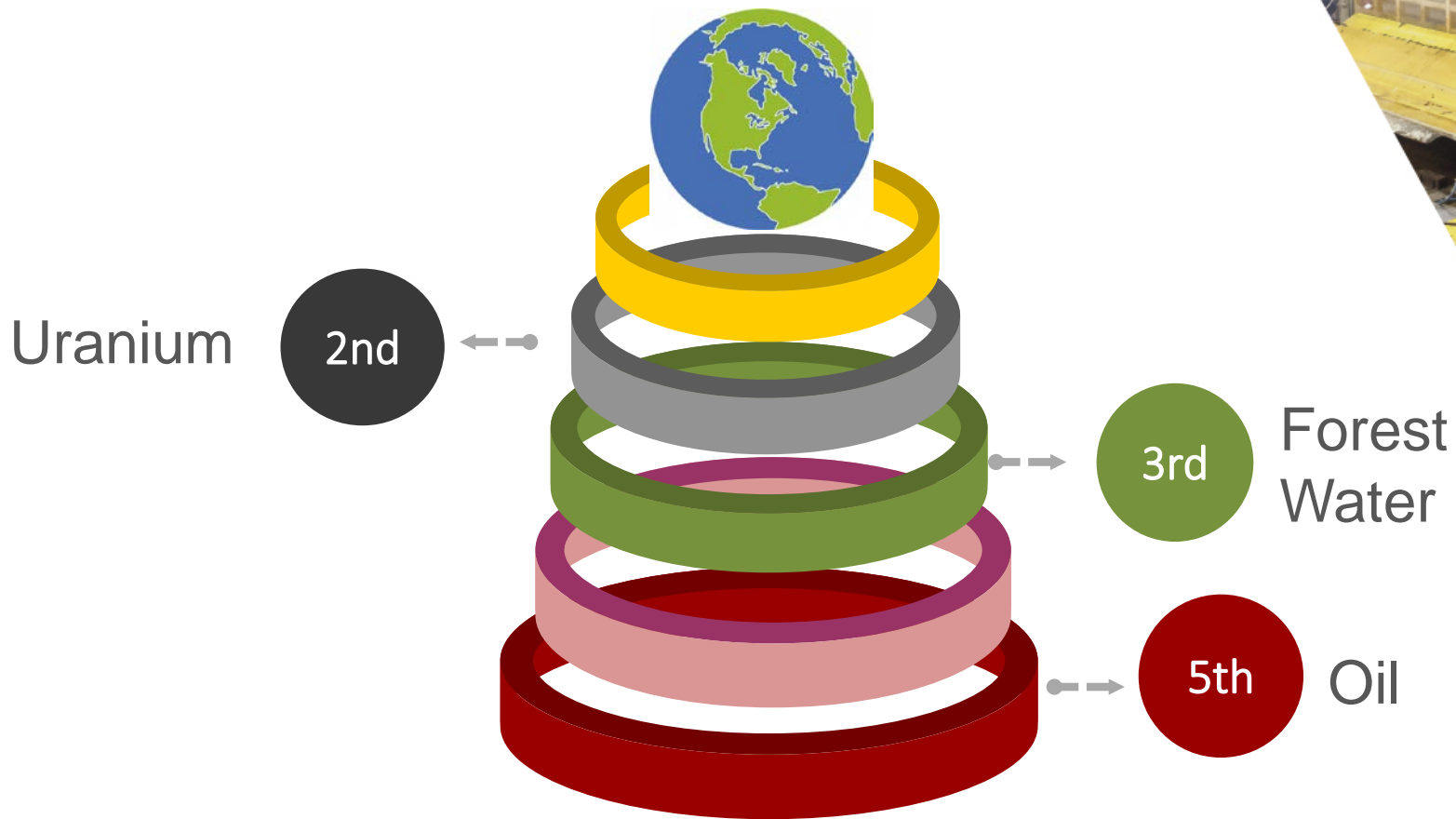
348 million hectares of forest



9% of world forest

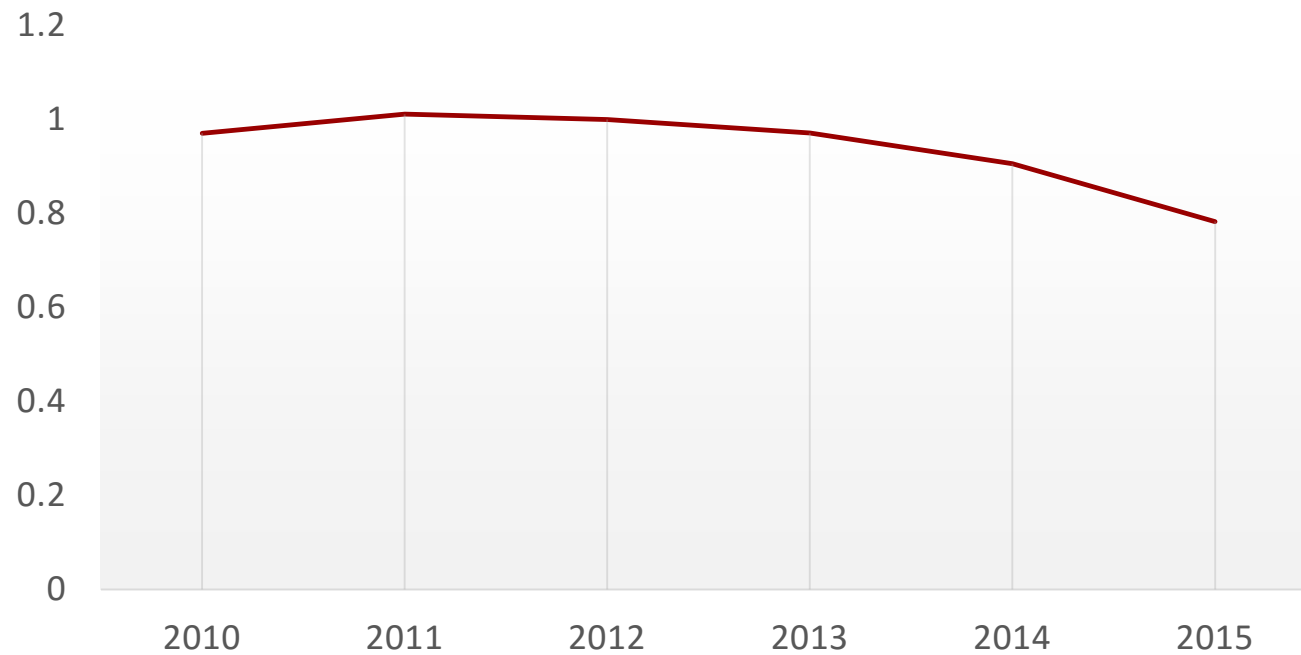


Natural resources production

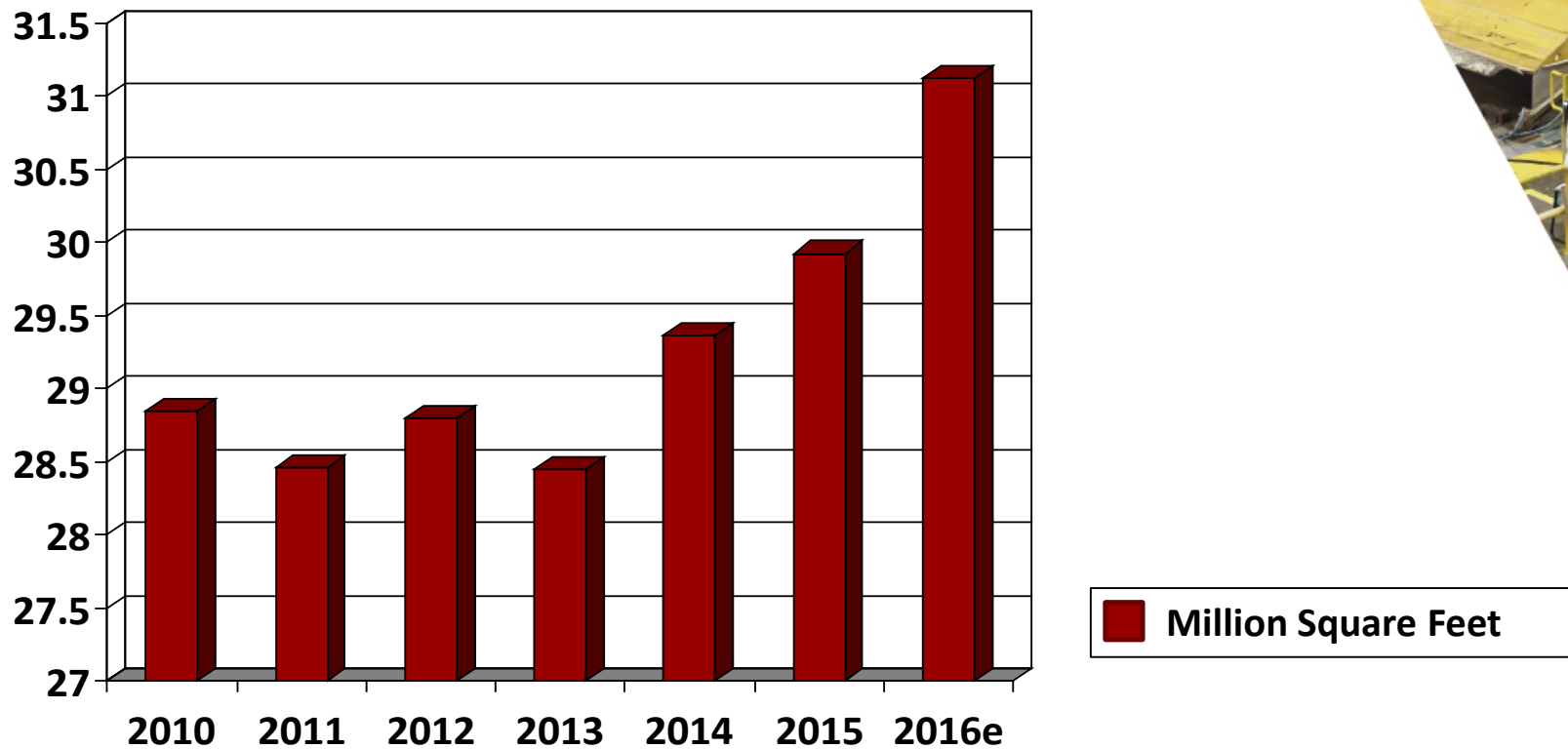


Currency history

CAD currency to USD



