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Moving Forward

CN 2019 INVESTOR FACT BOOK

MOVING FORWARD

Together into Our Next Century

2019 is a very special year for CN as we mark the 100th anniversary of our founding, when the Canadian federal government amalgamated several railways under the CN banner. Today, CN is widely recognized for our place as a backbone of the economy and transportation innovator. The only North American transcontinental railway, our nearly 20,000-mile network spans Canada and Mid-America, connecting three coasts.

2018 Highlights

TOTAL REVENUES

OPERATING RATIO

ADJUSTED ROIC¹

FREE CASH FLOW ¹⁾

DILUTED EARNINGS PER SHARE

\$587

ADJUSTED DILUTED EARNINGS PER SHARE¹

1) See section entitled Non-GAAP Measures for an explanation of these non-GAAP measures.

FORWARD-LOOKING STATEMENTS

As used herein, the terms "CN", the "Company", "we", "our", and "us" refer to Canadian National Railway Company, together with its wholly

Certain statements included in the CN 2019 Investor Fact Book constitute "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 and under Canadian securities laws. By their nature, forward-looking statements involve risks, uncertainties and assumptions. The Company cautions that its assumptions may not materialize and that current economic conditions render such assumptions, although reasonable at the time they were made, subject to greater uncertainty. Forward-looking statements may be identified by the use of terminology such as "believes", "expects", "anticipates", "assumes", "outlook", "plans", "targets", or other similar words.

Forward-looking statements are not guarantees of future performance and involve risks, uncertainties and other factors which may cause the actual results or performance of the Company to be materially different from the outlook or any future results or performance implied by such statements. Accordingly, readers are advised not to place undue reliance on forward-looking statements. Important risk factors that could affect the forward-looking statements include, but are not limited to, the effects of general economic and business conditions; industry competition; inflation, currency and interest rate fluctuations; changes in fuel prices; legislative and/or regulatory developments; compliance with environmental laws and regulations; actions by regulators; increases in maintenance and operating costs; security threats; reliance on technology and related cybersecurity risk; trade restrictions or other changes to international trade arrangements; transportation of hazardous materials; various events which could disrupt operations, including natural events such as severe weather, droughts, fires, floods and earthquakes; climate change; labor negotiations and disruptions; environmental claims; uncertainties of investigations, proceedings or other types of claims and litigation; risks and liabilities arising from derailments; timing and completion of capital programs; and other risks detailed from time to time in reports filed by CN with securities regulators in Canada and the United States. Reference should be made to Management's Discussion and Analysis in CN's annual and interim reports, Annual Information Form and Form 40-F, filed with Canadian and U.S. securities regulators on SEDAR (www.sedar.com) as well as on the U.S. Securities and Exchange Commission's website (www.sec.gov) through EDGAR and available on CN's website (www.cn.ca/investors), for a description of major risk factors.

Forward-looking statements reflect information as of the date on which they are made. CN assumes no obligation to update or revise forward-looking statements to reflect future events, changes in circumstances, or changes in beliefs, unless required by applicable securities laws. In the event CN does update any forward-looking statement, no inference should be made that CN will make additional updates with respect to that statement, related matters, or any other forward-looking statement.

PICTURED ABOVE: One of CN's newest high-efficiency locomotives, Jasper, AB COVER: Intermodal train, Brule, AB

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Photos by CN employee Tim Stevens



Contents

1/ Overview

- 02 Our Strengths and Competitive Advantages
- **04** Milestones in CN's History
- 06 Our Strategic Game Plan
- **08** Message from the President and CEO
- **10** Investing for Growth
- **12** Deploying Advanced Technology
- **14** Delivering Responsibly
- **20** Financial and Operating Measures

2/ Markets

- 22 Market Overview
- **28** Petroleum and Chemicals
- 36 Metals and Minerals
- 44 Forest Products
- 52 Coal
- **58** Grain and Fertilizers
- 66 Intermodal
- 74 Automotive

3/ Operations

- 80 Operational Overview
- 82 Western Region
- 84 Eastern Region
- 86 Southern Region

4/ Financials

- **88** Financial Overview
- **89** Quarterly Consolidated Statements of Income
- 90 Quarterly Consolidated Balance Sheets
- **91** Quarterly Consolidated Statements of Cash Flows
- **93** Quarterly Financial and Statistical Data
- **94** Non-GAAP Measures
- 99 Labour Relations Data Table
- 100 Shareholder and Investor Information

Except where otherwise indicated, all financial information reflected in this document is expressed in Canadian dollars and determined on the basis of United States generally accepted accounting principles (GAAP).

TICKER SYMBOLS:

CNR Toronto Stock Exchange CNI New York Stock Exchange

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For the most up-to-date information, including financial results, regulatory filings, annual reports, company presentations, weekly performance metrics and webcasts and events, please visit: <u>www.cn.ca/investors</u>

Overview Markets **Operations**

Our Strengths and Competitive Advantages

A GREAT AND DIVERSIFIED FRANCHISE

CN is a leading North American transportation and logistics company, and our approximately 20,000-mile network spans Canada and Mid-America, connecting ports on three coasts.

What sets CN apart

Expansive North American network with unmatched reach

CN's network was not built overnight. Our solid franchise is the result of strategic capital spending to strengthen and evolve the network and our key acquisitions across Canada and in the U.S. to build our tracks and extend our geography, which includes CN's fluidity advantage in Chicago.

Pioneers of Scheduled Railroading with a supply chain focus

For the past 15 years, Scheduled Railroading has been the foundation of how CN operates, from our day-to-day operations to our procurement practices. With Scheduled Railroading as our base, we are looking at innovative ways to transform our whole business, from engineering to sales and marketing, to be a best-in-class supply chain enabler.

Proven track record of growth and financial stability

CN is committed to long-term value financial performance and a best-in-class balance sheet. Our first use of cash is investing in the business to accommodate expected growth, including our

Experienced and diverse talent

CN is proud to have a pool of talent that pulls experience and knowledge not only from the rail industry, but also from other industries to build a more well-rounded management team. Our management team is composed of innovative, transformative and accountable leaders who are willing to take risks and build

(% of freight revenues)



Balanced and diverse portfolio

2018 REVENUES BY COMMODITY GROUP (% of total revenues)



Financials

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Milestones in CN's History

1919 – 2019: A CENTURY OF PROGRESS

CN has a long and storied history, and we are proud of the milestones we achieved during our century of progress. CN has played a unique role in North America, connecting people and jobs to communities and markets. Over the past 100 years, CN has evolved from a collection of various railways into a major transportation and logistics company, with a network that reaches from the Pacific to the Atlantic to the Gulf of Mexico.

2019

JUNE 6TH: **CN CELEBRATES 100 YEARS OF PROGRESS.** INNOVATION AND OPERATIONAL EXCELLENCE

Today, CN is a company built on a proud history, backed by over 25,000 employees, a tri-coastal network of close to 20,000 route miles, handling over \$250 billion in goods annually and producing over \$14 billion in revenues in 2018.



1919

JUNE 6[™]: **CREATION OF CANADIAN** NATIONAL RAILWAYS

Parliament passed legislation to create **Canadian National** Railways, consolidating several railroads.

1923

CN COMPLETES TAKEOVER OF GRAND TRUNK RAILWAY

Completing the consolidation of CN's ancestor railroads into a coherent, coast-tocoast network.

1929

CN OPERATES FIRST MAINLINE DIESEL LOCOMOTIVE

Inaugurated during a passenger run from Montreal to Toronto, ushering in a new era of rail transportation.

1939-45 1960

CN PLAYS AN

IMPORTANT ROLE IN

THE WAR EFFORT

millions of tons of

during WWII.

CN locomotives haul

freight and hundreds

of thousands of troops

APRIL 25TH: **END OF THE ERA OF STEAM**

> Last scheduled CN steam locomotive arrives in Winnipeg, MB. CN also introduces its iconic logo.

1976

CN COMPLETES CONSTRUCTION OF CN TOWER

Built in Toronto, ON, at 1.815 feet, it was the world's tallest free-standing structure for 32 years.

1977-78

CN FOCUSES ON FREIGHT TRANSPORT

CN's airline and passenger rail divisions, Air Canada and VIA Rail, become separate Crown corporations.

1995

NOVEMBER 28[™]: PRIVATIZATION OF CN

One of the largest rail privatizations and most successful Initial Public Offerings in Canadian history, raising \$2.2 billion.

ABOVE: Photos courtesy of Canada Science and Technology Museum

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CN DEVELOPS TWO STATE-OF-THE-ART TRAINING FACILITIES

Delivering our enhanced railroader training program focused on instilling and reinforcing a strong safety culture.

2009 **CN ACOUIRES**

THE ELGIN, JOLIET & **EASTERN RAILWAY**

Creating a key advantage for CN with the fastest rail route around congested Chicago.

2007 CN PARTNERS WITH PORT OF PRINCE RUPERT

Exclusively served by CN and the closest port to Asia, offers the shortest transit times to major destinations.





2004 CN ACQUIRES GREAT LAKES TRANSPORTATION

In addition to three small railroads, CN acquired the ships of Great Lakes Fleet, becoming a major player in the U.S. steel supply chain.

JULY 15TH: CN ACQUIRES BC RAIL

Extending CN's reach into resource-rich **British Columbia** and strengthening our forest products business.

2001

OCTOBER 9TH: **CN ACOUIRES** WISCONSIN CENTRAL

Furthering CN's reach by adding an important corridor to connect Western Canada to the U.S.

1998

CN PIONEERS PRECISION SCHEDULED RAILROADING

Innovates a fixed 24/7 schedule for railcars. aiming to improve both profitability and customer service.

1999

JULY 1st: **CN TAKES CONTROL OF ILLINOIS CENTRAL**

Expanding the railroad network to link Canada to the Gulf of Mexico, from Chicago to New Orleans. \equiv >

Our Strategic

FIVE-POINT STRATEGY TO CREATE SHAREHOLDER VALUE

CN understands the importance of a clear strategy anchored on safety, sustainability, efficiency and innovation. We have put in place a business strategy that will improve our business model, complement growth and highlight value creation.

Leverage our Scheduled Railroading foundation



Over 15 years ago, CN pioneered Scheduled Railroading and we continue to build on this great foundation to drive safety, service and productivity. Today, as we envision the future of CN, we are evolving our foundation through the deployment of key technology projects focused on safety, efficiency and reliability as our next strategic driver of value. With asset utilization at the heart of Scheduled Railroading, CN continues to be nimble on resource allocation to have the capacity and right assets at all times.

Bring the right talent to win

We have seasoned Scheduled Railroaders, some of whom have been with CN even before the beginning of Scheduled Railroading, and have been part of our transformation. We have proven market makers who continuously look for ways to grow CN faster than the economy, be it organically or through strategic partnerships and acquisitions that complement and extend our reach. As we develop the CN of tomorrow, we are embracing external talent who bring in expertise from other industries, knowledge that we can leverage in the railroad.



OF MULTI-DIMENSIONAL SEASONED RAILROADERS AND EXTERNAL TALENT

Looking into our game plan, we are assessing key roles. CN's bench of talent consists of Precision Scheduled railroaders and experts from other industries.

Deliver industry-leading profitable growth

DRIVING ORGANIC GROWTH **OPPORTUNITIES**

- · Continuing to invest ahead of our customers' and partners' growth
- Leveraging best-in-class natural resources supply chains
- Taking advantage of the North American consumer economy freight growth
- Expanding service offering, including in temperature-controlled supply chains

- crew and carmen; and



STRATEGIC ACOUISITIONS AND PARTNERSHIPS

- Feeding more rail volumes onto our expansive three-coast network
- Extending our physical and commercial reach
- Increasing rail intermodal by converting over-the-road freight
- Developing Prince Rupert Port(s) of the East to leverage our
- underutilized Halifax-Chicago

corridor

LEVERAGING THE NETWORK **TO DRIVE GROWTH**

- Keeping investments ahead of business opportunities in high-density Western Region
- Driving growth opportunities to leverage underutilized network in Eastern and Southern Regions

Operations

Financials $\langle \equiv \rangle$

Message from the President and CEO

MOVING FORWARD – INTO OUR NEXT CENTURY OF OPPORTUNITY

This 2019 CN Investor Fact Book is an informative reference guide about CN's markets, operations and financials. The Fact Book goes far beyond statistics to provide an in-depth understanding of our strategic vision for driving long-term profitable growth.

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Still improving after 100 years

As we commemorate our 100th anniversary on June 6, 2019, we are proud of the unique role our company has played in North American nation-building, connecting people and markets.

We have evolved from a collection of disparate railways into a leading transportation and supply chain company. We have a strong track record of operational and service excellence, driven by innovative end-to-end supply chain solutions that drive growth for CN, for our valued customers, and for our supply chain partners. With our supply chain focus, we are now advancing our strategic agenda by leveraging our strong pool of talent, digitizing operations and expanding the rail business through organic and inorganic growth.

Building on our foundation

Scheduled Railroading was pioneered by CN more than 15 years ago and remains the foundation of our operating model to drive safety and service. With Scheduled Railroading, we emphasize the importance of productivity, asset utilization and cost control. We continue to focus our efforts to be nimble when it comes to resource allocation.

CN achieves a high-performance culture by setting clear goals, defining our employees' responsibilities, creating a trusting environment, and ensuring employees to put safety first. We are also hiring from other industries and working with supply chain experts from here and abroad to gain a diversity of perspectives and quickly redefine the "art of the possible" in the rail industry. Safety is a core value at CN, and we invest significantly in training, coaching and employee engagement initiatives to strengthen our safety culture. We are also leveraging recent advances in technology to achieve our goal of continuous improvement in our safety performance.

Ramping up network capacity

In 2018, we undertook the largest number of infrastructure projects in CN's history – including expanding yards, adding new sidings and doubling sections of track – to increase the fluidity of the network to handle growing traffic volumes.

We are setting another record in 2019 with a capital program of \$3.9 billion that is focused on adding network capacity to accommodate our pipeline of growth opportunities and deploying technology in our operations to drive down costs and improve productivity. CN aims to stay ahead of opportunities in our high-density Western Region and to leverage our underutilized network in the Eastern and Southern Regions.

Moving forward with technology

Technology has an important role to play in the rail industry's future, and CN wants to be a pioneer in modernizing rail mindset and processes.

CN is positioning advanced technologies as our next strategic driver of value. We are working as ONE TEAM to drive a business-led, technology-enabled mindset that considers all facets of our operations, from track inspection to capacity planning.

As the deployment of our key technology projects ramp up over the years, our new cutting-edge systems will improve inspection reliability, provide rich data analytics, generate predictive models and drive capacity and safety.

Raising our game

CN has invested \$8 billion since our ground-breaking acquisition of the Illinois Central in 1998. This tradition continues with our recent acquisition of The TransX Group of Companies (TransX), one of Canada's leading intermodal and logistics companies, which will allow us to expand our skills in temperature-controlled supply chains.

We continue to see solid potential for organic growth in key existing markets. In addition, we are keeping a close eye on acquisition opportunities with a strong focus on services that "feed the network"; that is, bring volumes to our core rail network, build logistics partnerships and extend our commercial reach.

Our team of talented and experienced railroaders is ready to meet the growing needs of the North American economy. We continue to raise our game to align with new market realities. Let's move forward – into our next century of opportunity.



JJ Ruest President and C

08 TOGETHER INTO OUR NEXT CENTURY

President and Chief Executive Officer

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Financials

Investing for Growth



ROB REILLY Executive Vice-President and Chief Operating Officer

\$3.9B

RECORD CAPITAL INVESTMENT PLAN FOR 2019

Focused on adding network capacity to accommodate growth, deploying technology to drive down costs and improve productivity, and renewing our locomotive fleet.

3,300

NEW RAILCARS

Acquired 1,300 lumber cars, 1,000 boxcars and 1,000 highcapacity hopper cars to replace aging equipment and meet the growing needs of our customers.



NEW CONDUCTORS

Hired and trained about 1.600 new conductors in 2018. with an additional 500 on track to be fully qualified in 2019.

BUILDING A SOLID FOUNDATION

In recent years, we increased our capital investments to record levels to ensure we have the infrastructure and equipment needed to improve the safety and resiliency of the network as well as accommodate our solid pipeline of opportunities in diverse markets.

We are expanding yards and sidings, and doubling sections of track, especially in our busy Edmonton/Winnipeg/Chicago corridor. We are also renewing our locomotive fleet, replacing aging railcars, and hiring and training new conductors to replace attrition and accommodate growth. CN aims to be a pioneer in the deployment of advanced technology to enhance safety, drive down costs

and improve productivity. We are developing smart network planning solutions and autonomous detection systems to digitize operations and drive efficiency and productivity.

Our investments are giving us the tools we need as we move into our next century.

7.4 miles of double track – Rivers Sub

Strategic capital investments



INFRASTRUCTURE

In 2018, we undertook 7 yard expansions, 11 siding projects and 60 miles of double track. In 2019, we plan to add 80 miles of double track as well as 2 new sidings.



New Tier 4 high efficiency locomotives



EQUIPMENT

CN ordered 260 high-efficiency locomotives in 2017 for delivery in 2018-2020. We are also acquiring 1,000 new high-capacity grain hopper cars in 2019-2020.





PEOPLE

Hiring and training about 2,100 new conductors in 2018-2019

Financials

Deploying Advanced Technology



DOUG MACDONALD Senior Vice-President, Information and Technology

The ubiquity of technologies is accelerating fast-paced change within our industry by transforming supply chains and providing our business with the opportunity to operate more efficiently and serve our customers in new ways. There is more transparency and access to data than ever before.

Digitization: Our competitive edge

Every organization must adapt in order to remain ahead of its competitors. Data is the new currency, proving to be the most important strategic asset. New operational technology platforms and data analysis software harness real time data, empowering business users to make better-informed decisions in a timely manner.

The future is now. As we evolve from a traditional railway to the digital connected railway of the future, next generation technology algorithms designed to provide real time information to our crews and customers are laving the foundations of the digital connected railway that will usher us into our next century of operations.

TRANSFORMING SCHEDULED RAILROADING

Safe operations and serving our customers will always be at the heart of CN. As we strive to develop and implement better ways of creating value for our customers, new technology is advancing innovations in safety, reliability and predictability.

Modernization mindset: The evolution of CN

The advent of digitalization in rail requires a new vision that involves a transformation of roles, people, processes, and technology. Having the right talent focused on the right initiatives at the right time will enable CN to bring this modernization mindset to life.

CN is investing in technology and taking concrete actions to improve our information and operational technology structure and processes, while at the same time remaining focused on the safe and efficient management of our core initiatives.

We are modernizing all aspects of our business to meet business requirements today and in the future. In order to do so, we are taking a modular approach and prioritizing our opportunities while implementing deliverables that are more beneficial to customers, such as tracking capabilities.

CN's strong partnerships

New technology ecosystems have changed the technology landscape. Roles or activities traditionally embedded in IT are now embedded in the business with both entities moving as one unit. This openness also extends to our partnerships with customers and communities, external solution providers and start-ups with whom we interact. With the increasing value of technology services in corporate strategy, business metrics must be immediate, accurate and inextricably linked to the end users who are consuming the technology. We are tackling this challenge by collaborating in new and dynamic ways.

As collaborative partners who work together, CN's Information and Technology team helps line-of-business leaders and customers tap into the value of technology by finding the right metrics that show its impact on revenue, reduced costs, greater areas of productivity, and differentiation in a highly competitive marketplace and client satisfaction.

TECHNOLOGY AS OUR NEXT STRATEGIC DRIVER OF VALUE

Because we believe technology plays a critical role in our future, CN is investing in exciting, repeatable and scaleable innovations for safety, efficiency and higher value creation for our customers.

Positive **Train Control**

Positive Train Control (PTC) is technology mandated by the U.S. government to monitor and control train movements and automatically stop a train before an incident occurs. The system is designed to improve safety by significantly reducing the impact of human error on train operations. CN is on track to complete full PTC implementation by December 31, 2020.

Autonomous Track **Inspection Program**

CN's Autonomous Track Inspection Program (ATIP) is comprised of specially equipped railcars in regular train service with the latest sensor and AI technology to fully automate track inspections. ATIP allows for more frequent and higher quality inspections to enable more accurate preventative maintenance supporting our safety agenda.

Smart Network (Digital Twin)

Smart Network creates a digital replica of our network and is anchored on simulation and holistic view of network operations. With the ability to simulate train movements on the network. Smart Network will allow for CN to gain insight on capacity, costs and operational fluidity

CN is developing a new mobile platform with applications for our employees in operations to enable for process standardization, modernization of working tools, and improving timeliness and accuracy of information. • Mobile Reporting Services – provide

Automated **Inspection Portals**

CN's Automated Inspection Portals (AIP) aim to modernize the railcar inspection process by coupling high resolution imaging hardware with powerful machine learning software. With AIP, inspections will be more frequent with improved quality, especially on difficult parts of the railcar, leading to a safer and more reliable railway

Handheld Technology in **Operations**

train crews and field decisionmarkers with near real-time work plans and instructions for improved timeliness, accuracy and reliability.

• Car Repair Billing – enables near real-time reporting of carmen activity and provides work progress visibility to supervisors for improved information capture and sharing.

 Electronic Operating Manual – provides digital access to all operational and safety documentation for easier navigation and access to rules.



INSPECTION PORTALS



TRACK INSPECTION

Mobile devices for carmen and conductors

ON-SITE TECHNOLOGY

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Delivering **Responsibly**



JANET DRYSDALE Vice-President, Financial Planning

Taking action to protect the environment

As rail is one of the most environmentally friendly ways to move goods, we recognize our responsibility to provide a more sustainable transportation service to our customers while minimizing the impacts of our operations.

Driving emissions, energy and fuel efficiency

By providing our customers with a sustainable transportation solution, we not only contribute by moving the economy, but also by driving its efficiency. Over the past 25 years, we have improved our carbon efficiency by 40%. With almost 90% of our direct GHG emissions generated from rail operations, our focus is to continuously improve our

WORKING TOGETHER FOR A SUSTAINABLE FUTURE

Delivering responsibly is at the heart of how CN is building for a sustainable future. It means moving customer goods safely, being environmentally responsible, attracting and developing the best railroaders, helping build stronger communities, and adhering to the highest governance standards.

locomotive fuel efficiency and reduce our carbon emissions.

Our significant investments in innovative rail technology applications and analytics capabilities are helping us continuously improve our carbon footprint. By leveraging Trip Optimizer technology, locomotive throttle and dynamic braking we are improving our fuel efficiency. Our Horsepower Tonnage Analyzer (HPTA) also uses data to optimize a locomotive's horsepower-to-tonnage ratio and conserve fuel.

Playing a key role in a low-carbon world

In addition to providing a fuel efficient transportation service, we believe that rail can be an integral part of the climate change solution offering both environmental and economic advantages. Compared to other transportation modes, rail is the most fuel efficient method of moving freight over land: on average, trains are approximately four times more fuel efficient than trucks. To leverage these benefits, we offer our customers intermodal freight shipping, which combines the resources of different transportation modes, such as trucking and rail-allowing each mode to be used for the portion of the trip to which it is best suited.

As we continue to invest for the future, our connections with our customers, supply chain partners and governments are enabling us to deliver sustainable and profitable business that drives economic prosperity in a low carbon environment.

2018 SUSTAINABILITY AWARDS AND RECOGNITION HIGHLIGHTS

Dow Jones Sustainability Indices In Collaboration with RobecoSAM (

Member of the North American Index since 2009, and the World Index since 2012.



since 2009 and listed on the exclusive Climate A List for the last three years.

CDP

A LIST

CLIMATE





THE GLOBE AND MAIL^{*}

governance practices.



BEST 50



Decoupling growth from carbon emissions

LOCOMOTIVE CARBON EMISSION INTENSITY vs. **GROSS TON MILES (GTMs)** (tCO_e/GTM vs_Traffic Billion GTM



Operating efficiently has been the hallmark of CN's success. We are a leader in the North American rail industry, consuming almost 15% less fuel per gross ton mile than the industry average.

LOCOMOTIVE GHG INTENSITY REDUCTION

Over the past 25 years we have reduced our locomotive emission intensity by 40% while achieving record growth in the volume of freight we move. Our approach is to reduce the carbon intensity of our business progressively over time and at a pace that's consistent with the objective of stabilizing global temperature.

Kevin Franchuk, Senior Field Safety Manager, Western Canada instructs new hires on

PICTURED:

Overview

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Delivering Responsibly

10,400 **EMPLOYEES AND CUSTOMERS TRAINED IN SAFETY IN 2018**

Providing hands on and classroom training for experienced railroaders, new hires and customers at CN's two training centres.

6,500

COMMUNITY EMERGENCY RESPONSE PERSONNEL TRAINED

On dangerous goods traffic and emergency response planning through CN-supported TransCAER[®] events in 2018.

194,823

MILES OF TRACK TESTED IN 2018

By rail flaw detection systems designed to catch certain internal rail defects that could potentially lead to broken rails.

Reinforcing safety as a deeply held core value

Nothing is more important to CN than running a safe railroad. We strive to safeguard our employees, assets, customers' goods, neighbouring communities and the environment-always. It guides our actions at all times on our journey to become the safest railroad in North America.

Strengthening our safety culture

We remain committed to investing significantly in training, coaching and employee engagement initiatives to strengthen our safety culture. CN has a wide variety of initiatives to maintain a safe workplace and ensure employees have the necessary tools and training to work safely.

Our two CN campuses trained over 10,400 experienced railroaders, new hires and customers over the course of 2018. We also continued our successful "Looking Out for Each Other" program,

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which urges our team members to work together to be vigilant about safety and to speak up if they spot an unsafe situation.

Investing in infrastructure and safety technology

Financials

We are leveraging recent advances in technology for incremental improvements in safety. Technology has an important role to play in the rail industry's future, and CN wants to be a pioneer in making that happen.

In 2018, we built four Automated Inspection Portals (AIPs) in Winnipeg and we plan to install three more across our network in 2019. Our AIPs feature ultra-high-definition panoramic cameras and infrared lighting that capture 360° view of a train as it travels through the portal. These real-time inspection can

> then assist in identifying a railcar needing repair. This new technology also presents opportunities to better our workforce utilization, reduce disruptions, and enhance network safety and security. As we deploy these new inspection technologies, we are focusing on assessing the broad spectrum of relevant use cases for visual recognition across CN's operations in order to both improve safety and enhance operational efficiency.

To test the safety of our infrastructure, we used our two geometry equipped inspection cars in 2018 as part of our automated track inspection program. Utilizing these cars to test approximately 66,000 miles of track during the year, the equivalent of covering our entire network more than three times, helped us gather important data and improve preventative maintenance. In 2019, we plan to add six laser and LIDAR equipped inspection cars to our network. This cutting-edge technology will improve inspection

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For more information on CN's leadership in safety please visit www.cn.ca/safety

reliability as well as provide even richer and more frequent data sets to generate stronger predictive analytical models and preventative safety enhancements.

Rail safety is a shared responsibility. The cities, towns and Aboriginal communities we serve are powerful allies in promoting rail safety. During our annual Rail Safety Week campaign, which aims to educate communities about rail crossing safety, CN police officers and other employees conducted close to 200 activities at schools, community centres, railway stations and level crossings across Canada and the United States.

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Markets Overview

Engaging with communities on safety

We continue to work closely with communities on safety through our Structured Community Engagement Program. Since this outreach effort began in 2013, we have met face-to-face with almost 2,000 municipal officials and their emergency responders all along our rail network to review our comprehensive safety programs, share information on dangerous goods traffic, and discuss emergency response planning and training. Last year, we also brought critical training on dangerous goods handling to nearly 4,000 community emergency personnel through CN-supported TransCAER® (Transportation Community Awareness and Emergency Response) events.

Our goals are simple: nobody gets hurt, and there are no accidents that impact our communities, our customers or the environment.

Overview

Markets **Operations** **Financials** $\langle \equiv \rangle$

Delivering Responsibly

25,720

CN RAILROADERS **AT DECEMBER 31, 2018** Active employees occupying permanent positions.

+35%

INCREASE IN NEW HIRES IN 2018 To support strong business growth.

36%

OF ALL NEW EMPLOYEES HIRED **IN 2018 REPRESENTED BY DIVERSITY GROUPS**

Reflecting our dedication to diversity in the workplace.

Our people – the foundation of our success

People are the foundation on which all our guiding principles are built. Our goal is to provide a safe, supportive, and diverse work environment where our employees can grow to their full potential and be recognized for their contribution to CN's success.

Attracting and developing top talent

As we prepare for the next generation of railroaders, our focus is to attract the right people, onboard them successfully, develop the best railroaders with the right skills and engage our employees. Planning for the development needs of both new and existing employees are on-going priorities for our organization. CN offers training programs for various levels and is committed to keeping these programs current and relevant. Each employee is given equal opportunity to develop their competencies for advancement.

IIA-SOUTH

Fostering diversity and inclusion

In an increasingly complex global marketplace, we recognize the importance of diversity at all levels of our Company. Diversity enables us to better understand and respond to the needs of our stakeholders, access a larger talent pool, and increase the effectiveness of our decision-making through a wider range of perspectives, experiences, and sensibilities.

To support our goal to hire diverse and qualified candidates, CN's Talent Acquisition Team continues to monitor diversity within their candidate pipelines and collaborates with Recruitment Partners to increase visibility and promote CN opportunities. Working with various indigenous communities and institutions also helps us to promote CN as an equal opportunity employer. In 2018, 44% of Canadian applicants selfidentified as being diverse.

Partnering with Aboriginal communities

In 2018, we became the first transportation company to receive the Progressive Aboriginal Relations Bronze Level certification from the Canadian Council for Aboriginal Business for our commitment to working with Aboriginal communities and businesses as well as being one of the first 18 companies to join the CCAB Aboriginal Procurement Champion group.

BRONZ RELATIONS Canadian Council for D

nal Procurement CHAMPION

Committed to the highest standards in corporate governance

At CN, sound corporate citizenship touches nearly every aspect of what we do. Central to our approach is our strong belief that good corporate citizenship is simply good business.

Industry-leading governance practices

CN has always recognized the importance of good governance. As a Canadian reporting issuer with securities listed on the Toronto Stock Exchange (TSX) and the New York Stock Exchange (NYSE), we ensure our corporate governance practices comply with the highest standards and rules adopted by the Canadian Securities regulator, the U.S. Sarbanes-Oxley Act of 2002 and related rules of the U.S. Securities and Exchange Commission.

38%

WOMEN ON THE BOARD **OF DIRECTORS**

Exceeding our commitments to the Catalyst Accord and the Canadian chapter of the 30% Club.

CN is committed to inclusion in principle and in practice. We believe that a diverse board benefits from a broader range of perspectives and relevant experience. The Board's Diversity Policy considers gender, ethnicity, culture and geography when recommending director nominees.

We currently meet or exceed our commitments to the Catalyst Accord and the Canadian chapter of the 30% Club. In 2018, CN was also selected as one of Canada's Best Diversity Employers by The Globe and Mail.

Building stronger communities

As part of the fabric of the many cities, towns and villages across our close to 20,000-mile North American network, we are proud of the important contribution we make towards social and economic progress. Supporting inclusive, sustainable and equitable communities underpins our goal of leaving communities and economies better for our being there.

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For more information on CN's sustainability initiatives and performance, download our most current sustainability report at www.cn.ca/delivering-responsibly

conductors, Alysia Davis, with her Trainer, Joseph Brooks, Superintendent, Transportation at Harrison Yard, Memphis TN.

PICTURE

One of CN's ne



Experienced and diverse leadership

Giving back

For CN, giving back is a way of doing business that embodies our deep commitment to building stronger communities. Our corporate contributions of \$15 million in 2018 have made a significant difference to hundreds of non-profit organizations, and to the people who count on their support. We empower our employees, retirees and their families to donate their time to causes that matter most to them by providing more than \$1 million each year in grants to charitable organizations.

Greening communities

With a network that passes through a wide range of ecosystems, we are committed to taking measures to minimize our impact. This mindset extends beyond our operations to the communities we serve, where we have planted approximately 1.8 million trees in communities along our rail network since 2012-making CN the leading private non-forestry company tree planter in Canada.

Operations

Financials

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Financial and Operating Measures

Financial measures

	2014	2015	2016	2017	2018
KEY FINANCIAL PERFORMANCE INDICATORS					
Total revenues (\$ millions)	12,134	12,611	12,037	13,041	14,321
Rail freight revenues (\$ millions)	11,455	11,905	11,326	12,293	13,548
Operating income (\$ millions)	4,498	5,155	5,032	5,243	5,493
Net income (\$ millions)	3,167	3,538	3,640	5,484	4,328
Adjusted net income (\$ millions) 1)	3,095	3,580	3,581	3,778	4,056
Diluted earnings per share (\$)	3.85	4.39	4.67	7.24	5.87
Adjusted diluted earnings per share (\$) ¹⁾	3.76	4.44	4.59	4.99	5.50
Free cash flow (\$ millions) 1)	2,220	2,373	2,520	2,778	2,514
Gross property additions (\$ millions)	2,297	2,706	2,752	2,703	3,531
Share repurchases (\$ millions)	1,505	1,750	2,000	2,000	2,000
Dividends per share (\$)	1.00	1.25	1.50	1.65	1.82
FINANCIAL POSITION					
Total assets (\$ millions)	31,687	36,402	37,057	37,629	41,214
Total liabilities (\$ millions)	18,217	21,452	22,216	20,973	23,573
Shareholders' equity (\$ millions)	13,470	14,950	14,841	16,656	17,641
FINANCIAL RATIOS					
Operating ratio (%)	62.9	59.1	58.2	59.8	61.6
Adjusted debt-to-adjusted EBITDA multiple (times) 1)	1.63	1.77	1.85	1.75	1.94
Return on invested capital (ROIC) (%) 1)	16.6	16.8	16.0	22.4	16.7
Adjusted ROIC (%) 1)	16.2	17.0	15.8	15.9	15.7

2018 VS. 2014 CAGR



1) See section entitled Non-GAAP Measures for an explanation of these non-GAAP measures.

Operating measures²⁾

STATISTICAL OPERATING DATA

Gross ton miles (GTMs) (billions) Revenue ton miles (RTMs) (millions) Carloads (thousands) Route miles (includes Canada and the U.S.) Employees (end of period) Employees (average for the period)

KEY OPERATING MEASURES

Rail freight revenue per RTM (cents) Rail freight revenue per carload (\$) GTMs per average number of employees (thousands) Operating expenses per GTM (cents) Labor and fringe benefits expense per GTM (cents) Diesel fuel consumed (US gallons in millions) Average fuel price (\$/US gallon) GTMs per US gallon of fuel consumed

OPERATING METRICS

Car velocity (car miles per day) Yard productivity (cars per yard switching hour) Locomotive utilization (trailing GTMs per total horsepower) Train productivity (GTMs per train mile) Through dwell (hours) Through network train speed (miles per hour)

CN ROLLING STOCK

Diesel locomotives (end of period) Freight cars (end of period)

2) Statistical operating data, key operating measures and rolling stock information are unaudited and based on estimated data available at such time and are subject to change as more complete information becomes available. Definitions of these indicators are provided on our website, www.cn.ca/glossary.

2018 VS. 2014 CAGR



2014	2015	2016	2017	2018
448.8	442.1	423.4	469.2	490.4
232,138	224,710	214,327	237,098	248,383
5,625	5,485	5,205	5,737	5,976
19,600	19,600	19,600	19,500	19,500
25,288	23,066	22,249	23,945	25,720
24,525	24,406	22,322	23,074	25,423
4.93	5.30	5.28	5.18	5.45
2,036	2,170	2,176	2,143	2,267
18,298	18,114	18,969	20,335	19,290
1.70	1.69	1.65	1.66	1.80
0.54	0.57	0.57	0.54	0.58
440.5	425.0	398.9	441.4	462.7
3.72	2.68	2.34	2.74	3.32
1,019	1,040	1,061	1,063	1,060
199	224	236	211	188
44	48	51	51	49
212	219	230	225	208
8,625	8,739	9,314	9,424	9,163
8.3	7.3	6.9	7.7	8.3
20.3	21.5	22.5	20.3	18.0
2,087	2,180	2,268	2,285	2,412
68,432	63,913	63,442	65,019	66,978



Financials

Market



WORTH OF TRADE EACH YEAR



ANNUAL CARGO CARRIED

SERVED ACROSS NORTH AMERICA

OF TRAFFIC ORIGINATING AND **TERMINATING ON CN'S NETWORK**

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For more details on our markets, please visit www.cn.ca/your-industry

REACHING FARTHER WITH OUR CUSTOMERS

CN aims to deliver valuable transportation services for our customers and to work with all our supply chain partners as ONE TEAM with ONE GOAL. Our freight revenues are derived from seven commodity groups representing a balanced and diversified portfolio of goods, enabling CN to better weather economic fluctuations and enhance our potential for growth opportunities.

Our business model is anchored on the continuous pursuit of operational and service excellence. We focus on continuous improvement and a supply chain mindset that allows us to collaborate with our customers. We value the full integration from true origin to ultimate destination of a number of our business units, including Coal, Grain, Iron Ore and Auto Parts, into every step of their respective supply chains.

Considering changing economic conditions and shifting market cycles, CN nurtures the close relationships of our business units with our customers to better anticipate future demands and help to win in new end markets.





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Financials

Market Overview

Rail Centric Supply Chain



JAMES CAIRNS, Senior Vice-President Rail Centric Supply Chain

Strengthening our **Rail Centric business**



GROWING WITH OUR CUSTOMERS

Our job is to manage and expand the bulk and carload businesses for our grain, fertilizer, sulfur, coal, petroleum, chemicals, forest products, metals and minerals customers. CN is focused on moving products right through to their end customer.

To provide optimal service, CN works closely with stakeholders to understand every detail of a shipment, from origin to ultimate destination, adapting last-mile services to focus on the entire movement of goods through the complete supply chain.

Integrating the supply chain

We are increasingly integrating all supply chain players to improve how products get to market. CN is adding value to our supply chain model by leveraging our expertise to advise and assist our customers. We work closely with customers to better understand their business, right-sizing capacity to meet needs and identifying opportunities to bring suppliers and end users together.

CN promotes open communication with all our stakeholders. We coordinate with our customers to drive down costs, improve visibility of the entire move with common metrics, and seamlessly integrate our services into their operations. All parties continually share information to understand and optimize supply chain performance, including scheduling railcar

and container supply, planning vessel loading, as well as managing the network to avoid pinch points. For example, some customers cut hours off cycle times by topping up the air pressure in railcars before CN crews arrive. By improving switching efficiency and dwell time at our customers' plants, our customers can load more cars per day and CN adds low-cost capacity to the network.

Helping our customers operate safely

We have adopted a hands-on approach by sharing practical knowledge at the ground level with our customers, helping them manage their rail operations more efficiently. Furthermore, our safety experts work directly with our customers to train their personnel in safe railroading practices. In fact, we audit the safety of their operations on site with the goal of eliminating derailment and injury hazards. CN's annual Safe Handling Awards recognize our customers for achievements in meeting the challenges of maintaining safe operations.

Consumer Product Supply Chain

FOCUSING ON WHAT MATTERS

Our business is to grow CN's intermodal and automotive products by placing the customer front and center. Our goal is to provide superior service, utilize our expanding capacity, and deploy technology in pursuit of growth in excess of the broader economy.

At CN, we expand our customers' reach and capacity with our 23 intermodal terminals, 18 autoports and 1,100 truck owner-operators. To achieve our goals, we take a varied approach that includes:

Quality service

We earn our customers' business by meeting or exceeding expectations. Building on successful supply chain collaborations, we are developing new solutions for more complex challenges in service-sensitive markets. Industries that work with smaller lot sizes and just-in-time inventory management, like automotive and consumer goods, require an especially high level of customer service.

Innovation

CN aims to continuously improve our customer service by leveraging the latest technologies. We strive to enhance the value we provide by developing robust customer relationships and creating products and services that are difficult to replicate. This mindset distinguishes us from our competitors and building on our foundational Scheduled Railroading model, we aim to accelerate the pace of innovation to secure our position for the long haul.

Investing in the business

growth plans.

Acquisition opportunities

We look for ways to grow inorganically, which includes our recent acquisition of TransX, one of Canada's largest transportation companies, and our agreement to acquire the intermodal division of H&R Transport Limited, subject to customary closing conditions. These acquisitions allow us to expand our intermodal and temperature-controlled supply chains.

We are keeping a close eye on additional acquisition opportunities with a strong focus on accretive services to bring volumes to our rail franchise and that can be easily integrated into our operations.



KEITH REARDON, Senior Vice-President Consumer Product Supply Chain

CN is investing to expand our intermodal and automotive terminals as well as improve the velocity and fluidity of our network to handle growing volumes. To expand our fleet, in 2019, we are acquiring: 140 high-tech locomotives, 1,400 intermodal containers and 100 CargoCool[®] smart containers. With over \$22B of capital investments in the last 10 years, we continue to invest back into the business to deliver on our organic

Developing our Consumer Products franchise



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Top Trends Influencing Our Business

Navigating shifts in global trade

We constantly assess the potential impacts of North American trade conditions, including trade barriers on certain commodities, not only within Canada and the U.S., but also globally. We weigh the risks of the ever-evolving trade agreements that may interfere with the free circulation of goods across North America in order to mitigate any adverse impacts to our business. This constant assessment also helps CN take advantage of positive shifts and prepare a timely call to action.