Canadian box shipments



Canadian box market

1. Canadian box shipments (2013-2015)
 - +5.2%
2. US box shipments (2013-2015)
 - + 2.4%
3. Increased box shipments to USA due to low Canadian dollar

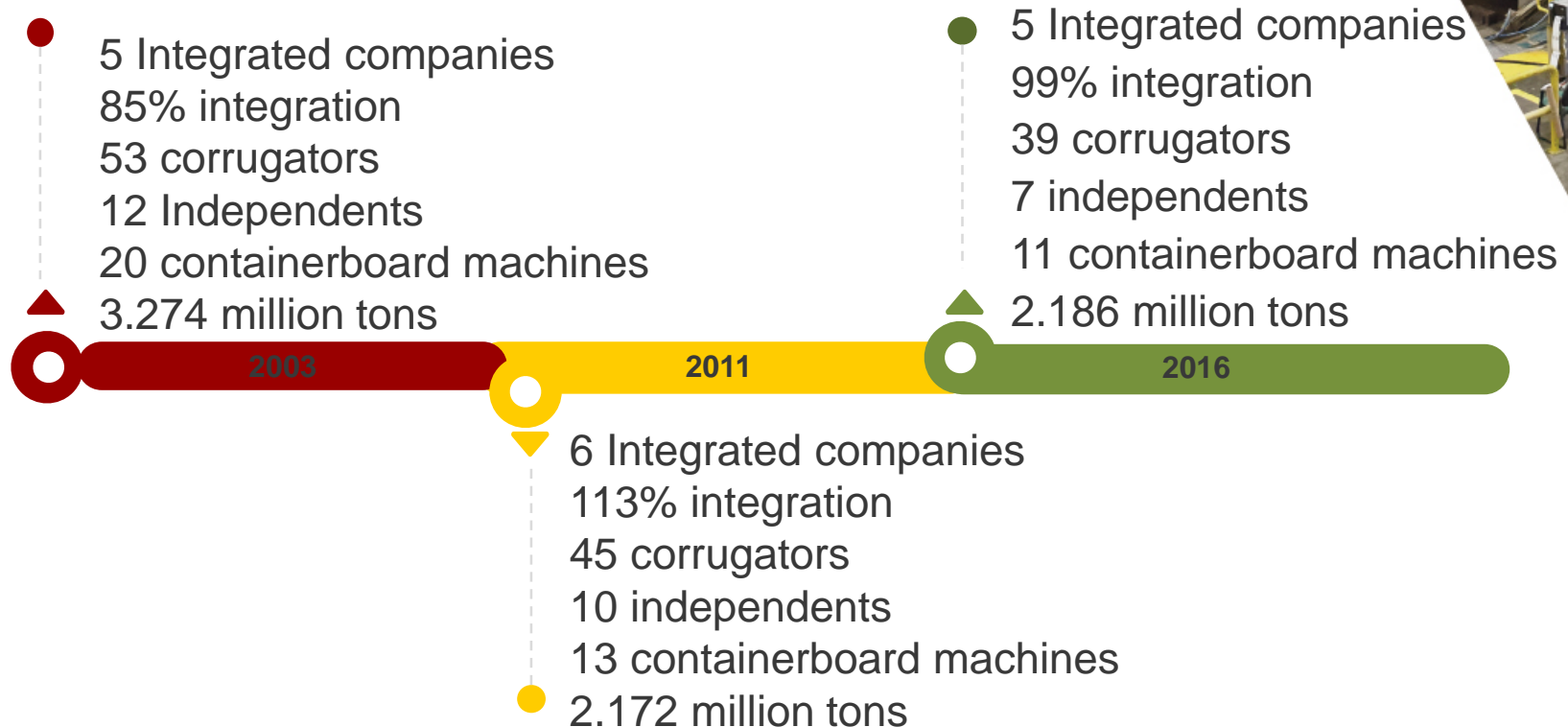


Containerboard Mills in Canada

1. 5 Companies
2. 11 mills with capacity of 2.186 million tons per year
3. 11 machines with average trim of 171 inches
4. 7 recycled machines
5. 3 semi-chem medium machines
6. 1 Virgin Kraft white top machine