Unique access to



SERVING SEVEN MAJOR PORTS

Including 5 logistics parks, more than 30 transload and distribution facilities, and 23 intermodal terminals in Canada and the U.S.

Unlocking markets

CN's growth strategy is tied to competition in the market, expected economic growth and global trade. We determine where and how to grow our business based on potentials and drawbacks of the North American and global marketplace. We consider whether there is a submarket to discover and grow or if expanding our supply chain inorganically presents an advantage.



Technological innovation

The importance of adapting and implementing new technology is ever more present today. At CN, we want to evolve from a traditional railway to a digitized railway of tomorrow. We invest in new technology to modernize our operations to increase efficiency, reliability and predictability of our services, as well as strengthening our safety culture.



PLANNED TO BE OPERATIONAL IN 2019 FROM WINNIPEG TO TORONTO TO MEMPHIS

Volatility in fuel pricing

We monitor fluctuations in fuel pricing, which can be affected by geopolitical events, changes in the economy or supply disruptions, as rising fuel prices can have a significant adverse effect on our operating costs. To mitigate the effects of the volatility in fuel prices, we manage fuel price risk through our fuel surcharge program in order to continue to provide a compelling service offering to our customers.



Performance **Summary**

		Revenues \$ millions									Carloads thousands		
	2014	2015	2016	2017	2018	% Change ¹⁾	2014	2015	2016	2017	2018	% Change ¹⁾	
Petroleum and Chemicals	2,354	2,442	2,174	2,208	2,660	20%	655	640	599	614	653	6%	
Metals and Minerals	1,484	1,437	1,218	1,523	1,689	11%	1,063	886	807	995	1,030	4%	
Forest Products	1,523	1,728	1,797	1,788	1,886	5%	433	441	440	424	418	(1%)	
Coal	740	612	434	535	661	24%	519	438	333	303	346	14%	
Grain and Fertilizers	1,986	2,071	2,098	2,214	2,357	6%	640	607	602	619	632	2%	
Intermodal	2,748	2,896	2,846	3,200	3,465	8%	2,086	2,232	2,163	2,514	2,634	5%	
Automotive	620	719	759	825	830	1%	229	241	261	268	263	(2%)	
Total rail freight	11,455	11,905	11,326	12,293	13,548	10%	5,625	5,485	5,205	5,737	5,976	4%	
Other	679	706	711	748	773	3%							
Total	12,134	12,611	12,037	13,041	14,321	10%							

	RTMs millions									Average length of haul miles			
	2014	2015	2016	2017	2018	% Change ¹⁾	2014	2015	2016	2017	2018	% Change ¹⁾	
Petroleum and Chemicals	53,169	51,103	43,395	44,375	50,722	14%	907	897	821	819	874	7%	
Metals and Minerals	24,686	21,828	20,233	27,938	27,993	-%	291	307	313	339	336	(1%)	
Forest Products	29,070	30,097	31,401	30,510	29,918	(2%)	798	810	836	840	839	-%	
Coal	21,147	15,956	11,032	14,539	17,927	23%	354	317	292	435	464	7%	
Grain and Fertilizers	51,326	50,001	51,485	56,123	57,819	3%	808	831	865	905	905	-%	
Intermodal	49,581	52,144	53,056	59,356	60,120	1%	1,777	1,822	1,841	1,848	1,826	(1%)	
Automotive	3,159	3,581	3,725	4,257	3,884	(9%)	712	766	730	802	762	(5%)	
	232,138	224,710	214,327	237,098	248,383	5%	692	727	749	775	782	1%	

1) % change from 2017 to 2018.

Delivering on our growth agenda

CN VOLUME PERFORMANCE RELATIVE TO INDUSTRY PEERS (RTMs) (Index 2012 = 100)



+4%

CAGR IN RTMs BETWEEN 2012 AND 2018

CN's objective is to grow our business faster than the overall North American economy. CN has demonstrated a strong track record of growth, outpacing the economy and our railroad industry peers. <

Financials

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Petroleum and Chemicals



ROBERT (BUCK) ROGERS Vice-President, Petroleum and Chemicals

Simple approach, dependable results

CN's approach is simple: to provide unparalleled value to our customers through seamless integrations of our services. Our extensive reach provides customers with the ability to use single rail carrier service from origin to final destination through our CargoFlo® network, as required, to enable the last mile delivery to our customers' end market. Technology will play an increasing role in our ability to tailor products to our customers' needs.

RELIABLE AND INTEGRAL PART OF MOVING ENERGY

The building blocks of the petrochemical industry are comprised of natural gas and oil. Being the only railroad that serves all three major petrochemical hubs in North America – U.S. Gulf Coast, the Alberta Heartland and Southwestern Ontario, CN provides a unique and comprehensive reach for its petroleum and chemicals customers.

CN advantage: Our three petrochemical hub access

As North America experiences a petrochemical boom due to the availability of low cost feedstock, there is an increase pressure on its supply chain. Growing dependence on supply chains that support global emerging markets has increased the strain on North American port capacity. CN's unique access to unencumbered and untapped capacity through the east, west and the U.S. Gulf Coast ports we serve allows us to help our customers stay competitive in their markets.

Working with our customers

CN goes beyond offering transportation from origin and destination. We also actively participate in helping customers cut costs, improve their operations to help them meet the demands of their end markets. Our holistic view allows us to share best practices, minimize footprint and ensure more efficient operations at our customer sites.

Investing where it matters

CN's capital expense plan for infrastructure to support the growth in the business remains comprehensive. With safety as a core value, we continuously review areas in which we can improve especially if best practices can be shared with our customers and partners. Significant investments are being deployed in the Greater Edmonton Area to support growth in propane, diesel and other various petroleum and chemical products.

For more information please visit www.cn.ca/petroleum-chemicals

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A Century of Stories

CN freight cars on a siding adjacent to an Imperial Oil facility in Sarnia, ON, in 1952. Imperial Oil is even older than CN; dating all the way back to 1880.





Business unit overview and market drivers





39% Chemicals and Plastics
 36% Refined Petroleum Products
 21% Crude and Condensate
 4% Sulfur

SULFUR

KEY FACTS

- CN is the only rail carrier servicing three petrochemical centers in North America: the Alberta Heartland, the U.S. Gulf Coast and Southwestern Ontario
- CN handles over 50% of all Canadian chemicals production
- Petroleum and chemicals shipments move in customer-supplied private cars

Metrics

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COMMODITIES

- PETROLEUM PRODUCTS
- Propane, butane, crude oil,
- gasoline, diesel, fuel oil, lubricants,
- asphalt, condensate
- CHEMICALS AND PLASTICS
- Polyethylene, caustic soda, sulfuric acid, pulp mill chemicals

MARKET DRIVERS

- North American industrial production
- North American crude oil and gas production
- Chemicals and plastics feedstock prices
- Investment by supply chain partners



Petroleum and Chemicals Supply Chain at a Glance

CN'S REACH BENEFITS OUR CUSTOMERS

Overview

CN is well-positioned to take advantage of the supply of the petrochemical industry, which is comprised of a wide range of commodities including chemicals and plastics, crude oil, natural gas, and sulfur. We are a true supply chain enabler, connecting petroleum and chemicals producers with their suppliers and markets.



Key advantages

> CN provides producers with single line access to refineries in Eastern Canada, the U.S. Midwest and the Gulf Coast, as well as export terminals in Louisiana

CN's access to three coasts and port facilities enables international supply chains through our available port capacity

CN offers an advantage of decoupling 24/7 plant production from traditional railway "once a day" service (3, 5 or 7 days per week)



Of Canadian petrochemical industry directly serviced by CN with our vast network allowing us to tailor services to our customers' needs



Bulk distribution facilities strategically located on our network for liquids transfer and break-bulk needs

Propane Export Terminal (RIPET), the first propane export terminal in Western Canada. RIPET is located on Ridley Island, near the Port of Prince Rupert, which is exclusively served by CN. The objective of the

which has been designed to ship up to 1.2M tonnes of propane per propane since mid-April 2019 and

Financials $\langle \equiv \rangle$

Petroleum and Chemicals

Petroleum in Review

AN IMPORTANT LINK IN THE PETROLEUM SUPPLY CHAIN

Developing new end markets for propane

Propane is commonly used as a fuel for vehicles, cooking, and home heating and is also an important feedstock for polypropylene, a synthetic plastic used in a wide variety of industrial and consumer applications. About half of Western Canadian propane is used within the region and one-third is shipped to Eastern Canada, with the balance transported to the U.S. Midwest. This proportion is expected to change with the recent opening of the new Ridley Island Propane Export Terminal.

CN's capital investments in key natural gas liquids corridors coupled with customer investment in their terminals in and around the Edmonton area allow CN to provide a balanced flow of loads and empties direct for our customers. Pembina Pipeline Corporation (Pembina) has commissioned a third fractionator at its Redwater, AB site north of Edmonton, bringing total capacity to 210,000 barrels per day, making Redwater the largest fractionation facility in Canada. Pembina ships its propane to an array of end markets all over North America and continues to develop terminal and rail infrastructure to support growth from the Redwater complex.

Prince Rupert opportunity

AltaGas has built the first propane export terminal on Canada's West Coast with first shipments starting in May 2019. The terminal is located on Ridley Island in the Port of Prince Rupert. On CN's rail

network, up to 1.2 million tonnes of propane per year, or 60 cars a day, can be transported from Western Canadian producers. Furthermore, Pembina has announced plans to construct a 25,000 barrel per day of liquefied petroleum gas (LPG) export facility on Watson Island with planned shipments starting mid-2020.

Crude-by-rail through confirmed capacity contracts

CN works with all shippers to build incremental capacity for crude-by-rail through long term contracts. Through our large system of rail terminals, we provide access to Western Canadian undiluted heavy crude oil and dilbit. CN's network directly serves the Peace River, Athabasca and Cold Lake production

areas, enabling us to provide producers with single rail line access to refineries in Eastern Canada, the U.S. Midwest and Gulf Coast as well as export terminals in Louisiana.

In addition, with CN's interconnections with other Class I railroads, CN customers can access the Pacific Northwest, Texas and the Eastern seaboard, where current pipeline infrastructure is limited. CN offers a safe and complementary service to pipelines, providing customers with greater market reach and scalability.

Canapux[™]: Innovating for the future petroleum supply chain

The majority of heavy crude oil in North America moves with the addition of diluents or condensates, necessary for pipeline transport. With CanaPux, CN is advocating and working toward diluent-free rail supply chains that allow for transport using gondola cars instead of tank cars. CanaPux pellets are environmentally friendly as they float in water, do not leak, are non-explosive, and can be piled instead of being stored in large tanks.

CN is developing CanaPux pellets as an environmentally secure and protected way of transporting bitumen or heavy crude oil.

Moving heavy crude oil without diluent can improve crude-by-rail economics by 30%. CanaPux can open up new markets for crude-by-rail with a further 15% improvement over diluent-free rail economics for shippers. This technology does not replace the need for pipelines, but can provide new optionality for producers, refiners and other off-takers that use extra-heavy crude oil.

CN is currently working with several industry partners to establish commercial pilot facilities, anticipated to be in service by mid-2021. We have received positive reaction to the concept, both for enabling market access for crude resources and for creating new ways of transporting this important product in an environmentally friendly manner.

CanaPux[™] – A safe and innovative process for transporting bitumen



are formed by blending and coating bitumen with polymer. CanaPux pellet processing facilities operate in close proximity to extraction sites and existing rail infrastructures.

To learn more information including the full CanaPux[™] process and innovative supply chain solution, please visit <u>www.cninnovation.ca</u>

1.2M TONNES OF PROPANE PER YEAR CAN BE TRANSPORTED FROM WESTERN CANADIAN PRODUCERS THROUGH CN'S NETWORK With shortage of pipelines, CN offers an alternative to crude oil producers for their products to reach their end markets. Photo by CN Employee TOGETHER INTO OUR NEXT CENTURY 32

Outlook

CN is positioned to capitalize on Western Canada's energy growth, from propane export facilities in Prince Rupert to increased drilling and fractionation in liquid-rich areas in Alberta and British Columbia. Growth is expected through the new LNG Canada initiative for rail shipments of condensate from Kitimat, BC.

CN is working with Western Canadian crude producers to remove costs from the transportation supply chain through the development of diluent recovery units to allow to move more bitumen in a railcar, increase rail capacity for shippers and transport a safe, non-hazardous product.

2 After CanaPux pellets are processed, conveyors take them from the processing facility to be loaded into open-top gondola cars and are transported by rail to a port terminal where they are transferred to ocean freighters.



3 CanaPux pellets are transported by rail and freighter to their destination market and processed to separate the bitumen from the polymer. The polymer can be reused and the bitumen can be refined or used for nonombustion purposes.

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Petroleum and Chemicals

Chemicals and Plastics in Review

GETTING OUR CUSTOMERS' PRODUCTS TO MARKET

Rise of demand for cheap feedstock

With low natural gas prices, there is an increased demand from the automotive, construction and packaging sectors. There are more investments being made to chemicals and plastic plants to improve operations and overall productivity. We work closely with our partners, from the producers in Alberta to the Louisiana petrochemical corridor, in order to establish required capacity.

Our strategically located CargoFlo® facilities enable us to provide better optionality to our customers, offering a one-stop-shop transportation service to producers to their end markets. We are able to combine the economic and environmental benefits of long-haul transportation with the flexibility of short-haul truck delivery.

Petrochemical opportunities

New petrochemical plants and major expansions are expected to be completed in the Alberta Industrial Heartland, the U.S. Gulf and Ontario, signalling solid demand in the next few years.

RIPET, which opened in May 2019, will provide access to more attractively priced markets in Asia for the propane derived from the natural gas industry based in British Columbia and Alberta.

The boom occurring in the U.S. Gulf also poses supply chain challenges tied to using traditional U.S. containers for export through the Gulf Coast ports. CN is developing alternative solutions using CN-served ports to assist customers to get their products to market promptly and reliably.

Outlook

Growth is expected to be in line with industrial production in Canada and the U.S. Nevertheless, the plastics market is benefiting from resurgence of energy in North America and the continued low price of natural gas. Western Canada still presents significant cost leadership advantage given its low cost and abundant supply of all petrochemical feedstock.

There is continued significant amount of production along the U.S. Gulf Coast, with the incremental production expected to flow towards Asian markets. With several new plants being built and other expansion projects announced in North America, CN expects a modest amount of growth.

Sulfur in Review

GROWTH IN SULFUR PRODUCTION

The use of phosphate fertilizers is the main driver of sulfur consumption. A significant portion of Canadian sulfur for export in both molten (liquid) and prilled (dry) form is handled by CN. The sulfur transported by CN is produced by the extraction of sour gas as well as the upgrading and refining process of crude oil. Sulfur from sour gas is prilled and shipped to the West Coast to be exported to the overseas market.

CN's sulfur franchise has the optionality for the sulfur from crude to either be shipped in molten form to traditional North American markets concentrated in Florida and North Carolina or to be trucked to gas plants with prilling capacity to then be shipped overseas. The dual option for sulfur producers allows them to capitalize on the best netbacks between the domestic and overseas markets.

Increase in sulfur exports

In addition to growth supported by crude refineries and oil sand producers, CN's franchise sees growth potential derived from increased sour gas production. CN serves the newest sulfur priller of Heartland Sulphur LP, which is located near Edmonton, AB. The priller is strategically located to give a cost effective alternative for local crude refineries as well as oil sand producers.

The priller became operational in 2018 and has the ability to form up to 2,000 metric tonnes per day of sulfur. Phase 2 is currently under consideration, posing a possible additional growth.

Opportunities driven by the SemCAMS Wapiti Gas Plant

Located northeast of Edmonton, the SemCAMS Wapiti Gas Plant, which became operational in early 2019, has the ability of handling 200 million cubic feet per day of natural gas and processing up to 350 tonnes per day of sulfur. The gas plant offers multitude midstream services including compression, sour gas sweetening and condensate stabilization. This plant is connected to the Kaybob K3 Sour Gas Plant through existing pipelines, which will prill the sulfur for CN to export. With the energized production, this opportunity poses as a source of long-term volumes for CN.

CN leverages its access to the Port of New Orleans to assist customers in getting their products to market.

Outlook

The offshore market continues to be highly attractive for Canadian sourced sulfur and CN is perfectly positioned to help its customers get their product to tidewater in the most efficient and effective manner.

Though production capacity is increasing, there is reduced local consumption of sulfur in Alberta, which creates the opportunity for sulfur to be prilled and railed to offshore markets. With CN serving the sulfur prillers located closest to the oil upgraders and refineries, along with the newest priller in Canada, we expect potential growth in volumes.



Operations

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Financials

Metals and **Minerals**



ROSSANA CARCAMO Director of Marketing, Industrial Products

Leveraging the strength of our network

With our rail access deep into the base metals, iron ore, frac sand, and lithium mining regions, CN leverages the strength of our rail network to reach the most important aluminum and steel production areas in North America. This strong origin franchise, coupled with our access to end markets for those commodities. makes CN a leader in the transportation of metals and minerals.

Creating value for our customers

To help our customers grow their business, CN seeks to provide quality and cost-effective service that creates value for our customers. We hold multiple customer touchpoints encouraging the free flow of information in order to better understand our customers' markets and their key drivers.

SUPPLY CHAIN COLLABORATION DRIVES GROWTH

As cyclical commodities, demand for metals and minerals follows drivers like manufacturing, construction and energy sector activity. CN works closely with our customers to understand and anticipate their market cycles. Then, we plan our capacity and service to align with the future needs of our customers.

We work with our customers to systematically develop growth strategies. We also review train and railcar requirements to right-size capacity with current and future demand. In order to proactively adjust our service accordingly, our goal is to monitor market conditions and anticipate changes.

Being a key player in the metals and minerals supply chain, we can identify opportunities to put suppliers and consumers together. Through our close relationship with oil and gas producers at North America's major shale basins, we worked out the logistics to connect them with frac sand producers in Wisconsin. CN established a dedicated team to coordinate our frac sand shipments from origin to destination.

Flexible shipping solutions

CN leverages our reach and know-how to get metals and minerals traffic quickly and safely to destination. We own and operate close to 67,000 railcars of all types to support our customers' current and future demand. CN's fleet planning process is designed to be flexible by constantly reviewing and adjusting our fleet based on expected demand, with a focus on supporting growth.

We provide customers located on and off our network with opportunities to take advantage of the low costs and environmental benefits of shipping by rail as part of our Sell One CN integrated service. Customers can use our intermodal service, combined with our metals distribution centers, to get their products to a wide range of destinations. Our containers can handle extremely heavy goods like steel, thanks to our sliding floor mobile transport trays that can load up to 50,000 lbs in less than a minute.



Business unit overview and market drivers



- CN serves 9 aluminum smelters, more than any other railroad in North America
- CN is the top mover of aluminum, iron ore and base metal ore in North America
- **ENERGY MATERIALS** • Frac sand and pipe **IRON ORE**

large loads

Metrics



D For more information please visit www.cn.ca/metals-minerals

\$1,689M **2018 REVENUES**

- METALS AND MINERALS • Steel, non-ferrous ores and base metals, construction materials, machinery, railway equipment and

MARKET DRIVERS

- Manufacturing production (e.g., automobiles, railcars, heavy equipment, aerospace)
- Non-residential construction activity
- Government spending on infrastructure projects
- World demand for ores and metals

+3.2%

2 Markets

Metals and Minerals

Supply Chain at a Glance

WORKING CLOSELY WITH CUSTOMERS

CN is committed to creating value for customers through collaboration and innovation. From steel to aluminum and iron ore to frac sand, CN has the network reach, equipment, transload facilities, port access and supply chain solutions to get our customers' products to market quickly and safely.

Markets

Overview



Key advantages

CN owns and operates a fully integrated supply chain that transports iron ore directly from mines to mills entirely with CN ships and trains.

Our rail access is deep into base metals, iron ore and frac sand mining regions as well as to core aluminum and steel production areas.

▶ With our strong origin franchise and our access to end markets, CN is the top mover of aluminum, iron ore and base metal ore in North America.



Acquired in 2018, with another 430 to be received in 2019



CN serves more than any other railroad in North America

 Tunder Bay

 Orgeneration

 Caraba

 Caraba

CN's Great Lakes Fleet has a rich history

While CN is turning 100 in 2019, our Great Lakes Fleet (GLF) is even older.