Containerboard Market Evolution



Containerboard industry changes since 2011

2011	2012	2013
Cascades Containerboard shutdown Burnaby, BC	WestRock shutdown Matane , QC mill Minas Basin shutdown Hantsport, NS	Atlantic Packaging converted a recycled newsprint machine to containerboard in Whitby, ON



People

ENTREPRENEURSHIP

Is the greatest characteristic of the leaders of the Canadian containerboard industry



The next generation of recycled linerboard

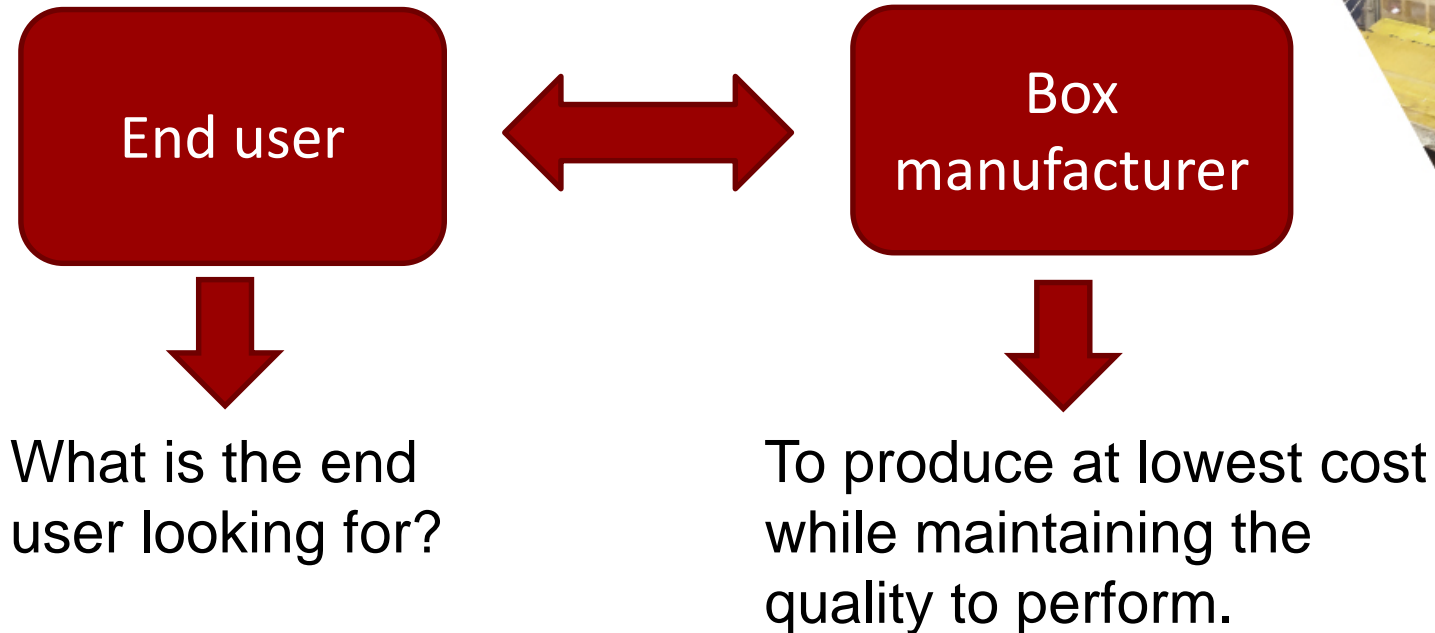
Change of
mentality

Access to
new
technology

Sustainability



What is needed to achieve the goal ?



To find a substrate which can optimize the performance of the box through a new concept called **Rightweighting**.

What is Rightweighting ?



It's about continued Fiber reduction not less strength.

Takes new technology to deliver improved production options.

It's about forward thinking to create new linerboard grades for a proliferation of newer flute types

What is Rightweighting ?



It's about meeting the need for smart alternatives for developing packaging for e-commerce, retail and shelf ready packaging and for design cartons.

It's about monitoring additional physical properties of linerboard.

Corrugated technology, zero crush converting and digital imaging have been waiting for advanced containerboard products to fill the need for right weight packaging.

Rightweighting, its origin

1. Started in 2000's, European containerboard producers decided to invest in new technology to produce lightweight linerboard. Over 30 new machines were built in Europe since.
2. Unfortunately the North America containerboard industry did not follow the trend and very few investments were made to adapt paper machines to offer lightweight containerboard grades.



Easy to understand

1. North America has 143 containerboard machines.
2. Median age 41 year old.
3. Median technology age 19 year old.

Why would they push
for lightweight ?



You Snooze, You Lose

1. Cars (Performance)
2. Web shopping (time saver)
3. Newspapers (Video and direct access)
4. Depot stores (Lower prices)
5. Lightweighting (Packaging optimization)



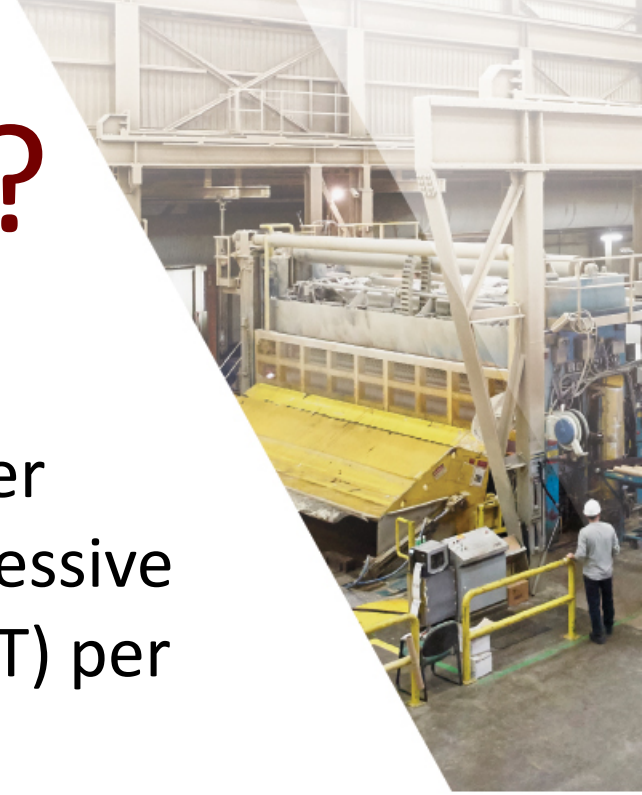
Canadian producers take the lead

3 of the last 5 containerboard projects were from Canadian producers.



What is that new technology?

The new generation of linerboard paper machines are designed to build compressive strength to obtain the highest STFI (SCT) per basis weight.