Established in 1901, GLF amalgamated six steamship companies into one, the largest commercial fleet in the world at that time. In 1906, GLF introduced the first 600-ft ships to the Great Lakes. Radar was installed fleet-wide by 1950, the same year GLF carried its billionth ton of cargo. In 1967, GLF proved that winter navigation was possible on the Great Lakes.

Today, GLF operates a safe, highly efficient fleet of nine vessels year-round, including three recordbreaking 1,000-footers that are continually upgraded to meet the needs of customers.

Operations Markets

Financials

Metals and Mir

Metals and Minerals in Review

WELL-POSITIONED TO PARTICIPATE IN EXPECTED GROWTH

CN is an agile supply chain partr

CN has the market covered from A to Z from aluminum to zinc. By promoting open communication with our customers regarding their operations and markets, we can better anticipate our customers' needs, especially in volatile economic times.

Through our network of 16 strategically located metals distribution centres and with the largest active fleet of railcars for metals in Canada, we provide efficient and competitive supply chain solutions to reach a wide range of customers.

CN's steel portfolio is well diversified

Our customers serve a wide variety of markets, including auto manufacturing, oil and gas production, heavy industry and non-residential construction; this diversification helps minimize the impact of market cycles in these sectors on our business.

Strong and lightweight, aluminum is an important ingredient in a wide array of products, from automobiles and aircraft to beverage cans and consumer

CN is the leader in aluminum

electronics. The electrolysis process used to manufacture aluminum requires much electric power. Therefore, the Canadian industry has concentrated in Quebec where relatively low-cost hydroelectricity is abundant.

CN moves more aluminum from Canada to the U.S. than any other railroad. CN's unique access to the Canadian aluminum smelters, coupled with our rail network reaching deep into the U.S., have made CN a strategic supply chain partner to the aluminum industry. Nearly 85% of Canada's primary aluminum production is exported to the U.S.

Highly integrated metals supply chains The steel and aluminum industries in Canada and the U.S. are deeply integrated and underpin supply chains that strengthen the global competitiveness of the North American economy. Canada is a longstanding and reliable supplier of steel and aluminum to the United States. CN is aware of external factors, including geopolitics, that may affect our business. We watch these factors closely in order to assess their possible impacts.

STRATEGICALLY LOCATED METALS DISTRIBUTION CENTRES

Growth in minerals continues

Aggregates, cement and non-ferrous ore concentrates are CN's main commodities in the minerals group. As with other commodities, supply and demand for minerals generally follow global market cycles and local factors, including government spending on infrastructure projects. CN closely monitors projects and gets involved at the early stages to contribute supply chain solutions.

Shifting aggregates market

Shipments of gravel and crushed stone by rail is a growing business for CN as local quarries in metropolitan areas are being depleted and replaced by sources farther away. The added distance makes rail a transportation mode of choice and CN is at the forefront of this evolving market.

Strength in cement

Activity in the oil and gas sector and government spending on infrastructure projects continue to have a positive impact on CN's cement volumes. One example is BC Hydro's Site C project, which is a 1,100 MW hydroelectric project located near CN's network in northern British Columbia. Construction began in 2015 and is expected to continue until 2024.

Lithium is a hot commodity

Canada is widely known for its rich deposits of non-ferrous ore, including copper, zinc and lithium. These deposits are mostly found in northern Canada, an area where CN's network offers unique supply chain solutions.

Lithium is non-ferrous metal that is creating a lot of excitement. Lithium is central to the manufacture of the lithium-ion batteries that are found in consumer electronics and, increasingly, electric vehicles. CN's network reaches into lithium-rich regions of Canada and we are actively working with our customers on seven large lithium mining projects, one of which has begun shipments with another in the advanced stages of development.

ALUMINUM PLANTS IN CANADA

CN serves all nine Canadian smelters, which, when combined, are the world's third-largest producers of primary aluminum after China and Russia.

Customer	Plant Location	Current Production Capacity (metric tonnes)
Alouette ¹⁾	Sept-Îles, QC	609,000
Rio Tinto Alcan	Alma, QC (Saguenay Power, QC)	467,000
Alcoa / Rio Tinto Alcan ²⁾	Becancour, QC	445,000
Rio Tinto Alcan	Kitimat, BC	408,000
Alcoa	Baie Comeau, QC	280,000
Alcoa	Deschambault, QC	260,000
Rio Tinto Alcan	Laterriere, QC	247,000
Rio Tinto Alcan	Grand Baie, QC	227,000
Rio Tinto Alcan	Arvida, QC	172,000
Total		3,115,000

1) Aluminerie Alouette consortium is made up of the following five shareholders: Rio Tinto Alcan (Canada, 40%), Austria Metall (Austria, 20%), Hydro Aluminium (Norway, 20%), Marubeni (Japan, 13.33%) and Investissement Québec (Canada, 6.67%) 2) Alcoa (74.90%), Rio Tinto Alcan (25.10%)

PICTURED: **Our Hamilton Minerals** Distribution Centre in Hamilton, ON is one of 16 strategically located metals distribution centres.

CN provides efficient and competitive supply chain solutions to reach a wide range of customers in the metals and mineral industry.

Outlook

General economic growth and higher demand for large-diameter pipe will drive steel production, including a possible U.S. infrastructure stimulus program. Aluminum demand is anticipated to rise as the metal is increasingly used in vehicle production and other applications.

CN is positioned to benefit from the favorable market outlook for most nonferrous minerals, but continues to assess any impact of geopolitical factors. The shift to longer hauls makes transporting aggregates by rail more competitive. Large-scale construction projects will generate more aggregates and cement shipments. The growing popularity of lithium-ion battery-powered devices is forecast to accelerate in coming years.



Financials

Metals and Minerals

Energy Materials in Review

THE OIL AND GAS SECTOR REMAINS A STEADY SOURCE OF GROWTH

Monitoring demand for frac sand

Large amounts of frac sand are used in the hydraulic fracturing process where it is pushed into wells under high pressure to hold the shale fractures open to free oil and gas trapped within the rock formations.

With direct rail access to over 20 million tons of annual processing capacity of Wisconsin Northern White sand, CN has invested over \$100 million in infrastructure upgrades to help create an efficient and highly competitive supply chain connection between our sand customers and energy producers in Western Canada and the U.S., including the Montney, Duvernay, Marcellus and Utica, and Bakken shale formations.

Following the 2015-2016 downturn in the oil and gas market, the shale industry modernized its drilling and tracking technology to stay competitive. Horizontal drilling techniques improved by increasing lateral lengths, adding more stages per foot and increasing the amount of sand pumped per stage. Particularly in Western Canadian shales served by CN, both horizontal wells fractured and total frac sand stages increased in 2018.

Shipping more steel pipe

We ship large-diameter pipes for pipelines and small-diameter pipes for oil and gas drilling. Following CN's construction and expansion of yards and sidings in Western Canada in 2018, shipments of both commodities showed moderate growth.

Outlook

Western Canada is expected to benefit from the construction of new oil and gas pipelines, such as the \$4.5 billion Coastal GasLink project for the LNG Canada project. The LNG Canada joint venture includes building a \$40 billion liquefied natural gas (LNG) export facility in Kitimat, BC, which will be fed by natural gas extracted from the Canadian northwest.

Another pipeline project that CN follows closely is the \$9 billion Trans Mountain pipeline expansion plan that projects to carry crude oil from Alberta to export terminals in British Columbia. CN is well-prepared to handle growth in the commodities required for these projects.



CN is benefiting from increasing demand for sand

CN SAND SHIPMENTS TO CANADIAN MARKETS (carloads) 49 027



Iron Ore in Review

DOMINANT IRON ORE TRANSPORTER ON THE GREAT LAKES

CN's seamless iron ore supply chain

CN's iron ore operation is an excellent application of our end-to-end supply chain mindset. By closely collaborating with our mine and steel mill customers. we transport iron ore from mine to mill entirely with CN assets.

CN handled 44 million tons of iron ore in 2018 with an operation that requires finely tuned end-to-end coordination: loading trains guickly at the mine and arriving at the dock on time, managing trains from one dock to another to load vessels guickly, vessels arriving and departing on schedule, and excellent operations management by everyone concerned.

Great Lakes Fleet is the industry leader

For over 100 years, GLF has been an industry pioneer and leader. With reliable vessels able to deliver up to 75,000 tons in all seasons, we carry any bulk commodity to any port on the Great Lakes and St. Lawrence Seaway.

Our principal commodities and trade routes include:

- and Lake Erie.
- most of the Great Lakes.
- Coal: Sourced from Lakes Erie,

Outlook

As the U.S. is expected to continue to drive demand for finished steel used in vehicles, consumer durables and nonresidential construction, the outlook for iron ore remains positive. In addition, a possible U.S. infrastructure stimulus program, combined with the expected construction of new oil and gas pipelines in Western Canada, could accelerate demand for finished steel and, therefore, support demand for iron ore.

This favorable economic outlook for iron ore demand coupled with the long life of the mines served by CN, will support continued solid volumes throughout CN's iron ore supply chain.

GLF operates a safe, highly-efficient fleet, continually enhanced to meet the needs of our customers.

PICTURED ABOVE: Great Lakes Elect vessel Arthur M. Anderson at the Two Harbor, MN, ore dock

• Iron ore: Sourced on Lake Superior and the Upper Peninsula of Michigan, and shipped to lower Lake Michigan

• Limestone: Sourced in northern Lake Huron, and shipped throughout

Michigan and Superior, and shipped throughout the Great Lakes.



100 CN

A Century of Stories

The Thunder Bay Port Arthur Ore Dock operated from 1944 until the late 1970s. Servicing the Canadian iron ore mines, CN is seen here unloading gondola cars in 1956.



Operations

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Financials

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Forest **Products**



KELLY LEVIS Vice-President, Industrial Products

Through continued investment in rolling stock and close relationship with our customers, and port, terminal transload and vessel partners, CN will enhance and develop new and innovative supply chain solutions enabling our customers to reach farther and grow their markets.

Market focus

CN's strong franchise allows our customers to maintain or even increase production in order to take advantage of available opportunities. Our industry-leading premium equipment, direct access into the U.S., and our extensive interconnection agreements, let us fully participate in the ongoing improvement of the U.S. housing market, particularly in regards to shipments of lumber, panels and siding.

We also work with our forest products customers to develop alternative markets in Asia, such as India and Japan.

REACHING FARTHER WITH OUR CUSTOMERS

Forest products have long been a part of CN's core business, utilizing multiple different and often complex supply chains. CN is proud to be a critical enabler and transport partner helping to move our customers' products within North America and around the world.

CN's direct access to West Coast ports capacity provides our customers the option to pivot towards the Asian market when U.S. demand slows.

The Port of Prince Rupert has the potential to ship more containerized forest products, especially lumber and woodpulp. The port is attracting additional steamship lines and transload facilities looking to benefit from a compelling service proposition, including reduced sailing time to/from Asia, fluid terminal operations, avoid truck congestion in the lower mainland Vancouver ports as well as fast and consistent rail transit into Central Canadian and U.S. markets.

We work closely with partner ocean carriers and forest products producers to provide "match-back" of international containers. Match-backs occur when CN loads an import container that would otherwise return to Asia empty with export products such as lumber, enabling steamship lines to cover some of the cost of shipping empty containers back to their home port.

Matching fleet to demand

To continuously provide car order fulfillment for our customers, we closely track demand by origin and destination regions, and the effect of respective market drivers. CN continuously adapts its fleet requirements based on the timeliness of customer forecasts and active demand. CN maintains the largest high-capacity centerbeam fleet in the industry.

With a view towards continuous improvement, CN is actively adapting and optimizing its ability to supply orders in an efficient and timely fashion, all the while optimizing fleet utilization.

CN's Sell One CN integrated service provides customers the flexibility of using our intermodal service and its extended reach through transload facilities to get their products to destination.



KEY FACTS

- Largest rail carrier of forest products in North America
- Nearly 14% of total CN revenue tied to the housing market
- Upgraded fleet of 22,300 premium cars
- PULP & PAPER Woodpulp, newsprint, printing paper, logs, wood chips, wood pellets, clay

LUMBER & PANELS

Metrics



For more information on CN's forest products operations, please visit www.cn.ca/forest-products

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\$1,886M **2018 REVENUES**

COMMODITIES

- Lumber, oriented strand board panels, plywood, siding, engineered wood products, timber mats
- repair and remodeling activity, industrial activity

MARKET DRIVERS

Residential construction,

LUMBER & PANELS

- PULP & PAPER
- Global consumption of paper, tissue and packaging



+0.7%

+1.3%

2 Markets

Markets

Prince Rupert

Vancouver

Prince Georg

Surrey

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Overview

Operations

Financials

Forest Products

Supply Chain at a Glance

THE FULLY INTEGRATED END-TO-END SOLUTION

CN serves the U.S. housing market with high quality Canadian lumber, panels and siding. Asia is the principal market for Canadian woodpulp and an attractive diversification option for Canadian lumber producers. Our 14 forest products distribution centers provide our customers with intermodal flexibility, forward inventory capability and truck alternative for mills that are not rail served.



Strategically located to move forest products across Canada and the U.S. and reach our customers' markets overseas

> CN's direct access to West Coast port capacity gives our customers an advantage in shipping to Asia, where demand is resurging

In line with our Operational and Service Excellence, we provide customers the flexibility of using our intermodal service and transload facilities

Over centerbeams



CN maintains the largest fleet in the industry to adapt to evolving customer demand



Located in key locations across our network to better serve our forest products customers

Edson

Calgary

Edmonton

Saskatoon

North Battleford

Bienfait 🔵

Winnipeg

Atikokan Thunder Bay

Chicago

loliet

🔿 Memphis

Jacksor

Detroit

Indianapolis

Mobile

New Orleans

Duluth

Chipper-Minneapolis/St. Paul Arcadia

CN'S FOREST PRODUCTS SUPPLY CHAIN

- Lumber and panels Pulp and paper
- Ports served by CN
- distribution centres • Wood pellet producers Intermodal terminals

Forest products

46 TOGETHER INTO OUR NEXT CENTURY



Working as ONE TEAM for cleaner energy

North American wood pellet production is expected to continue to grow throughout 2020 and 2021, and CN remains well-positioned to collaborate with customers in their expansion plans.

In 2019, European and Asian demand remains strong, but the Japanese market is driving the growth. Renewable energy targets implemented require a shift away from coal and nuclear with wood pellets posing as a key commodity to achieve the necessary reduction in carbon dioxide emissions. CN customers are actively engaged in securing long-term offtake agreements with European and Asian power producers.

Forest Products

Lumber and Panels in Review

WORKING WITH CUSTOMERS TO DEVELOP MARKET OPTIONS

Our transport of lumber and panels reflects our strong origin and destination franchise. We have direct access into some of the largest wood producing regions in the world. We also directly serve the U.S. housing market in the Midwest and South as well as two deep-water ports on Canada's West Coast for the Asian market.

Canadian lumber is coveted for its high quality as it is generally lighter, drier, easier to cut and nail, and is more durable. Tariffs on Canadian lumber contributed to higher costs for wood, which are fueling price increases for new single-family homes.

78%

OF 2018 CARLOADS OF LUMBER AND PANELS ARE DESTINED FOR THE U.S.

With new innovations developed by Canadian producers, such as engineered wood siding, and new markets cultivated, including India, CN is working right alongside producers to offer supply chain solutions that protect and grow market share.

The U.S. housing market puzzle

With renewed buyer confidence, new home sales have been steadily increasing in the U.S. since 2012. Year-over-year, housing starts increased 4.3% in 2018, reaching 1.25 million units.

Nevertheless, U.S. housing starts in 2019 are trending flat versus 2018 even with lower rates and inventory, job creation and Opportunities for Canadian producers rising wages. Lumber prices struggle to increase even amid supply curtailments. However, CN's franchise in North America favorably positions us to benefit from any upside in the diverse markets we deliver to: particularly to China, continue to be

residential construction, repair and remodeling activity, and industrial activity. Nearly 14% of CN's overall revenues are tied to the housing market, including lumber and panels, other materials needed to build and equip a new house, such as furniture and roofing shingles, and materials for renovating an existing home.

Lumber and panels growth

CN's lumber and panel shipments originate mainly in Western Canada and are destined to various markets in North America and offshore. Primary destination is the U.S., accounting for 78% of the business unit's carloads in 2018.

to diversify the market for Canadian lumber arose as a result of the downturn in U.S. demand from the recession back lin 2008. Lumber shipments to Asia.

Investing in industry-leading high capacity centerbeams

Ten years ago, CN started its research for optional draft energy management systems with regards to railcars, which culminated in a CN patent for a new arrangement that is currently being employed in a new centerbeam build.

The new-builds are 73-foot riserless centerbeams with a maximum load capacity of 286,000 lbs, allowing the car to manage typical yard impacts with 6.5 inches of stroke and unlike a traditional cushioned car, providing up to 3 inches of draft protection while running on a train. The new centerbeams are also equipped with the latest safety appliance standards, enhancing both comfort and safety of our crews.

Outlook

an important opportunity for CN's Western Canadian customers. These producers are likely to continue to capitalize on overseas opportunities and maintain a presence in Asia.

Engineered wood siding

CN continues to experience double-digit growth in the transport of engineered wood siding, an eco-friendly and durable alternative to natural wood, aluminum and vinyl siding. This product, made of wood fiber coated with resin and compressed to create a board of superior strength, is used primarily in the residential and remodeling market.

To take advantage of the growing remodeling trend in the U.S., an increasing number of mills are opening or restarting. CN works closely with customers and develops relationships with new ones to support this area of growth.

CN's competitive advantage includes our extensive reach into the fiber-producing regions, our large fleet of centerbeams required to ship long-length engineered wood siding, and our reliable transit times for prompt delivery of orders.

CN continuously monitors geopolitical factors, such as the application of U.S. tariffs on Canadian softwood lumber imports. These tariffs are considered to have leveled the playing field between Canadian and U.S. sources. However, Canada remains the primary supplier of softwood lumber and siding to the U.S.

The U.S. housing market is still expected to grow steadily over the next few years, driven by single-family housing. The number of single-family units is a key indicator of lumber demand as they require up to seven more lumber per unit than multi-family units. Access to more affordable fiber in Alberta, Saskatchewan, Ontario, Quebec and Eastern Canada is another variable that will play a key part in softwood lumber exports and for CN. We continue to work with customers to develop market options for their production, including the U.S.-based mills.



CN has extensive access to Canadian producers of lumber and panels, and we continue to improve our end-to-end service to enhance our competitive position with our diverse customer base.

100 CN

A Century of Stories

CN has a long history in northern British Columbia. Here, lumber is loaded into a CN boxcar at Giscombe, near Prince George, in 1947.



2 Markets

Overview

Markets

Operations

Financials

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Forest Products Pulp and Paper in Review

PARTNERING WITH CUSTOMERS TO GROW

CN's product offering continues to evolve and diversify, including our forward marking the 19th consecutive year of inventory and warehousing, car reload and high-velocity programs, and our intermodal options. Our market share over the trucking industry benefited from our equipment availability and superior service, counterbalancing reduced newsprint demand.

Demand for paper grades and woodpulp

Canada remains the second-largest pulp producer in the world, surpassed only by Brazil. Woodpulp is predominantly used in the production of paper, paperboard, tissue and other personal care products.

Due to the availability of alternate media sources, such as the Internet and social media, North American demand for

most paper grades continues to shrink, decline. Nevertheless, CN remains focused dominant in the overall retail market, on growing market share with its current customer base to help them remain competitive in their markets.

Tissue products and pulpboard, which is made up of containerboard used to package consumer goods, are the exceptions to the decline.

E-commerce driving the increase in demand for packaging

The containerboard market is being driven in part by the increasing trend of consumers purchasing large items online, which require bigger and stronger boxes for shipping. Containerboard is also used inside packages as protective material

to prevent damage in transit. As e-commerce continues to become the demand for packaging is anticipated to rise as consumers' behavior is shaped by the ready availability of goods online, from food items to furniture.

Tissue remains a growth story

Since 2007, worldwide tissue consumption has risen at an annual rate of over 5% as tissue is not easily substituted. The global demand for both packaging and tissue has increased steadily with economic growth, evolving consumption habits and scarce domestic wood fiber supply, notably in overseas markets such as China and, to a lesser extent, India.

Production of hardwood pulp, mainly eucalyptus, in Brazil, where significant investments in new mills and infrastructure continue to expand capacity, is expected to drive the bulk of the growth over the next five years, marking CN's future opportunities. The majority of CN-served pulp producers are located in Western Canada, but CN also plays a significant role by moving eucalyptus pulp from Brazil to consumers in North America via the Port of Mobile.