Building compressive strength

Furnish

Former

Pressing

Starch

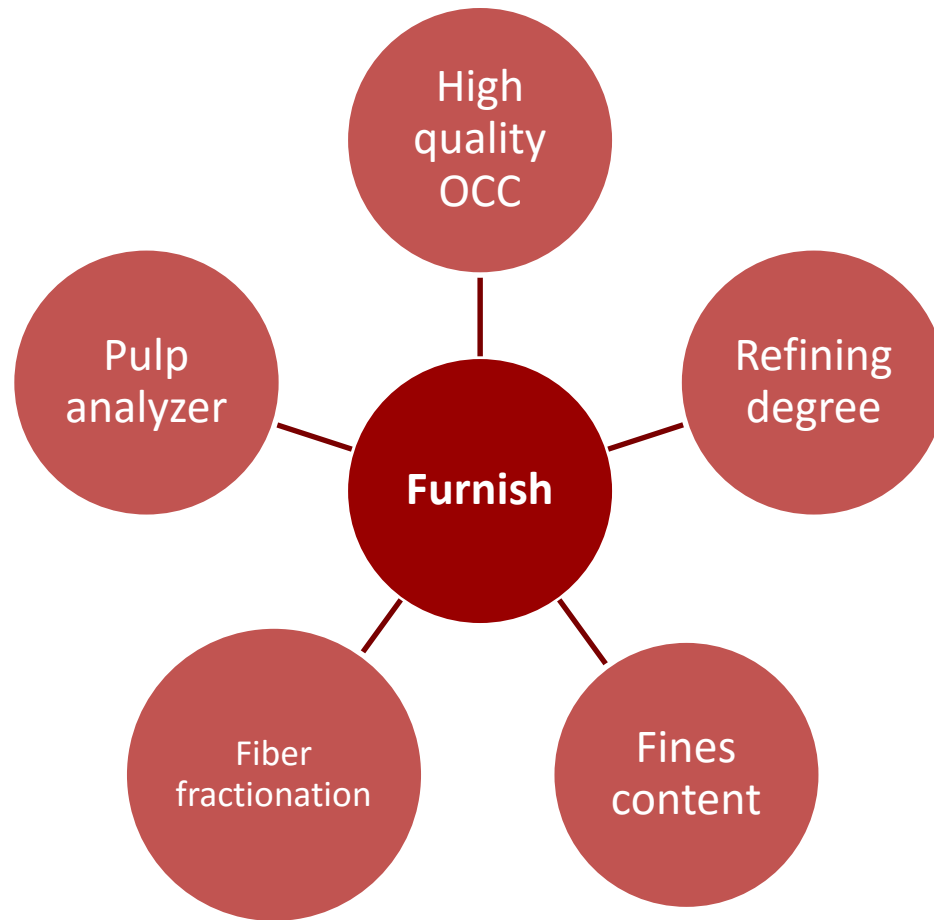
Drying

Calendar

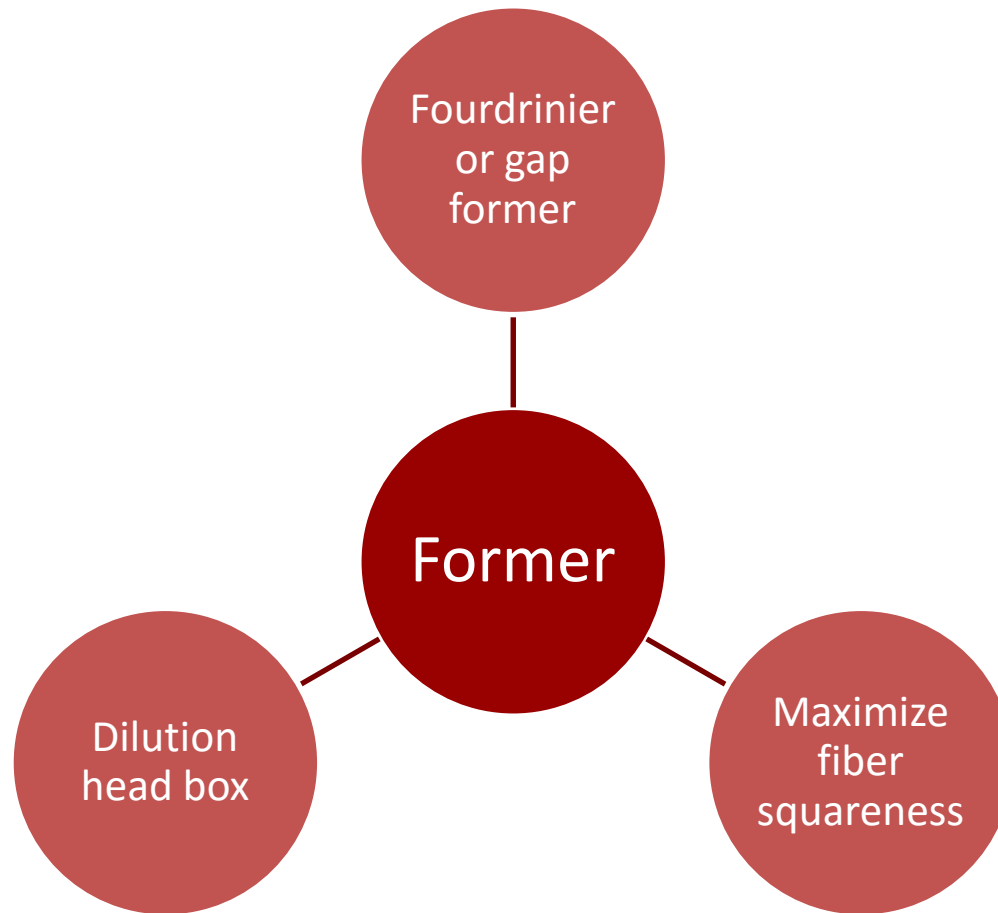
Scanning



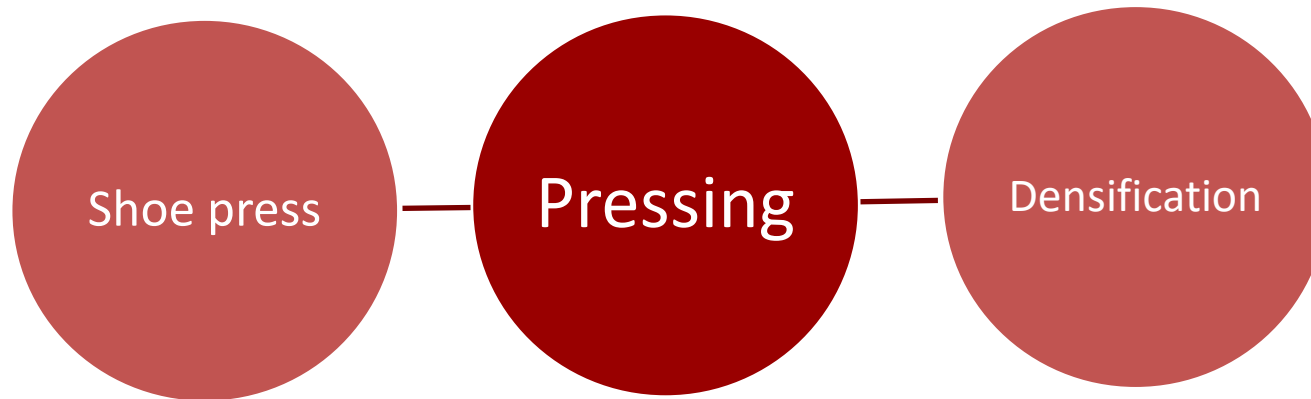
Building compressive strength



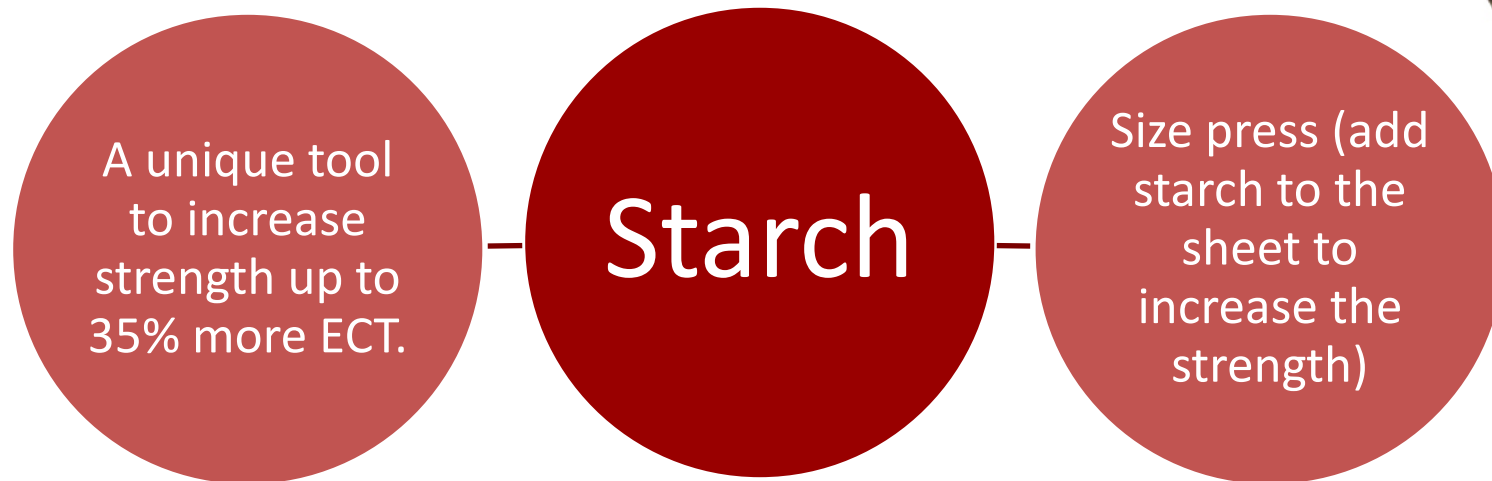
Building compressive strength



Building compressive strength



Building compressive strength



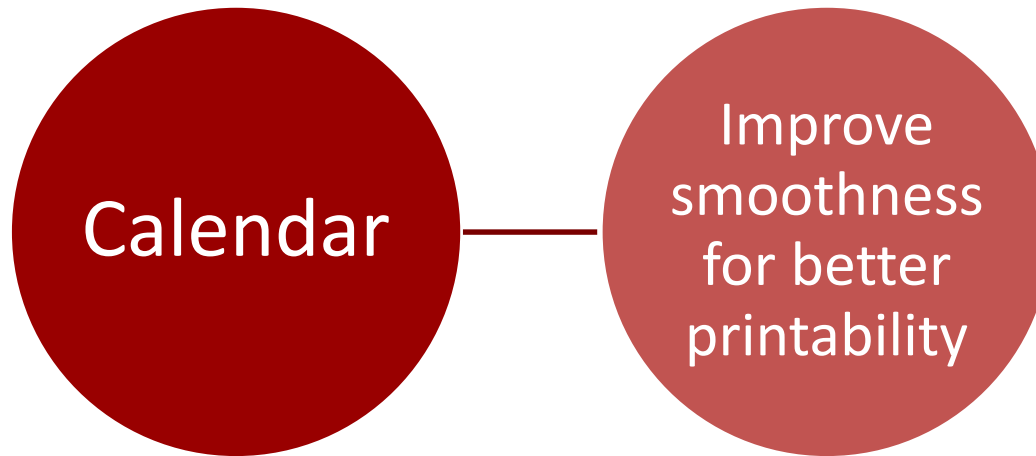
Building compressive strength

Drying

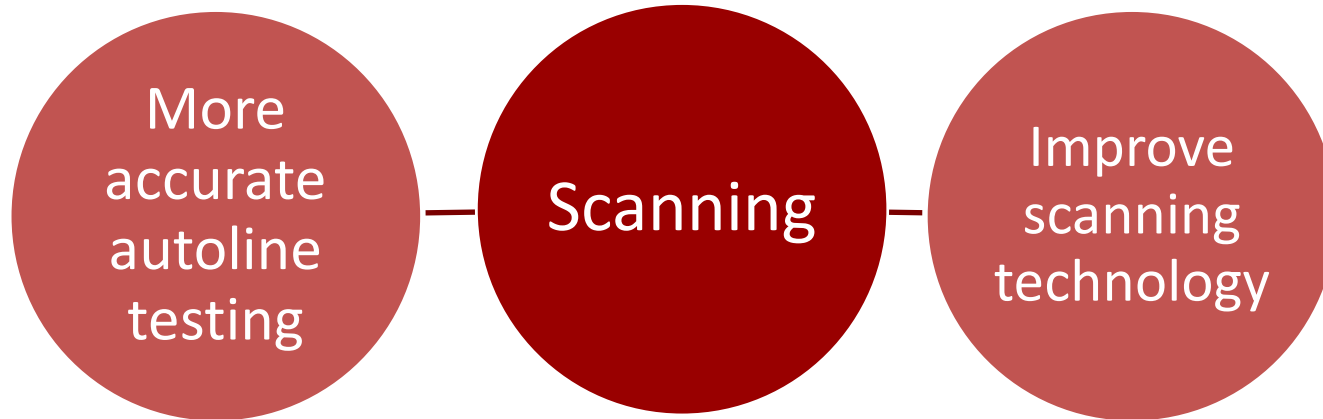
New
technology
assures low
shrinkage,
(dimensional
stability)