New leap of growth in wood pellet demand

Wood pellets are made from compacted residue from the lumber production process and can be used as fuel for power generation and for commercial or residential heating, opening future opportunities for CN. A significant portion of the global wood pellet production comes from Canada with a concentration of production in British Columbia.

+10%CAGR IN CN'S WOOD PELLET **VOLUME SINCE 2014**

Wood pellets have a very high combustion efficiency making wood pellet heat as one of the cleanest-burning, most renewable energy sources available.

Nevertheless, CN is experiencing a higher demand for greenfield wood pellet development in the southern part of its network.

CN shipped about 2.2 million tons in 2018, or 22,300 carloads. With the opening of a new production facility, CN wood pellet shipments increased by 5% in 2018. There are more projects being developed in Canada as the demand overseas continues to grow and the price remains advantageous.

The steady growth in wood pellet demand is expected through 2020, with the pace of demand that started to pick up in 2018 and new projects coming online in Japan. CN remains well-positioned to collaborate with customers in their expansion plans.



Continued rise in export demand for wood pellets





Outlook

Despite the overall downward trend for paper products, particularly for the printing and newsprint grades, demand for pulpboard and tissue is expected to increase and Canadian woodpulp production to remain stable.

While the wood pellet demand from the European market remains strong, the Japanese market is driving the majority of growth with new projects coming online following the 2011 Fukushima nuclear disaster. Renewable energy targets implemented a shift away from coal with wood pellets as a key commodity to achieve reduction in carbon dioxide emissions. CN remains well-positioned to collaborate with customers in their expansion plans for the expected growth in North American wood pellet production in 2019 and 2020.

52 TOGETHER INTO OUR NEXT CENTURY

Markets

Overview

Markets

Coal

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ALLEN FOSTER Vice-President, Bulk

With direct access to 13 mines and seven petroleum coke-producing facilities in Canada and the U.S., as well as five high-capacity export terminals, CN connects North American coal producers to markets around the world.

Canadian coal in the global market

Due to tumultuous swings in both supply and coal prices, the market for metallurgical and thermal coal is going through another evolution. In an everevolving global marketplace, coal quality is becoming an important factor for end users. Fewer impurities and lower

Ø For more information on CN's coal operations, please visit www.cn.ca/coal

FACILITATING A SUSTAINABLE COAL SUPPLY CHAIN

Operations

Financials

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Fluctuating worldwide supply and demand factors influence metallurgical and thermal coal prices, prompting North American coal mines to adjust their production levels accordingly. With producers focused on keeping costs low, CN facilitates a sustainable and reliable coal supply chain. CN leads a collaborative team-based approach, where every stakeholder from the mine to the port is linked.

sulfur content will keep Canadian coal in demand. CN is helping customers win in this new environment with a sophisticated world-class supply chain that supports growth for their products. Our collaborative service allows our customers to compete more effectively with U.S., Australian and Indonesian producers.

Reaching new markets with petroleum coke

Petroleum coke is a by-product of the oil refining process. Increase in demand for the high-energy and cost-efficient fuel from the cement, smelting and power generation industries are major factors driving the global petroleum coke market. As such, North American production is rising and CN is ready to serve the supply chain.

While Canadian petroleum coke is mainly exported to Asian markets through the West Coast, U.S. petroleum coke is also for export markets.

Illinois Basin Coal serving two distinct markets

Complementing the low-sulfur coal supplied from the Powder River Basin, producers of low-cost Illinois Basin Coal have the option of shipping directly to domestic utility plants that use sulfur scrubber technology. Alternatively, CN provides the only direct access unit train service from Illinois Basin mines to export terminals on the U.S. Gulf Coast at Convent, LA and Mobile, AL, which continue to build on our export footprint to Europe and Asia.

A Century of Stories

In 1930, a CN train loaded with coal leaves the Newcastle mine, about 100 km northeast of Calgary, AB, destined for Manitoba.





2 Markets

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Overview Markets

Coal Supply Chain at a Glance

CONNECTING GLOBAL MARKETS

CN is the only railway in North America with direct access to coal export terminals on the West Coast and the Gulf of Mexico. CN is able to extend the advantages of our extensive network to our customers through the flexibility of multiple terminals, enabling coal producers to better serve the Asian and European markets.



CN is the only railroad in North America with direct access to coal export terminals on the West Coast of Canada and the Gulf of Mexico

CN's unparalleled access to coal export terminals offer our customers flexibility and a fluid gateway to European and Asian markets

CN's dedicated Bulk Operations service group works with all supply chain partners to manage inventories at mines and terminals, including coordinating to meet vessel schedules



Supply chain advantage to the Asian market through our exclusive access to Ridley Terminal at the Port of Prince Rupert



CN's high capacity export terminals create direct access for 13 mines and seven petroleum coke-producing facilities



Chetwynd /illow Creel Brue Tumbler Ridge Wolverine Trend Grande Prairie Grande ton Edmonton Cardinal River Calgary Vancoviver WESTERN CANADIAN COAL MINES Conuma Coal (Willow Creek, Brule, Wolverine) Anglo American (Trend) CST Coal (Grande Cache) Coalspur (Vista) Teck (Cardinal River) Westmoreland (Coal Valley) Moncton) uebec Halifax Montreal Saint Johr

Canadian coal mines ready to serve global demand

CN's customers monitor fluctuations in the coal market to better anticipate future demand. Conuma Coal saw the potential for Canadian coal and was the first to bring back idled production. Conuma had purchased three coal mines in the northeastern British Columbia in 2016, and opened the Brule mine in 2016, the Wolverine mine in 2017 and the Willow Creek mine in 2018, offering a suite of sought after coal products to discerning steel producers.

CST Coal followed suit by purchasing the Grand Cache Coal asset and focusing on bringing quality product to the market with the reopening of the mine at the end of 2018.

2 Markets

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Financials

Coal **Canadian** Coal in Review

EFFICIENCY IN THE CORE OF OUR WORLDWIDE SUPPLY CHAIN

Efficiency through long-train operations

CN has the capability of running trains in excess of 200 railcars due to the construction of longer rail siding and use of new Alternating Current (AC) traction locomotives and Distributed Power. CN's train sets are modular in size, allowing for maximum flexibility between different mines. CN's conventional train size is 108 to 116 cars long, yet can be easily combined to run trains up to 218 railcars long. There is a reduction in number of loading days as a result of longer trains, thereby increasing the efficiency of terminals and overall throughput.

Growing terminal capacity

CN serves all three Canadian coal export terminals on the West Coast. Neptune and Westshore in Vancouver, and Ridley

terminals are currently undergoing or foreseeing plans to increase their terminal capacity, which in turn will support growth from our customers. As part of our capital projects, CN invested on the Vancouver and Ridley corridors to handle the increase traffic of coal trains.

Canadian coal on the move

The export Canadian coal market is rejuvenated. High guality metallurgical and thermal coal make Canadian supply desirable on the seaborne market. In Western Canada, metallurgical mines have restarted and a new thermal mine is about to open.

For Canadian coal, high calorific value coal with lower sulfur content is being adopted over lower quality coals in Asia. Westmoreland's Coal Valley has

withstood the fluctuations of the market and has been in continuous production for over 40 years, with planned capital projects to extend the life of the mine.

Outlook

CN is experiencing a resurgence in Canadian coal. Continuing global modernization is driving the demand for steel and power. There is a balanced demand for metallurgical and thermal coal, and both are expected to grow steadily in the near future. Canadian coal will have its position in the market place as a source for high quality, lower sulfur production and CN's franchise is wellpositioned to take advantage of these export opportunities.



Company	Mine	Type (mil	Estimated Capacity lion tonnes)	Status
Coalspur	Vista	Thermal	7.0	Opening
Westmoreland	Coal Valley	Thermal	4.0	Operating
Conuma	Brule	Metallurgical	2.5	Operating
CST Canada	Grande Cache Coal	Metallurgical	2.0	Operating
Teck	Cardinal River	Metallurgical	2.0	Operating
Conuma	Wolverine	Metallurgical	1.7	Operating
Anglo American	Trend	Metallurgical	1.5	Idle
Conuma	Willow Creek	Metallurgical	1.5	Operating

U.S. Coal in Review

SERVING BOTH DOMESTIC AND EXPORT MARKETS

Domestic demand

CN handles over 13 million tons of domestic thermal coal annually, with the Powder River Basin representing 100% of our domestic tonnage. CN acts as the delivering carrier handling coal-served power plants in the U.S. Midwest and Southeast. Due to economic factors, producers favoured the higher priced export market in 2018, which resulted in tougher competition to move Illinois Basin coal.

Export demand

Similarly, the U.S. export market has been challenged; with 30-year lows in commodity pricing stemming from a global oversupply of coal and further exacerbated by the strong U.S. dollar.

CN's all-rail supply chain directly serves the only Gulf Coast terminals that can receive

Increase export coal in the U.S. Gulf Coast

coal by rail (Convent, LA and Mobile, AL). Based on throughput capacity, these terminals, equipped with loop tracks to unload unit trains for stockpile or directly into vessels, have the ability to receive up to 20 million tons of coal annually. In 2018, CN moved 10.4 million tons of export coal to both Convent Marine Terminal and Port of Mobile to utility customers in Europe and Asia

Production of petroleum coke is on the rise as a result of continued increased use of heavy crude slates by refineries. CN is well-positioned to assist refineries in moving petroleum coke to domestic and export markets, and continues to gain market share. Since 2015, CN has tripled carloads of petroleum coke by marketing water-served terminals with the ability to receive petroleum coke by rail.

Through CN's access to Ridley Terminals at the Port of Prince Rupert, customers can access global markets.

CN U.S. EXPORT TONS TO GULF COAST (tons in millions) 10.4 8.5 2014 2015 2016 2017 2018



Petroleum coke opportunities

Outlook

U.S. market conditions for both domestic and export coal are stable. Several domestic producers have restructured and are holding production in check, resulting in a reduction of supply and a promotion of pricing discipline. The Affordable Clean Energy rule was passed in 2018 by the U.S. Environmental Protection Agency, allowing each state to regulate carbon dioxide emissions, thereby setting the stage for a more stable long-term market for coal.

For the export market to Europe, U.S. export pricing has improved since historic lows in 2016.

Foresight's Sugar Camp mine, with its capacity of 13.5 million to serves the expanding export market from Illinois Coal Basin

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Financials

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Grain and **Fertilizers**



DAVID PRZEDNOWEK Director, Sales & Marketing

Western Canadian grain production has held up remarkably well in the face of adverse growing conditions in recent years, particularly drought and dry conditions, demonstrating the power of improved crop management technologies and genetics. At the same time, CN has been investing strongly in capacityenhancing projects in Western Canada to meet increasing crop size and our customers' needs.

Emphasis on priority car supply agreements

Considering that grain sales contracts are entered into well in advance of shipment, security of priority car supply to meet demand is critical to grain shippers of every size. Over the last few years, CN's approach to car supply and planning has changed significantly, moving toward a model where over 90% of car supply is secured by shippers by using a variety of CN commercial products.

EVOLUTION AND INNOVATION IN THE GRAIN SUPPLY CHAIN

Innovation in crop production and handling starts can be found at every point in the grain supply chain. CN has a central role to play in delivering crops to end-users across North America and around the world, with our approach to business evolving with the changing Prairie grain handling landscape.

We offer a variety of products to meet different needs, from export and commercial fleet integration programs to year-round support, to single-use products, such as car auctions.

Evolution in approach to grain fleet

Growth in CN's car spotting program during the post-harvest peak has exceeded the proportional growth in Western Canadian crop production in the past decade, reflecting a more efficient and productive end-to-end supply chain. Concurrently, our approach to car management and planning has evolved, with steady growth in the use of shippercontrolled private cars to move grain in lanes where it is operationally efficient to do so. Changes in the regulatory framework have brought greater certainty to the investment climate for CN and we are modernizing our hopper car fleet, acquiring new generation high capacity hopper cars with greater carrying capacity.

Helping our customers win

CN is aware of the distinct needs and requirements of our Canadian and U.S. grain partners, economic factors that affect Canadian, U.S. and global markets, and the regulatory environments in which we operate. To respond to changing market trends and the needs of farmers, retailers and traders, we take careful consideration of our capacity, technology and competitive edge. As an example, with the demand for potash in the U.S. Corn Belt remaining viable, we successfully developed supply chain solutions to support our customers to gain market share through our routing advantage around Chicago using the former EJ&E lines.

With the desire to assist our customers to achieve their goals, we examine every factor that may affect our grain operations, be it internal factors such as our fleet or external factors such as extreme weather conditions.





D For more information please visit www.cn.ca/grain and www.cn.ca/fertilizer

2 Markets

Overview

Markets

Grain and Fertilizers

Supply Chain at a Glance

HELPING OUR CUSTOMERS FEED THE WORLD

CN believes in a collaborative approach to grain transportation, from shipping export grain, potash and processed products from the Prairies to ports in Prince Rupert, Vancouver, Thunder Bay, the St. Lawrence Seaway, and the U.S. Gulf Region to domestic flows from ethanol plants, corn processing facilities and canola/ soybean crush plants.

Key advantages

> With our reach to ports on three coasts, CN facilitates a competitive advantage for customers to meet growing demand in key markets in Asia and Latin America

> CN has access to the terminal in Duluth, MN and delivery of grain and processed grain products to barge loading facilities along the Mississippi and Illinois Rivers

> Stuffing facilities in the Prairies and other locations that load grain products into containers ready for export shipment are available to CN



CN is investing in new cars that are shorter and can carry a higher payload



Grain elevators are built on CN lines, 19 of which are exclusive to CN



These assets will improve overall support the growth of Canada's

PICTURED

GrainsConnect Canada has

complete with loop tracks.

built four new generation high

throughput elevators on the CN network in Western Canada

2 Markets

Grain and Fertilizers

Grain in Review

SUSTAINING THE GROWTH OF A RAPIDLY EXPANDING GRAIN INDUSTRY

Overview

Investment at origin and destination

The expansion of grain handling network in Western Canada has advanced rapidly in recent years, fueled mainly by strong grain handling and trading margins. Growth in canola crushing and other new processing capacity is fueling the increased movement of processed grain products on CN's network. Elevator networks are being modernized by well-established grain companies, with new entrants to the market, such as GrainsConnect Canada, building out

+40%

INCREASE IN CROP SIZE SINCE 2005

their grain handling footprint to support their global customer network. These new generation high-throughput elevators, many with loop track designs, present opportunities for faster grain receiving and loading operations.

Markets

CN has placed great emphasis on investments in our Western Canadian network in part to support growth in grain handling volumes. Technology at origin is evolving as CN implements a more efficient hook and haul model to improve overall velocity, especially along our busy corridor between Winnipeg and Edmonton. Our initiatives include improved track configuration, efficient remote-controlled switch technology and ensuring trains can be aired-up in advance of crew arrival.

Evolution and growth of containerized grain supply chain

The containerized grain supply chain is evolving and increasing in size and scale due to the diversity of commodities being exported in containers resulting from the ever-changing demands of consumers.

Increased grain handling infrastructure at CN's Prince Rupert corridor is facilitating overall grain handling capacity. Ray-Mont Logistics' transload facility in the Port of Prince Rupert is capable of receiving unit train-sized shipments of grain and processed grain products for container stuffing, and has fundamentally changed the canola meal pellet supply chain. Other container stuffing facilities continue to invest in infrastructure to facilitate more efficient rail operations and move more product to destination.

CN's source loading program for intermodal containers, representing incremental capacity to move grain, continues to evolve, consistently exceeding 1 million tonnes annually in Western Canada. Working closely with our steamship line partners, this program from our Saskatoon hub has experienced higher volume of containerized grain. In 2019, our supply chain partner will open its InterMobil terminal in Regina, increasing the capacity of CN's overall source loading program in Saskatchewan.

CN is evolving along with the U.S. grain market

Expansion in the grain barge fleet, along with increased availability of truck and rail grain-receiving capability along the Mississippi River, has altered trade flows and influenced transportation supply and demand economics.

CN's commercial freight solutions, including our car auction and fleet integration programs, combined with strong and reliable operational performance, give customers certainty to meet export sales. We are bringing other freight products to market that fit

25 to 50-car loaders for operational efficiency. We also work closely with shortlines to expand our reach to feed export demand.

Regulatory environment

A segment of Canadian grain is subject to regulation under Canadian legislation, but grain exported to the U.S. are excluded. Railroads are subject to a maximum revenue entitlement for regulated grain shipments. Each railroad is free to set freight rates for western grain shipments, but the Canadian Transportation Agency (CTA) determines total revenue, which is based on a statutory formula that takes into account volume and length of haul of grain movements in that crop year, and a CTAdetermined railway input price index.



TOTAL CANADIAN GRAIN PRODUCTION FOR THE 2000–2018 CROP YEARS* (million metric tonnes)



-Mont Logistics' transload facility in Prince Rupert is capable of receiving unit train-sized shipments of grain and grain products for container stuffing. Photo from Ray Mont Logistics



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Financials

With the boost in corn consumption since the mid-2000s, our U.S. grain franchise shifted to a balance between exports and year-round corn and soybean demand.

Outlook

Improved agronomic practices and crop enhancements are promoting ongoing crop yield improvement in North America. CN's strategy to move to a commercial framework with most of our grain customers and our commitment to working with all supply chain members provide a very constructive backdrop for grain shipments into the future.

CN monitors geopolitical factors that can affect grain demand. The production and trade flows of biofuels like ethanol continue to be strongly influenced by government policy. Steady growth is expected for other commodities such as corn.

PICTURED:

A fully loaded potash train moves westbound on CN's line.

GLOBAL POTASH DEMAND

Photo by CN Employee Tim Stevens

							2021F vs 2016
	2016	2017	2018E	2019F	2020F	2021F	CAGR
India	3.75	4.56	4.60	4.65	4.70	4.74	4.8%
Brazil	9.21	10.17	10.90	11.00	11.25	11.38	4.3%
China	14.33	15.64	14.93	14.90	15.60	15.70	1.8%
SE Asia	6.26	6.98	7.50	7.13	7.28	7.44	3.5%

SASKATCHEWAN POTASH PRODUCTION CONTINUES TO GROW

As an important plant nutrient, potash is a key player

to improve crop quality and increase food production.

Potential new producers in Canada continue with their

development plans, keeping in mind of the long-term

global demand and pricing of potash.

Belle Plaine SASKATCHEWAN POTASH MINES Existing Potash Mines Existing Potash Mines with Expansion Plans O Potential New Mines

Saskatoon

Cory

Patience Lake Colonsay

Regina

Laniga

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Sterhazy

Rocanville



Markets **Operations** Financials

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COMMITMENT TO OUR FERTILIZER CUSTOMERS

Positive long-term fundamentals for potash

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Markets

Grain and Fertilizers

Fertilizers

in Review

er for Western Car s or has access to most of th major potash mines in Saskatchewan. The majority of Canadian potash moves by rail to markets in the U.S. or to ports for export through Canpotex to overseas markets.

Potash demand continues to grow will play a critical role in meeting the increasing demand for food, underscoring solid demand for fertilizers. CN is wellpositioned to benefit from an increase in demand through our broad North American franchise and connections to key ports to reach growth areas such as

China, Brazil, India and Southeast Asia.

CN is growing with Canpotex

The majority of Canadian export volumes of potash are currently sold through Canpotex. CN is an integral part of Canpotex's supply chain and, as their share of the global potash market grows, share with them.

Intil recently, all of Canpotex's exports were shipped through terminals in Vancouver, BC (170-car unit trains), and Portland, OR (130-car unit trai

As these terminals run into capacity constraints and to provide Canpotex with additional flexibility, a third export option became critical to Canpotex's growth plans. In 2016, export capacity opened up at the potash terminal at the Port of Saint John, NB. CN worked with Canpotex to develop the potential of Saint John as a third export terminal for Canpotex, providing them with a competitive advantage into Brazil, one of the fastest growing fertilizer regions in the world.

The fit was perfect. CN had already invested to implement long-train operations in Eastern Canada by doubling the length of some rail sidings from 6,000 to 12,000 feet, acquiring new Alternating Current traction locomotives and expanding the use of Distributed Power. By taking advantage of available capacity in Eastern Canada and coordinating with the Port of Saint John, CN now runs a new standard of 205-car unit trains at 23,000 tonnes from Saskatchewan to the East Coast.

Fertilizer demand grows

With limited arable acreage and increasing pressure on agricultural production, fertilizer application is critical to achieve the quality and yields farmers expect. CN serves several fertilizer producers in Canada and the U.S., and ships various forms of nitrogen, phosphate and potash fertilizers to core agricultural and industrial markets.

Outlook

Nutrien, which resulted from the Agrium and PotashCorp of Saskatchewan merger in 2018, made a decision to convert its phosphate facility in Redwater, AB, to produce more ammonium sulfate. Nutrien already operates a large nitrogen plant at the Redwater site, and this move is expected to increase the site's ammonium sulfate capacity to 700,000 tonnes per year.

U.S. market.

to capitalize from the development of fertilizer distribution facilities on our network. Global demand for potash is expected to continue to grow and CN will continue working with Canpotex and potential new producers in Canada to help them capture market share as global food production increases. While the U.S. market remains viable, it is considered a mature market. However, as Saskatchewan producers reduce production costs, Canada has an opportunity to capture market share from imports entering the U.S. from Russia, Belarus, Israel and others. CN is well-positioned to assist our customers increase their penetration of the

The potash terminal located at Port Saint John, NB provides Canpotex with an east coast port option for better access to Central and South America, Africa and Europe.



Replacement capacity for phosphate to serve the Western Canadian market is expected to come from production from the U.S. and overseas, such as Morocco and Russia. CN has opportunities

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A Century of Stories

Aerial view of CN trains being loaded at an International **Minerals and Chemical** Corporation potash mine in Esterhazy, SK, in 1969.



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Financials

Intermodal



OFFERING THE BEST OF BOTH WORLDS TO OUR CUSTOMERS

Our close and collaborative partnerships with customers and supply chain partners have enabled the sustainable growth of our intermodal business. CN leverages the advantages of and ongoing investments in our network to provide continuous improvement and enable our customers to reach new markets.

Collaboration is key

As ONE TEAM of intermodal experts, we aim to render the highest level of cost-effective transportation and logistics services to our customers. Service level agreements are in place between CN and all port authorities and terminal operators we serve. Our collaborative approach ensures that import products are moved off the ports in a timely fashion, exports are delivered on time to meet vessel schedules, and processing of our trucking partners are expedited in our inland terminals.

With the investments in our 20 inland terminals with further expansions in 2019, CN's terminal partners at CN-served ports undertake strategic investments with the same objective of increasing capacity to meet our customers' needs. Ongoing

investment in our network and services, including the acquisition of TransX, allows CN to deliver additional value by providing new market opportunities for our customers.

Two distinct markets

CN intermodal is comprised of these two groups:

International – handles import/export container traffic on behalf of ocean carriers (also known as steamship lines).

Domestic – includes retail channels in Canada, wholesale channels in Canada and the U.S. as well as transborder shipments between Canada, the U.S. and Mexico. The acquisition of TransX will allow us to broaden our supply chain focus and to continue to offer the best services to our customers, from the first mile to the last mile.

Our business is enhanced by CN's supporting infrastructure, including a trucking division (CNTL), a centralized dispatch group, a fleet of over 10,300 containers and 9,500 chassis (excluding TransX), a logistics management team and an abundant supply of 40-foot containers from CN's Domestic Repositioning Program.

The benefits of CN intermodal

Various contributing factors to our success are fundamental to CN's compelling service offering, including fluid terminal operations, fast and consistent rail service to all major Canadian markets and important U.S. markets in the Midwest, quick and easy access in and around Chicago, and match-back programs to improve roundtrip economics.



A Century of Stories

CN's intermodal service has come a long way since the days of drive on/drive off Piggyback freight service. Photo: Toronto, ON, in 1956.







+6.0%

+6.0%

+4.9%

2 Markets

Overview

Markets

Prince Rupert

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Prince George

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Vancouver

Operations

Financials

Edmonton

Calgary

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Intermodal terminals

MEXICO

Logistics parks

Saskatoon

Winnipeg

Chippewa Falls

Arcadia

Thunder Bay

Joliet (

Decatu

Detroit

Indianapolis

Mobile

Chicago

Memphis

Jacksor

New Orleans

Supply Chain at a Glance

DELIVERING BEST-IN-CLASS SERVICE

The intermodal journey harnesses the global reach of vessels, the speed and efficiency of trains and the locality of trucking. CN's intermodal franchise aims to be a true supply chain enabler and provide efficient and innovative transportation products to our customers. With our 23 intermodal terminals located near ports and large urban centers, we, along with our supply chain partners, can access markets in North America and beyond.

Key advantages

> CN's intermodal service allows our customers to benefit from the cost and environmental savings rail delivers, which is four times more fuel-efficient than trucking alone.

> With CNTL, CN pairs the efficiency of rail with the added flexibility of trucking to better serve our local and regional customers.

Sailing from Asia, Prince Rupert is two days faster and Vancouver is one day faster than shipping to Los Angeles or Long Beach. Europe is closer to the Port of Halifax than other U.S. East Coast ports.



Including both domestic and CargoCool containers, facilitating CN's objective to grow



Enabling efficient delivery to the end market 1) As at December 31, 2018



International Domestic

Ports served by CN



Port infrastructure project in Canada's largest marine port

CN understands the importance of improving rail congestion issues, overall freight traffic and container dwell times at the Port of Vancouver. CN reached an agreement with the Government of Canada and the Port Metro Vancouver to upgrade key infrastructure necessary to increase capacity in the busiest global trade export gateway of Canada.

The north shore capacity projects, amounting to \$214M, include staging track and tunnel improvements with completion expected by the end of 2020. The south shore capacity projects, amounting to \$85M, consist of double tracking a four-kilometer section of rail with completion expected by the second half of 2021.
Intermodal

International Intermodal in Review



DAN BRESOLIN Vice-President, Intermodal

1.6M TEUs ANTICIPATED ANNUAL CAPACITY **OF PRINCE RUPERT BY 2021**

A TRUE SUPPLY CHAIN ENABLER

Through our market reach that gives us direct access to 15 port operations including the major ports of Vancouver, Prince Rupert, Montreal, Halifax, Saint John, New Orleans and Mobile, we are able to provide full transportation services to global ocean carriers and increase our international footprint.

Gateway terminal expansions

CN has exclusive access to the Port of Prince Rupert, the fastest-growing port in North America. Prince Rupert offers some of the shortest transit times to key markets like Chicago as a result of its proximity to Asia. DP World's Prince Rupert Terminal, which recently expanded from an annual capacity of

850,000 twenty-foot equivalent units (TEUs) to 1.35M TEUs, will further expand to handle 1.6M TEUs by 2021 and 1.8M TEUs by 2022.

Other ports have further capacity expansion plans in the next few years, including Deltaport in Vancouver with plans to expand from 1.8M TEUs to 2.4M by 2020 and Centerm in Vancouver to increase from 900K TEUs to 1.5M TEUs by 2022.

CN continues to evaluate new markets to connect and grow the menu of options for the ocean carrier community and their increasing vessel sizes. We are well-positioned to handle the resulting additional volumes from these expansion projects by building capacity ahead of demand with our capital investments in double track in Western Canada, locomotives and inland terminal capacity projects.

Inland terminal expansions

Terminal expansions consist of increased ground storage, additional intermodal container handling equipment and gate automation. Toronto, which represented 33% of 2018 international intermodal volumes, added 30% more capacity with the opening of Malport. Terminal expansions are also in progress in the key growth markets of Detroit, Chicago, Memphis, Montreal and Vancouver. In 2019, CN will have exclusive access to the privately owned East Regina intermodal terminal to provide other export market opportunities to our customers.

To accommodate greater anticipated demand, CN is planning to develop other inland terminals throughout the network to accommodate growing traffic volumes, in particular a new logistics hub in Milton, ON. The facility would benefit our customers and the regional economy by

providing needed inland terminal capacity, improving Central Canada's access to key transborder markets as well as the coastal gateways we serve.

Intermodal export growth

Our role as a true supply chain enabler paired with our ability to align steamship line container capacity with grain shipper demand resulted in significant growth experienced by CN's grain and specialty crop franchise. To improve round-trip economics by enhancing revenues and cost control, our ocean carrier partners are securing exports from the Prairies and grain shippers are using otherwise empty containers to grow their export supply chain and create surge capacity during periods of peak demand.

Seizing opportunities to increase exports from Vancouver to Asia

Western Canadian ports play an important role in connecting Canada to Asia. SM Line, a South Korean container carrier which operates a fleet of 21 container vessels, launched its Pacific Northwest service in 2018. SM Line chose CN as its Canadian rail partner and landed its first vessel, which has capacity up to 6,000 TEUs, at Fraser Surrey Docks in Vancouver in May 2018. Since beginning its Western Canada operations, volume levels have increased with approximately 80% of their imports destined to Canada and the balance is U.S.-destined freight.

CN connects Prince Rupert

North America's first dedicated ship-to-rail container terminal through our coast-to-coast rail network

CN continues to align our capacity with port terminal expansions to meet projected increases in U.S.-destined volumes.

Outlook

Growth in our international intermodal franchise is supported by our competitive advantages linked to our rail access to three North American coasts. Future expansions of CN-served ports and our steamship line partnerships not only provide new opportunities for our import/export customers, but also position us to benefit from additional trade volumes.

Canadian trade is expected to remain stable, with potential upside if global economic conditions strengthen materially.



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Financials

Domestic Intermodal in Review



GARY CROWTHER Director of Marketing, Domestic

NEXT GENERATION CARGOCOOL® CONTAINERS AND 992 NEW DOMESTIC CONTAINERS ADDED IN 2018, RESULTING IN OUR INTERMODAL FLEET OF 10,300 UNITS

INNOVATING TO CREATE FLEXIBILITY AND SUSTAINABILITY

CN's domestic intermodal network is a unique combination of rail service, trucking, warehousing and distribution. As we support both retail beneficial cargo line 40-foot containers in domestic owners directly as well as the wholesale community, our domestic intermodal business is evenly balanced between these two markets. We direct our supply chain perspective on collaboration with our customers and key partners. Enhancing the value that CN provides to our customer and their supply chains continues to be our focus.

CN's domestic intermodal franchise is comprised of a highly diversified portfolio of products and markets for customers across North America. We continue to expand our franchise, focusing on the

development of new markets, products and services. Over the years, we have become the largest user of steamship repositioning programs, diversified our network through improvements to our Mexico service, and continue to develop the automotive market.

Our collaboration with the wholesale community for specialized services to reach U.S. market beyond the CN rail network drives our areas of focus, which includes the expansion of our CargoCool® program and ongoing innovations in our key retail, manufacturing, less-thantruckload and full-load wholesale businesses. In 2018, CN became a full partner member of the Equipment Management Pool (EMP) domestic container program with Union Pacific and Norfolk Southern.

Expanding our intermodal supply chain services with TransX

With our drive to provide optimal and sustainable shipping solutions across North America, CN acquired TransX, our supply chain partner for many years. With this acquisition, CN will continue to deepen our supply chain focus and to offer the best services to our customers, from the first mile to the last mile. This transaction will support further expansion in the service-sensitive refrigerated transportation business and the safe and efficient movement of our customers' goods, helping them win in their markets.

We integrate CN's philosophy of working closely with all our partners within our domestic intermodal franchise by leveraging our competitive advantages to co-market new supply chain options with our strategic partners by developing new markets and working with existing customers, including commodity-based segments like grain to drive strategic marketing initiatives and new innovative product offerings. For grain and specialty crops, CN encourages more grain shippers and steamship lines to participate in our export grain intermodal program. To position ourselves for continued growth, CN began to increase support in the Saskatchewan market with the creation of an intermodal terminal in Regina, SK in 2018 set to be in service in 2019.

CargoCool[®]

CN is the first railroad to introduce a refrigerated program operating in Canada, the U.S. and Mexico that offers traceability and post-audit capability. CN CargoCool provides a fast, convenient, cost-competitive and eco-friendly approach to moving temperature sensitive goods.

In 2018, revenues contributed in excess of \$200 million. CN has been successful in expanding our service offering from frozen to fresh food, and our aim is to use our experience and capabilities in the cold supply chain to penetrate other high-value, service-sensitive segments, such as pharmaceuticals and cosmetics.

Given the growing global population and the continued growing demand for frozen processed food, CN anticipates increased demand in domestic intermodal services. Over \$20 million had already been invested by CN over the last few years to increase CargoCool capacity. In 2018, CN added another 100 next generation 53-foot refrigerated containers, bringing the CargoCool fleet to over 800 units, with plans to continue the acquisition program for these reefer units in 2019 to handle future growth.

CN's CargoCool provides superior reach, competitive transit times, critical remote monitoring through ReeferTrak[©], and seamless customs services that ensure our customers' cargo gets to the right place at the right time at the right temperature.



CN is able to offer seamless offline service to our customers thanks to the flexible nature of intermodal and CN's extended trucking arm.

Outlook

Continued growth is expected for CN's domestic intermodal franchise, driven in part by strength in domestic Canadian and transborder road-to-rail conversion. Additionally, full partnership in the EMP program, multiple service offerings to/from Mexico and capacity challenges in the long-haul trucking industry are expected to contribute positively. CN expects economic indicators that encourage growth, such as stabilizing housing starts, to remain positive. Our outlook leverages the service excellence of CN's rail and terminals operations, as well as the extended abilities of our partners to provide supply chain solutions. **Financials** <

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Automotive



WILLIAM (BILL) REICHARD Assistant Vice-President, Automotive

Driving supply chain efficiencies

CN delivered 2.4 million finished vehicles of various shapes and sizes in 2018, including commercial vans, SUVs, crossovers and sedans. CN continues to invest in equipment and infrastructure to drive growth, meet customer expectations and be responsive to the changing sales mix in the automotive market. CN is investing in and delivering multi-configuration auto rack cars to accommodate changes in consumer demand and shipping requirements. CN also participates in dedicated fleets of specialized equipment to ship larger, high-roof automobiles.

EXTENDING OUR AUTOMOTIVE SUPPLY CHAIN REACH

Connecting to the automotive world is an exciting challenge. Can we reach farther? How responsive can we be to consumer preference? How can we help our customers grow their market? CN's goal is to provide consistent and reliable service through proactive communication and continuously deliver.

Since 2017, we have added 20% capacity to our bi-level fleet as a response to the growth in SUV and light truck volumes. At our auto compounds, we have invested heavily in track and infrastructure to increase railcar spotting, reduce switching and dwell times, and create the ability to offload and reload vehicles guickly. An electronic gate program that provides haul-away carriers quicker entry and exit is also being implemented.

In the auto parts business, we transload 40-foot import containers into 53-foot containers to minimize the empty flow of equipment to and from Western Canada and Detroit.

Capitalizing on market opportunities

Over the years, CN's market share in Canada has grown and we are well-positioned to support the importing and exporting of vehicles to and from the Pacific Rim and Europe, as well as opportunities in the U.S. and Mexico. With a new auto compound in the Port of Mobile in 2020, we expect opportunities for north to south traffic for short sea options to handle volumes from Mexico.

We invested in our port facility in Halifax, NS in 2018 for more ground capacity. Vehicle traffic at the facility has grown 16% over the last three years. With the new Comprehensive Economic Trade Agreement (CETA) between Canada and Europe, CN is strategically aligned to support growth between the two continents.

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For more information on CN's automotive operations, please visit www.cn.ca/automotive

A Century of Stories

A brand new 1957 Chevy Bel Air is unloaded through the wide end-doors of a bi-level auto carrier, a CN innovation, in Moncton, NB, in 1956.







+1.7%

2 Markets

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Overview Markets

Operations

Prince Rupert

Vancouver

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Financials

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Edmonton

Calgary

Automotive facilities

Assembly plants

Parts plants

Saskatoon

Winnipeg

Thunder Bay

Chicago

Markhan

Memphis

Canton Nissan

Mobile

New Orleans

Jackson

Sarnia 🥑

Detroit

Automotive

Supply Chain at a Glance

CONNECTING THE AUTOMOTIVE MARKET

CN serves a total of 18 vehicle assembly plants and ports, accounting for 25% of North American production, across the three coasts. We take a balanced approach to efficiently move eastbound and westbound traffic for optimal fleet utilization. Our network allows us to distribute finished vehicles and auto parts to major population centers in Canada and Central U.S.

Key advantages

CN's unique three-coast network enables imports and exports of finished vehicles and production/aftermarket parts globally

CN's intermodal service offers an efficient transport option of auto parts from domestic and international suppliers

≥ CN arranges all aspects of the automotive supply chain including ocean, rail, truck, transload, customs, customer service and billing



Enabling CN to accommodate higher volume of vehicles and securing capacity



CN's fleet of multi-level cars, helping CN to stay responsive to greater demand

CN'S AUTOMOTIVE SUPPLY CHAIN

Finished vehicles

(f) Ports served by CN



ONE TEAM. ONE GOAL. A robust launch

Planning a new vehicle launch is a process that starts long before production at the assembly plant. Three years ago, CN and Ford Motor Co. collaborated to develop a rail supply chain to support the launch of the all new Ford Ranger.

CN helped design a solution for inbound parts and an offsite rail loading facility for finished vehicle distribution. Our ONE TEAM approach helped achieve a robust launch. CN's operational dedication in support of plant production and outbound distribution illustrates our commitment to our customer partners.

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Automotive

Finished Vehicles and Auto Parts in Review

EFFICIENCY IN THE NORTH AMERICAN SUPPLY CHAIN

Growing demand for finished vehicles

Spring marks the peak season for sales and vehicle shipments in the finished vehicle business. During this period, the availability of both railcars and compound space can become very tight. CN is continually looking for ways to generate the required capacity to handle the business in the most efficient manner any time in the year. As a result, CN continues to invest in infrastructure, rolling stock and technology to enable growth in the dynamic automotive business.

\$34M

INVESTED IN OUR AUTO COMPOUNDS TO SUPPORT

Investing to accommodate growth

CN's franchise is geared to SUV and light truck production, which currently accounts for 70% of all finished vehicle sales in North America. To accommodate expected light vehicle sales, CN has invested 20% more capacity to our bi-level fleet since 2017. CN also has a fleet of multi-purpose railcars that can be changed from bi-level to tri-level depending on consumer demand.

Continuing plans to support capacity

CN has invested more than \$34 million in the last two years into automotive facilities. Significant improvements at Calgary, Halifax, Montreal and Toronto have helped to support the growth in our automotive business.

To generate greater efficiencies within the existing footprint of our auto compounds, CN is implementing geographic baying of vehicles, which lets haul-away drivers load vehicles and exit the compounds more quickly.

Improving service to customers

CN understands the importance of quality and fast transit times for our automotive customers as well as ensuring faster asset turns on our multi-level fleet. We continuously seek innovative solutions and are redesigning our train service in certain corridors to take advantage of direct service for a quality and consistent ride.

Moving auto parts to market

A large number of auto parts originate overseas in containers, including Mexico. CN moves auto parts for customers in box cars, as well as domestic and international containers. Because of our network reach to Canadian ports and our majority share of production facilities serving Canada, CN is well-positioned to participate in the end-to-end supply chain.

CN has the majority share of steamship lines calling on Canadian ports. We handle:

- Containerized parts for import/export through Prince Rupert, Vancouver, Montreal, Halifax and Mobile and New Orleans; and
- 53-foot domestic containers throughout North America direct and through our transload operations, converting 40-foot to 53-foot containers where it adds value to our customers.

CN's intermodal service has the flexibility and fleet capacity to handle growth.

2,000

SHIPMENTS OF AUTOMOTIVE PARTS PER WEEK EN ROUTE TO NORTH AMERICA

Managing global shipments of auto parts

Through CN Supply Chain, we offer services to manage the movement of auto parts from origin supplier to the destination production plant. CN handles all aspects of the supply chain, including the ocean, rail, truck, transload, customs, customer service and billing.

For time-sensitive, high-value auto parts shipped in containers, dedicated customer service is provided by CN's Auto-Desk. We manage the supply chain to accommodate the "just-in-time" inventory strategy of automotive manufacturers. Roughly 2,000 shipments per week en route to North America are tracked by the Auto-Desk, ensuring the expeditious transfer of parts to production plants.



North American SUV and light truck sales outpace cars







The automotive market will look very different in the next few years. Our team at CN is well-positioned to capitalize on these changes.

Outlook

North American light vehicle sales have flattened since the peak at 21 million units in 2016. Sales are expected to continue around the 20 million unit mark with consumer preference mainly for SUVs and light trucks. CN maintained its share of finished vehicle volumes including new pieces of traffic secured in 2018. Our focus will be on further nurturing our market reach through partnerships and developing new facilities to increase our share.

Manufacturing volumes of auto parts are expected to follow finished vehicle production and stabilize at peak 2016 levels. CN has the robust international and domestic intermodal franchise required to capture a greater participation in the auto parts market.

Markets

Operations

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Financials

Operational



ROUTE MILES



RAILROAD-CONTROLLED ACTIVE

CARS ON ANY GIVEN DAY



BRIDGES OWNED AND MAINTAINED BY CN

For up-to-date weekly key operating metrics, please visit www.cn.ca/investors/ key-weekly-metrics

PURSUING OPERATIONAL AND SERVICE EXCELLENCE

As the pioneers of Scheduled Railroading, our operating model is still based on this strong foundation. Along with our well-established supply chain strategy, we focus on operating safely and efficiently while providing a high level of service to our customers.