Building compressive strength

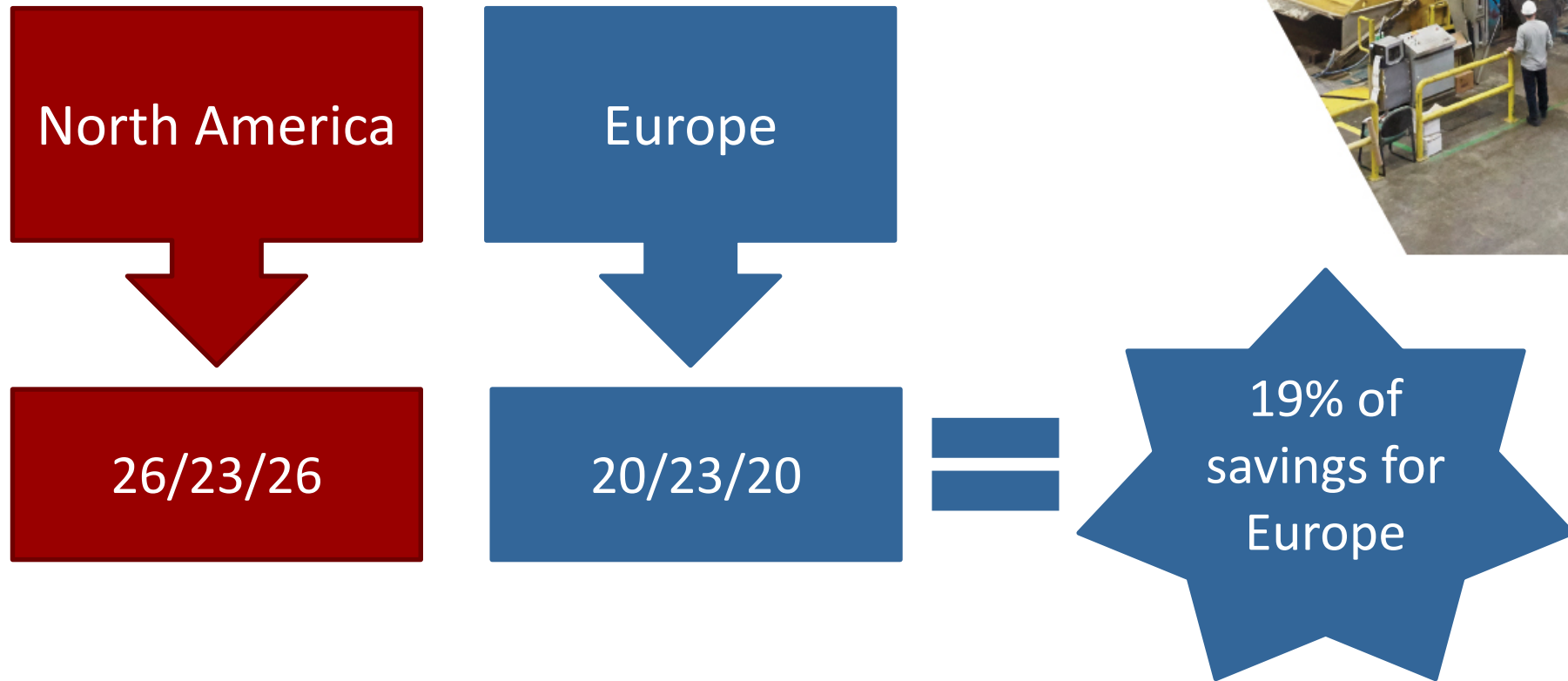


Building compressive strength



Box producer benefits

Board combination today for 25 ECT:



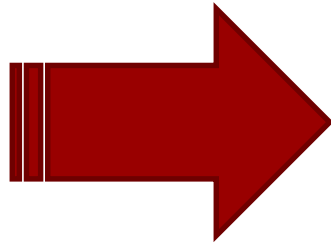
Fiber reduction

	Linerboard	Medium
North America	31/35 lbs	33 lbs
Europe	20.5 lbs	18 lbs



New market opportunities

New market



Folding boxboard
(micro flutes)

Retail ready
packaging
(forecasted increase
5.2% annually)



Key takeaways

1. New capacity and technology towards lightweight
2. Rightweighting is here
3. Basis weight is no longer an indicator of strength
4. Finally available in North America, driven by Canadian entrepreneurs.



THANK YOU!



References

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 - <http://www.canadianforex.ca/forex-tools/historical-rate-tools/yearly-average-rates>
 - <https://www.nrcan.gc.ca/forests/report/area/17601>
 - <http://www.nrcan.gc.ca/publications/key-facts/16013>
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