We operate with a disciplined mindset whereby CN handles individual rail shipments according to a specific trip plan to meet our customer commitments. Our aim is to run more efficient trains, produce higher network velocity and reduce dwell times at terminals and yards.

We understand the importance of balancing our drive for productivity with enhanced customer service. Working as ONE TEAM with customers and supply chain partners, we strive for one goal: continuous improvement of information sharing, problem solving and execution.

CN is making record capital investments to improve the safety and resiliency of the network as well as increase capacity to enable growth. Technology has an important role to play in CN's future. We are leveraging recent advancements to improve inspection technology for our trains and tracks. We are also providing mobile devices to our carmen and conductors as well as developing smart network planning solutions and autonomous detection systems to digitize operations and drive safety and productivity improvements.



Regional performance



SOUTHERN REGION (millions of GTMs per route mile)



3

Financials

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Western Region



JAMES THOMPSON Vice-President, Western Region

KEY ADVANTAGES

> Access to fastest growing port – Exclusively served by CN, the Port of Prince Rupert, the closest port to Asia, offers a one to two-day transit advantage versus the Ports of L.A./Long Beach.

Low grades – CN enjoys the lowest grades of any railroad through the Rockies, allowing us to deliver our customers' cargo more safely and efficiently while maximizing train length and fuel productivity, even in winter.

> Increased capacity – In 2018 and 2019, CN is investing at a record pace to serve our customers with more efficient long-train operations by extending sidings and doubling sections of track to create more places where trains can meet

BUILDING FOR THE FUTURE

CN is building for the future with large capital investments in long-term safety and capacity to meet growing traffic across the region. CN invested \$1.3 billion in Western Canada in 2018 and plans to invest another \$1.1 billion in 2019, including key track expansion projects and new equipment to help us deliver superior service to our grain, forest products, intermodal and industrial customers.

Investing in safety

We are leveraging recent advancements to improve inspection technology for our trains and tracks. Our new Automated Inspection Portals (AIPs) feature ultrahigh-definition cameras and infrared lighting that capture a 360° view of a train travelling through the portal. In 2019, seven AIPs are expected to be operational throughout our network: 4 in Winnipeg, 1 in Toronto, 1 in Fulton and 1 in Memphis.

We are adding autonomous track inspection cars to improve inspection reliability, provide richer data analytics, generate predictive models and drive preventative maintenance. We are also providing mobile devices to our carmen and conductors to make it easier for them to access operating and safety rules and documents.

We are continuing to expand our fleet of air repeater cars that help maintain air pressure in the train brake lines during bitterly cold weather.

In partnership with labor unions, new conductor's skills development and assessment continues for six months after gualification. Employees return to the CN Campus training facility throughout their careers for refreshers and to train on new technology.

Energy customers are expanding

Two new propane export terminals at the Port of Prince Rupert, one operational in 2019 and the other expected to open in 2020, will be exclusively served by CN from northwest of Edmonton. There are also three new petrochemical plants announced in this region. Western Canadian coal opportunities continue with the opening of three mines in 2018 and 2019.

Improving service to grain customers

We are leveraging our investments in longer sidings, high-horsepower locomotives and new-generation grain hopper cars with up to 10% more capacity per car to increase capacity and improve service to our grain customers.

Our partners are investing as well. Grain terminals are enhancing throughput by constructing new elevators with long loop track designs. In fact, 80% of grain elevators built since 2015 and to be built in Western Canada will be on CN's network.





CN's energy customers in the Alberta Heartland are expanding

Increased demand from propane shippers is supporting the development of two new propane export terminals at the Port of Prince Rupert, one opened in 2019 and the other expected in 2020. With the collaboration of our supply chain partners, these new terminals will be exclusively served by CN unit trains from production facilities in the Alberta Heartland northwest of Edmonton. In this region, there are also three new petrochemical plants announced for completion in the 2021-23 timeframe. These developments are expected to increase the number of CN carloads moving from the Alberta Heartland to the Port of Prince Rupert.

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Operations

Financials

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Eastern Region



FRANCOIS BOUCHER, General Manager Network Operations - Eastern Region

KEY ADVANTAGES

Port of Halifax advantage – CN is the only railroad to

serve all major ports in Eastern Canada, including the Port of Halifax, which has the shortest transit time from Europe on the Eastern Seaboard and is only two days by rail from Toronto.

Expansive reach –

CN's Eastern Region extends from Winnipeg through Canada's industrial heartland in Ontario, deep into the metals, minerals and timberproducing regions of northern Quebec, continuing east into the Maritimes and the Port of Halifax.

Flexible distribution **network** – CN's extensive network of intermodal terminals, autoports and transload facilities enables non-rail-served shippers and receivers to benefit from rail transportation's cost and environmental advantages.

PREPARING FOR THE NEXT WAVE OF GROWTH

Reaching service-sensitive markets

CN is focused on growing through supply chain innovation and strategic investments. To create more efficient solutions for our customers for the long-term, we invest time and capital, especially for those who compete in service-sensitive markets like automotive and consumer goods.

A top employer in Montreal

CN was recognized as one of Montreal's top employers of 2019 by Canada's Top 100 Employers for the third consecutive year. We were chosen for our commitment to employee development and community involvement. Our people are what differentiate CN as a world-class transportation company. Giving back to the communities we work in is not a slogan, it is a way of doing business for CN, and our employees take that to heart.

Also recognized as one of Canada's Best Diversity Employers in 2019, CN employs close to 3,000 people in the Montreal region and nearly 8,700 in all of Eastern Region.

Investing for tomorrow

CN continues to invest in new equipment and major facilities such as the Brampton Intermodal Terminal and MacMillan Yard near Toronto. Over the past few years, CN invested in our main line corridor in Northern Ontario by installing sections of double track and extending sidings to accommodate longer, more efficient trains. In 2018, CN took over three shortlines in the Greater Toronto and Hamilton Area (GTHA) to improve access to key transborder markets and coastal gateways.

The GTHA is the fastest growing area in Canada, with a population expected to grow to 10 million by 2041. To respond to the projected growth in customer demand, CN needs to expand. CN plans to invest \$250 million to build the Milton Logistics Hub, key to connect Canada and the GTHA with international markets.

The project is being assessed through a comprehensive federal review process, which strongly encourages public participation. A decision on the project is expected to be made in early 2020 followed by a two-year construction period. The Milton Logistics Hub is expected to drive economic, environmental and social benefits across Canada. More information on the project is available at www.cnmilton.com.

As we expect solid freight volumes in the years ahead, CN is investing \$886 million in 2019 in Eastern Canada, improving network safety, capacity and fluidity. With this expectation, our strategy includes acquisitions that can drive incremental volumes onto our underutilized network from Halifax all the way to Chicago with the potential to develop a Prince Rupert model of the East.



CN is the sole railroad to serve the Port of Halifax, which is just two days by rail from Toronto.

EASTERN REGION FACILITIES





Replicating Prince Rupert's success in the East

CN has helped to create the fastest growing container terminal on the West Coast (Fairview in Prince Rupert) and, thanks to our action-oriented approach to growing volumes on our eastern network, CN is well-positioned to replicate this success at the Port of Halifax.

With the fastest transit times from Europe of any port on the East Coast, the Port of Halifax is a growing force in global trade. Via CN, the only rail connection from the Port of Halifax, the port is just two days from hubs like Toronto and Montreal, giving cargo ready access to major markets in Canada and the U.S. Midwest.

St. John's 🔴

KEY FACTS

Moncton

18

Halifax

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- CN's corporate headquarters is located in Montreal, QC
- Eastern Region is home to CN's two largest inland intermodal terminals (Brampton and Montreal) and our largest classification vard (MacMillan Yard near Toronto)
- CN serves four deep water ports in the Eastern Region: Halifax, Saint John, Montreal and Quebec

- ▲ Main yard
- V Hump yard
- 🛧 Car / locomotive repair shop
- Automotive
- CargoFlo[®]
- Forest products distribution centre
- Intermodal termina
- Logistics park
- O Metals and minerals

(1) Ports served by CN

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Financials

Southern Region



DEREK TAYLOR Vice-President, Southern Region

KEY ADVANTAGES

Chicago outer belt – With the full integration of the former EJ&E network, CN has the ability to link all five of our rail lines entering Chicago from all directions into one seamless system, resulting in higher throughput and capacity.

Energy market

opportunity – CN is prepared to seize the overall demand in North American energy markets. Leveraging CN's Chicago, three-coast advantage and capacity improvements on the Midwest division has created a dependable supply chain between the ports on the three coasts.

Building for the future – CN is investing to optimize the overall capacity and speed of our U.S. network with the intent to capture new market opportunity. The combination of an optimized network and operational acumen will set up CN for future success.

NETWORK OPTIMIZED FOR SPEED AND MARKET OPPORTUNITY

CN's Chicago advantage

CN's acquisition in 2009 of the former Elgin, Joliet and Eastern (EJ&E) network that encircles Chicago has allowed our trains to bypass congestion on the inner city corridors. This has created an important competitive advantage for CN with the ability to reduce overall delivery times by 24 to 36 hours. CN is the only railroad in Chicago not heavily reliant on belt roads to deliver traffic to interchange points. Our trains now move twice as fast through Chicago, giving us a minimum 24-hour advantage over the competition.

The integration of the former EJ&E network involved investing hundreds of millions of dollars on infrastructure improvements, including upgrades for capacity of the former EJ&E's Kirk Yard in Gary, IN. With this investment in Kirk Yard, automotive and intermodal traffic can be streamlined at Markham Yard and manifest traffic classified at Kirk Yard, enabling us to keep our dwell time to a minimum and increase velocity.

Investing in our network

As a true backbone of the economy, CN continues to build for the future with strategic capital investments in safety and capacity. These improvements will continue to improve the velocity and the resiliency of our network. In recent years, CN invested in additional track and intermodal container lifting capabilities at Ranier, MN to expedite customs inspections and avoid bottlenecks in transborder shipments. In five key states on our network, CN performed work to lengthen existing sidings to improve network capacity and added strategic yard capacity to seize energy market opportunities.

Optimizing for speed

CN constantly monitors terminal and network capabilities and capacities to improve customer service and end-to-end supply chain speed. We optimize the routing of customer commodities and traffic by sending customer freight to areas in our network designed to handle that type of commodity. For example, we developed the export coal supply chain between Southern Illinois and a Baton Rouge area shipping terminal. This optimization results in faster train speed from origin to destination, improving the overall speed of customers' goods through the supply chain, therefore supporting our customers to be more efficient and competitive.

CN looks forward to maximizing future opportunities to leverage our Chicago and three-coast advantage. This includes projects on the former EJ&E to match existing traffic levels and prepare for future growth through this critical area.







The U.S. federal government has mandated installation of Positive Train Control (PTC) on certain rail lines. CN is progressing on track with targets filed with the Federal Railroad Administration (FRA), including training employees, equipping locomotives, installing radio towers, and completing track segments. All PTC equipment has been installed and all employees have been trained.

Efforts are currently focused on testing and implementation on each required subdivision. Over 50% of all PTC mandated track miles are currently in service running PTC. In total, CN plans to invest U.S.\$1.5 billion to implement PTC on approximately 3,500 route miles of track by 2020.

KEY FACTS

- About one-third of our rail network and employees are located in Southern Region
- Roughly one out of every four CN carloads originates, terminates or travels through the Chicago hub
- Homewood, a Chicago suburb, is home to CN's U.S. corporate headquarters and a US\$25-million state-of-the-art training centre, which opened in 2014
- 🔺 Main yard
- ▼ Hump yard
- 🛧 Car / locomotive
- repair shop
- CN Campus training facility
- Automotive
 CargoFlo[®]
- Forest products distribution centre
- Intermodal terminal
- Logistics park
- O Metals and minerals

🕀 Ports served by CN

Financials

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Financial Overview



GHISLAIN HOULE Executive Vice-President and CFO

\$14,321 M

TOTAL REVENUES



\$2,514 M

FREE CASH FLOW ¹⁾

BUILDING ON A STRONG FOUNDATION

Formulating compelling business plans, investing capital in innovations to drive growth and efficiencies, and making the right financial decisions to support these initiatives determine a company's success in the long haul. Over our 100-year history, CN's success is supported by a track record of consistently strong financial performance underpinned by long-term growth, enabling sustainable shareholder value creation.

We are proud of our achievements: amongst the best industry operating ratio, solid returns on invested capital¹⁾, and 23 consecutive years of increasing dividends to reward our shareholders. With Scheduled Railroading embedded in our DNA, CN is building on this foundation, and continues to focus on executing our strategies and initiatives with the same drive and discipline.

Pursuing organic and inorganic growth to extend the reach of our network with revenue opportunities, deploying technologies to improve cost efficiency, and continuing to add capacity on our unique three coast network—we believe these initiatives differentiate CN in the North American transportation and logistics industry.

We have accomplished a great deal in our 100 years and we expect to continue to share our future successes with our shareholders as we move forward into our next century.

Quarterly Consolidated Statements of Income

Unaudited (\$ millions, unless otherwise indicated) Q1 Q2 REVENUES 3,206 3,329 3 **OPERATING EXPENSES** Labor and fringe benefits 659 607 Purchased services and material 440 432 Fuel 342 329 323 Depreciation and amortization 326 Equipment rents 101 103 117 Casualty and other 117 Total operating expenses 1,982 1,914 1,415 1 **Operating income** 1,224 (123) Interest expense (122) Other components of net periodic benefit income 79 80 Other income 2 1 1,183 1,373 1 Income before income taxes Income tax recovery (expense) (299) (342) Net income 1,031 884 Operating ratio 61.8% 57.5% 57 EARNINGS PER SHARE (\$) Basic 1.16 1.36 Diluted 1.16 1.36 WEIGHTED AVERAGE NUMBER **OF SHARES** (millions) Basic 761.3 756.1 7 Diluted 764.5 759.7 7 Dividends declared per share (\$) 0.4125 0.4125 0.4

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For more information on our financial results, please visit www.cn.ca/investors/ financial-results

2018					2017		
Year	Q4	Q3	Q2	Q1	Year	Q4	Q3
14,321	3,808	3,688	3,631	3,194	13,041	3,285	3,221
2,860	791	707	648	714	2,536	665	605
1,971	527	485	478	481	1,769	473	424
1,732	466	437	436	393	1,362	379	312
1,329	346	330	330	323	1,281	316	316
467	115	127	112	113	418	107	107
469	111	110	108	140	432	120	78
8,828	2,356	2,196	2,112	2,164	7,798	2,060	1,842
5,493	1,452	1,492	1,519	1,030	5,243	1,225	1,379
(489)	(122)	(121)	(124)	(122)	(481)	(117)	(119)
202	70	70	70	77	245	70	00
302 376	73 93	76 48	76 229	77 6	315 12	76	80 5
5,682	95 1,496	40 1,495	1,700	991	5,089	1,188	5 1.345
5,002	1,490	1,495	1,700	391	5,069	1,100	1,545
(1,354)	(353)	(361)	(390)	(250)	395	1,423	(387)
4,328	1,143	1,134	1,310	741	5,484	2,611	958
61.6%	61.9%	59.5%	58.2%	67.8%	59.8%	62.7%	7.2%
5.89	1.57	1.55	1.78	1.00	7.28	3.50	1.28
5.87	1.56	1.54	1.77	1.00	7.24	3.48	1.27
734.5	728.4	732.7	736.0	741.2	753.6	746.2	751.1
737.7	731.3	736.2	739.1	744.2	757.3	750.0	755.0
1.8200	0.4550	0.4550	0.4550	0.4550	1.6500	0.4125	4125

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Financials

Quarterly Consolidated Balance Sheets

Unaudited								
(\$ millions)								
				2017				2018
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
ASSETS								
Current assets								
Cash and cash equivalents	265	131	109	70	242	394	317	266
Restricted cash and cash equivalents	459	461	482	483	483	485	492	493
Accounts receivable	903	899	973	984	1,039	1,078	1,127	1,169
Material and supplies	412	453	422	424	521	558	563	557
Other current assets	270	213	137	229	396	327	262	243
Total current assets	2,309	2,157	2,123	2,190	2,681	2,842	2,761	2,728
Properties	33,686	33,656	33,460	34,189	34,695	35,479	35,880	37,773
Pension asset	1,061	1,160	1,260	994	1,112	1,216	1,304	446
Intangible and other assets	274	272	261	256	270	268	264	267
Total assets	37,330	37,245	37,104	37,629	38,758	39,805	40,209	41,214
LIABILITIES AND SHAREHOLDERS' EQUITY								
Current liabilities								
Accounts payable and other	1,643	1,733	1,753	1,903	1,807	1,972	1,996	2,316
Current portion of long-term debt	1,563	1,815	1,723	2,080	2,555	2,458	1,823	1,184
Total current liabilities	3,206	3,548	3,476	3,983	4,362	4,430	3,819	3,500
		-	-	-	-			
Deferred income taxes	8,586	8,630	8,606	6,953	7,152	7,320	7,457	7,480
Other liabilities and deferred credits	605	589	568	590	598	566	556	501
Pension and other postretirement benefits	690	685	678	699	701	704	700	707
Long-term debt	9,361	8,742	8,691	8,748	9,357	9,416	10,071	11,385
SHAREHOLDERS' EQUITY								
Common shares ¹⁾	3,635	3,625	3,613	3,613	3,589	3,629	3,624	3,634
Common shares in Share Trusts	(113)	(113)	(113)	(168)	(137)	(137)	(137)	(175)
Additional paid-in capital ¹⁾	390	404	415	434	406	393	401	408
Accumulated other comprehensive loss	(2,357)	(2,416)	(2,522)	(2,784)	(2,615)	(2,467)	(2,534)	(2,849)
Retained earnings ¹⁾	13,327	13,551	13,692	15,561	15,345	15,951	16,252	16,623
Total shareholders' equity	14,882	15,051	15,085	16,656	16,588	17,369	17,606	17,641
Total liabilities and shareholders' equity	37,330	37,245	37,104	37,629	38,758	39,805	40,209	41,214

 In the fourth quarter of 2018, the Company changed its presentation with respect to the settlement of equity-settled awards when purchasing shares on the open market, on a retrospective basis. Comparative balances have been reclassified to conform to the current presentation. See Note 14 – Share Capital in the Company's 2018 Annual Consolidated Financial Statements available on CN's website, <u>www.cn.ca/investors</u>, for additional information.

Quarterly Consolidated Statements of Cash Flows

(\$ millions)										
					2017					2018
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
OPERATING ACTIVITIES										
Net income	884	1,031	958	2,611	5,484	741	1,310	1,134	1,143	4,328
Adjustments to reconcile net income to net cash provided by operating activities:										
Depreciation and amortization	323	326	316	316	1,281	323	330	330	346	1,329
Deferred income taxes	145	134	129	(1,603)	(1,195)	115	114	172	126	527
Pension income and funding ¹⁾	(108)	(53)	(51)	(74)	(286)	(68)	(52)	(36)	(53)	(209
Gain on disposal of property	-	_	-	_	_	-	(223)	(36)	(79)	(338
Changes in operating assets and liabilities:										
Accounts receivable	(31)	(6)	(91)	3	(125)	(34)	(26)	(57)	26	(91
Material and supplies	(50)	(44)	26	(2)	(70)	(96)	(33)	(4)	13	(120
Accounts payable and other	139	102	59	118	418	(201)	216	(30)	394	379
Other current assets	(71)	4	48	(61)	(80)	(25)	18	58	(37)	14
Other operating activities, net ¹⁾	25	11	12	41	89	_	28	33	38	99
Net cash provided by operating activities	1,256	1,505	1,406	1,349	5,516	755	1,682	1,564	1,917	5,918
INVESTING ACTIVITIES										
Property additions	(396)	(675)	(724)	(878)	(2,673)	(425)	(840)	(1,002)	(1,264)	(3,531
 Disposal of property	_	_	_	_	_	_	154	40	_	194
Other investing activities, net	(12)	(19)	(20)	(14)	(65)	(8)	(22)	(17)	(20)	(67
Net cash used in investing activities	(408)	(694)	(744)	(892)	(2,738)	(433)	(708)	(979)	(1,284)	(3,404

1) In the first quarter of 2019, the Company began presenting Pension income and funding as a separate line on the Consolidated Statements of Cash Flows. Previously, Pension income and funding was included in Other operating activities, net. Comparative figures have been adjusted to conform to the current presentation.

Markets

Financials <

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Quarterly Consolidated Statements of Cash Flows (cont.)

(\$ millions)										
	1				2017				1	2018
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
FINANCING ACTIVITIES										
Issuance of debt	_	_	493	423	916	1,286	_	1,137	845	3,268
Repayment of debt	(10)	(29)	(25)	(777)	(841)	(431)	(600)	(991)	(371)	(2,393
Change in commercial paper, net	89	(112)	(260)	662	379	(25)	451	21	(348)	99
Settlement of foreign exchange forward contracts on debt	(3)	7	(34)	15	(15)	(12)	19	31	15	53
ssuance of common shares for stock options exercised	13	13	12	20	58	8	51	17	27	103
Withholding taxes remitted on the net settlement of equity settled awards	(52)	_	(3)	(2)	(57)	(34)	(12)	(3)	(2)	5'
Repurchase of common shares	(499)	(505)	(539)	(473)	(2,016)	(615)	(385)	(521)	(479)	(2,000
Purchase of common shares for settlement of equity settled awards	(19)	(1)	(2)	(3)	(25)	_	(12)	(3)	(1)	(16
Purchase of common shares by Share Trusts	_	_	_	(55)	(55)	_	_	_	(38)	(38
 Dividends paid	(313)	(310)	(309)	(307)	(1,239)	(336)	(334)	(332)	(331)	(1,333
Net cash used in financing activities	(794)	(937)	(667)	(497)	(2,895)	(159)	(822)	(644)	(683)	(2,308
Effect of foreign exchange fluctuations on cash, cash equivalents, restricted cash, and restricted cash equivalents	(2)	(6)	4	2	(2)	9	2	(11)	_	-
Net increase (decrease) in cash, cash equivalents, restricted cash, and restricted cash equivalents	52	(132)	(1)	(38)	(119)	172	154	(70)	(50)	200
Cash, cash equivalents, restricted cash, and restricted cash equivalents,										
beginning of period	672	724	592	591	672	553	725	879	809	553
Cash, cash equivalents, restricted cash, and restricted cash equivalents, end of period										
Cash and cash equivalents,	724	592	591	553	553	725	879	809	759	75
end of period	265	131	109	70	70	242	394	317	266	26
Restricted cash and cash equivalents, end of period	459	461	482	483	483	483	485	492	493	49
Cash, cash equivalents, restricted cash, and restricted cash equivalents,										
end of period	724	592	591	553	553	725	879	809	759	75
SUPPLEMENTAL CASH FLOW INFORMATION										
nterest paid	(134)	(110)	(129)	(104)	(477)	(140)	(95)	(164)	(89)	(48

Quarterly Financial and Statistical Data

					2017					2018
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
REVENUES (\$ millions)										
Petroleum and chemicals	584	549	532	543	2,208	564	616	665	815	2,660
Metals and minerals	361	389	396	377	1,523	388	447	457	397	1,689
Forest products	447	464	440	437	1,788	422	490	508	466	1,886
Coal	129	126	135	145	535	142	175	169	175	661
Grain and fertilizers	607	530	492	585	2,214	539	591	568	659	2,357
Intermodal	742	815	827	816	3,200	814	863	897	891	3,465
Automotive	205	238	194	188	825	197	236	199	198	830
Total rail freight revenues	3,075	3,111	3,016	3,091	12,293	3,066	3,418	3,463	3,601	13,548
Other revenues	131	218	205	194	748	128	213	225	207	773
Total revenues	3,206	3,329	3,221	3,285	13,041	3,194	3,631	3,688	3,808	14,321
STATISTICAL OPERATING DATA										
Gross ton miles (GTMs) (millions)	116,235	117,195	118,171	117,599	469,200	113,040	123,540	123,042	130,792	490,414
Revenue ton miles (RTMs) (millions)	59,776	58,789	59,056	59,477	237,098	57,185	63,021	61,642	66,535	248,383
Carloads (thousands)	1,368	1,424	1,484	1,461	5,737	1,408	1,506	1,525	1,537	5,976
Route miles (includes Canada and the U.S.)	19,600	19,500	19,500	19,500	19,500	19,500	19,500	19,500	19,500	19,500
Employees (end of period)	22,549	23,089	23,428	23,945	23,945	24,812	25,654	26,143	25,720	25,720
Employees (average for the period)	22,396	22,858	23,183	23,859	23,074	24,467	25,275	25,905	26,047	25,423
KEY OPERATING MEASURES										
Rail freight revenue per RTM (cents)	5.14	5.29	5.11	5.20	5.18	5.36	5.42	5.62	5.41	5.45
Rail freight revenue per carload (\$)	2,248	2,185	2,032	2,116	2,143	2,178	2,270	2,271	2,343	2,267
GTMs per average number of		2,.00	2,002	27110	_,	2,0	2727 0	_,_,	2,010	_,,
employees (thousands)	5,190	5,127	5,097	4,929	20,335	4,620	4,888	4,750	5,021	19,290
Operating expenses per GTM (cents)	1.71	1.63	1.56	1.75	1.66	1.91	1.71	1.78	1.80	1.80
Labor and fringe benefits expense per GTM (cents)	0.57	0.52	0.51	0.57	0.54	0.63	0.52	0.57	0.60	0.58
Diesel fuel consumed (US gallons in millions)										
Average fuel price (\$/US gallon)	113.2 2.76	108.9 2.65	107.1 2.56	112.2 2.98	441.4 2.74	112.8 3.16	113.7 3.37	113.4 3.42	122.8 3.35	462.7
GTMs per US gallon of fuel consumed	1,027	1,076	1,103	1,048	1,063	1,002	1,087	1,085	1,065	1,060
	1,027	1,070	1,105	1,040	1,005	1,002	1,007	1,005	1,005	1,000
SAFETY INDICATORS ¹⁾										
Injury frequency rate (per 200,000 person hours)	1.89	1.54	1.72	2.16	1.83	2.14	1.62	1.60	1.90	1.81
Accident rate (per million train miles)	1.54	1.61	2.03	2.18	1.83	2.17	2.48	1.90	1.56	2.02

1) Based on Fee	deral Railroad Admii	nistration (FRA) re	eporting criteria.

Statistical operating data, key operating measures and safety indicators are unaudited and based on estimated data available at such time and are subject to change as more complete information becomes available. Definitions of these indicators are provided on our website, <u>www.cn.ca/glossary</u>.

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Financials

Non-GAAP **Measures**

This document makes reference to non-GAAP measures that do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies. From management's perspective, these non-GAAP measures are useful measures of performance and provide investors with supplementary information to assess the Company's results of operations and liquidity. These non-GAAP measures should not be considered in isolation or as a substitute for financial measures prepared in accordance with GAAP.

Adjusted performance measures

Management believes that adjusted net income, adjusted earnings per share, adjusted operating income and adjusted operating ratio are useful measures of performance that can facilitate period-toperiod comparisons, as they exclude items that do not necessarily arise as part of CN's normal day-to-day operations and

could distort the analysis of trends in business performance. Management uses adjusted performance measures, which exclude certain income and expense items in its results that management believes are not reflective of CN's underlying business operations, to set performance goals and as a means to measure CN's performance.

The exclusion of such income and expense items in these measures does not, however, imply that these items are necessarily non-recurring.

The following table provides a reconciliation of net income and earnings per share, as reported for the periods specified, to the adjusted performance measures presented herein:

Unaudited

(\$ millions, except per share data)					
Year ended December 31	2014	2015	2016	2017	2018
Net income	3,167	3,538	3,640	5,484	4,328
Adjustments:					
Operating expenses	_	_	-	_	27
Other income	(80)	_	(76)	_	(338)
Income tax expense (recovery) ¹⁾	8	42	17	(1,706)	39
Adjusted net income	3,095	3,580	3,581	3,778	4,056
Basic earnings per share	3.86	4.42	4.69	7.28	5.89
Impact of adjustments, per share	(0.09)	0.05	(0.08)	(2.26)	(0.37)
Adjusted basic earnings per share	3.77	4.47	4.61	5.02	5.52
Diluted earnings per share	3.85	4.39	4.67	7.24	5.87
Impact of adjustments, per share	(0.09)	0.05	(0.08)	(2.25)	(0.37)
Adjusted diluted earnings per share	3.76	4.44	4.59	4.99	5.50

1) The tax effect of adjustments reflects tax rates in the applicable jurisdiction and the nature of the item for tax purposes.

The following table provides a reconciliation of operating income and operating ratio, as reported for the periods specified, to the adjusted performance measures presented herein:

Unaudited					
(\$ millions, except percentage)					
Year ended December 31	2014	2015	2016	2017	2018
Operating income	4,498	5,155	5,032	5,243	5,493
Adjustment: Operating expenses		_	_	-	27
Adjusted operating income	4,498	5,155	5,032	5,243	5,520
Operating ratio ¹⁾	62.9%	59.1%	58.2%	59.8%	61.6%
Impact of adjustment	_	_	_	_	(0.1)-pts
Adjusted operating ratio	62.9%	59.1%	58.2%	59.8%	61.5%

1) Operating ratio is defined as operating expenses as a percentage of revenues.

For the year ended December 31, 2014, the Company reported adjusted net income of \$3,095 million, or \$3.76 per diluted share, which excludes a gain on disposal of the Deux-Montagnes subdivision, including the Mont-Royal tunnel, together with the rail fixtures, of \$80 million, or \$72 million after-tax (\$0.09 per diluted share) in the first quarter.

For the year ended December 31, 2015, the Company reported adjusted net income of \$3,580 million, or \$4.44 per diluted share, which excludes a deferred income tax expense of \$42 million (\$0.05 per diluted share) in the second quarter, resulting from the enactment of a higher provincial corporate income tax rate.

For the year ended December 31, 2016, the Company reported adjusted net income of \$3,581 million, or \$4.59 per

diluted share, which excludes a gain on disposal of track leading into Montreal's Central Station, together with the rail fixtures, of \$76 million, or \$66 million after-tax (\$0.09 per diluted share) in the fourth quarter, and a deferred income tax expense of \$7 million (\$0.01 per diluted share) in the second quarter, resulting from the enactment of a higher provincial corporate income tax rate.

For the year ended December 31, 2017, the Company reported adjusted net income of \$3,778 million, or \$4.99 per diluted share, which excludes a net deferred income tax recovery of \$1,706 million (\$2.25 per diluted share) consisting of the following:

• in the fourth guarter, a deferred income tax recovery of \$1,764 million (\$2.33 per diluted share) resulting from the enactment of the U.S. Tax Cuts

and Jobs Act and a deferred income tax expense of \$50 million (\$0.07 per diluted share) resulting from the enactment of higher provincial corporate income tax rates;

- in the third guarter, a deferred income tax expense of \$31 million (\$0.04 per diluted share) resulting from the enactment of a higher state corporate income tax rate;
- in the second guarter, a deferred income tax recovery of \$18 million (\$0.02 per diluted share) resulting from the enactment of a lower provincial corporate income tax rate; and
- in the first quarter, a deferred income tax recovery of \$5 million (\$0.01 per diluted share) resulting from the enactment of a lower provincial corporate income tax rate.

Operations

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Financials

Non-GAAP Measures (cont.)

Adjusted performance measures (cont.)

For the year ended December 31, 2018, the Company reported adjusted net income of \$4,056 million, or \$5.50 per diluted share, which excludes employee termination benefits and severance costs related to a workforce reduction program of \$27 million, or \$20 million after-tax (\$0.03 per diluted share) in the fourth quarter and gains on disposals of property of \$338 million, or \$292 million after-tax (\$0.40 per diluted share), consisting of the following:

- in the fourth guarter, a gain previously deferred on the 2014 disposal of a segment of the Guelph subdivision located between Georgetown and Kitchener, Ontario, together with the rail fixtures and certain passenger agreements, of \$79 million, or \$70 million after-tax (\$0.10 per diluted share);
- in the third quarter, a gain on disposal of property located in Montreal, Quebec of \$36 million, or \$32 million after-tax (\$0.04 per diluted share); and

strategic opportunities. The Company

defines its free cash flow measure as

by operating activities and net cash

the impact of business acquisitions,

if any.

used in investing activities; adjusted for

the difference between net cash provided

• in the second guarter, a gain on transfer of the Company's capital lease in the passenger rail facilities in Montreal, Quebec, together with its interests in related railway operating agreements, of \$184 million, or \$156 million after-tax (\$0.21 per diluted share), and a gain on disposal of land located in Calgary, Alberta, excluding the rail fixtures, of \$39 million, or \$34 million after-tax (\$0.05 per diluted share).

The following table provides a

reconciliation of net cash provided by

operating activities as reported to free

cash flow for the periods specified:

Free cash flow

Management believes that free cash flow is a useful measure of liquidity as it demonstrates the Company's ability to generate cash for debt obligations and for discretionary uses such as payment of dividends, share repurchases, and

Unaudited

(\$ millions)					
Year ended December 31	2014	2015	2016	2017	2018
Net cash provided by operating activities	4,381	5,140	5,202	5,516	5,918
Net cash used in investing activities	(2,161)	(2,767)	(2,682)	(2,738)	(3,404)
			2,520	2,778	

Adjusted debt-to-adjusted **EBITDA multiple**

Management believes that the adjusted debt-to-adjusted earnings before interest, income taxes, depreciation and amortization (EBITDA) multiple is a

Unaudited

(\$ millions, unless otherwise indicated) As at and for the year ended December 31

Debt

Adjustments: Operating lease liabilities, including current portion¹⁾

Pension plans in deficiency

Adjusted debt

Net income

Interest expense

Income tax expense (recovery)

Depreciation and amortization

EBITDA

Adjustments:

Other income

Other components of net periodic benefit income

Operating lease cost¹⁾

Adjusted EBITDA

Adjusted debt-to-adjusted EBITDA multiple (times)

1) The Company adopted Accounting Standards Update 2016-02: Leases and related amendments (Topic 842) in the first guarter of 2019. The Company now includes operating lease liabilities, as defined by Topic 842, in adjusted debt and excludes operating lease cost, as defined by Topic 842, in adjusted EBITDA. Comparative balances previously referred to as present value of operating lease commitments and operating lease expense have not been adjusted and are now referred to as operating lease liabilities and operating lease cost, respectively. See Note 2 - Recent accounting pronouncements in the Company's 2019 unaudited Interim Consolidated Financial Statements available on CN's website, www.cn.ca/investors, for additional information.

useful credit measure because it reflects the Company's ability to service its debt and other long-term obligations. The Company calculates the adjusted debt-toadjusted EBITDA multiple as adjusted debt divided by adjusted EBITDA.

The following table provides a reconciliation of debt and net income to the adjusted measures presented below, which have been used to calculate the adjusted debt-to-adjusted EBITDA multiple:

	2014	2015	2016	2017	2018
-	8,372	10,427	10,937	10,828	12,569
	607	607	533	478	579
	400	469	442	455	477
	9,379	11,503	11,912	11,761	13,625
	3,167	3,538	3,640	5,484	4,328
	371	439	480	481	489
	1,193	1,336	1,287	(395)	1,354
	1,050	1,158	1,225	1,281	1,329
	5,781	6,471	6,632	6,851	7,500
	(107)	(47)	(95)	(12)	(376)
	(126)	(111)	(280)	(315)	(302)
-	201	204	197	191	218
	5,749	6,517	6,454	6,715	7,040
	1.63	1.77	1.85	1.75	1.94

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Non-GAAP Measures (cont.)

Return on invested capital (ROIC) and adjusted ROIC

Management believes ROIC and adjusted ROIC are useful measures of the efficiency in the use of capital funds. The Company calculates ROIC as return divided by average invested capital. Return is defined as net income plus interest expense after tax, calculated using the Company's effective tax rate. Average invested capital is defined

as the sum of total shareholders' equity, long-term debt and current portion of long-term debt less cash and cash equivalents, and restricted cash and cash equivalents, averaged between the beginning and ending balance over a twelve-month period. The Company calculates adjusted ROIC as adjusted return divided by average invested capital. Adjusted return is defined as adjusted net income plus interest expense

after-tax, calculated using the Company's effective tax rate, excluding the tax effect of adjustments used to determine adjusted net income.

The following table provides a reconciliation of net income and adjusted net income to return and adjusted return, respectively, as well as the calculation of average invested capital, which have been used to calculate ROIC and adjusted ROIC:

Unaudited

(\$ millions, except percentage)					
As at and for the year ended December 31	2014	2015	2016	2017	2018
Net income	3,167	3,538	3,640	5,484	4,328
Interest expense	371	439	480	481	489
Tax on interest expense 1)	(102)	(120)	(125)	(124)	(116)
Return	3,436	3,857	3,995	5,841	4,701
Average total shareholders' equity	13,212	14,210	14,896	15,749	17,149
Average long-term debt	7,305	8,407	9,217	9,098	10,067
Average current portion of long-term debt	783	993	1,466	1,785	1,632
Less: Average cash, cash equivalents, restricted cash and restricted cash equivalents	(589)	(596)	(674)	(613)	(656)
Average invested capital	20,711	23,014	24,905	26,019	28,192
ROIC	16.6%	16.8%	16.0%	22.4%	16.7%
Adjusted net income ²⁾	3,095	3,580	3,581	3,778	4,056
Interest expense	371	439	480	481	489
Adjusted tax on interest expense ³⁾	(103)	(116)	(126)	(124)	(120)
Adjusted return	3,363	3,903	3,935	4,135	4,425
Average invested capital	20,711	23,014	24,905	26,019	28,192
Adjusted ROIC	16.2%	17.0%	15.8%	15.9%	15.7%

1) The effective tax rates from 2014 to 2018 used to calculate the tax on interest expense are 27.4%, 27.4%, 26.1%, 25.8% and 23.8%, respectively. Due to the negative tax rate reported by the Company in 2017, tax on interest expense for 2017 was calculated using an adjusted effective tax rate.

2) See section entitled Adjusted Performance Measures for an explanation of this non-GAAP measure.

3) The adjusted effective tax rates from 2014 to 2018 used to calculated the adjusted tax on interest expense are 27.7%, 26.5%, 26.2%, 25.8% and 24.5%, respectively.

Labour Relations Data Table

Our commitment to our employees and our employees' unions is to maintain our positive relationships that will enable us to build and sustain regular and on-going dialogue with union leaders to work with them on issues of mutual interest. We strive to reach consensus whenever we can, and when we cannot,

resolve our differences.

Canada

UNIONIZED EMPLOYEES: CANADA AND U.S. As at December 31, 2018

CANADA Conductors and Yard Coordinators Track Forces Shopcraft Locomotive Engineers Clerical and Intermodal Signals and Communications Rail Traffic Controllers Special Agents Other

UNITED STATES

Enginemen, Conductors and Yard Coordinators Track Forces Locomotive Engineers Shopcraft Signals and Communications Clerks Other

CN WORKFORCE

As at December 31, 2018

All employees

Unionized employees Non-unionized employees

1) In negotiations.

we use traditional and alternative forms of dispute resolution to peacefully

United States

As at the end of 2018, CN employed a total of 7,744 employees in the U.S., of which 6,425 were unionized.

As at the end of 2018, CN employed a total of 17,976 employees in Canada, of which 13,778 were unionized.

Number	Expiration
3,630	22/07/2019
2,772	31/12/2023
2,043	31/12/2022
2,094	31/12/2022
1,789	31/03/20191)
733	31/12/2021
180	31/12/2022
65	31/12/2023
472	-
1,799	N/A
1,338	N/A
1,108	N/A
1,070	N/A
399	N/A
268	N/A
443	N/A

Canada	U.S.	Total
17,976	7,744	25,720
13,778	6,425	20,203
4,198	1,319	5,517

Financials

Shareholder and **Investor Information**

Transfer agent and registrar

Computershare Trust Company of Canada

Offices in: Montreal, QC; Toronto, ON; Calgary, AB; Vancouver, BC

Telephone: 1-800-564-6253 www.investorcentre.com/service

Co-transfer agent and co-registrar

Computershare Trust Company, N.A. Attn: Stock Transfer Department

Overnight mail delivery: 250 Royall Street Canton, MA 02021

Regular mail delivery: P.O. Box 43078 Providence, RI 02940-3078

Telephone: 303-262-0600 or 1-800-962-4284

Shareholder services

Shareholders with questions concerning their shares should contact:

Computershare Trust Company of Canada Shareholder Services 100 University Avenue, 8th Floor Toronto, ON M5J 2Y1

Telephone: 1-800-564-6253 www.computershare.com

Investor relations

Paul Butcher Vice-President, Investor Relations

Telephone: 514-399-0052 Fax: 514-399-5985

Michaël Archambault Senior Manager, Investor Relations

Telephone: 514-399-4654 Fax: 514-399-5985

Email: investor.relations@cn.ca

Mailing address

CN Investor Relations 935 de La Gauchetière St. W. 16th Floor Montreal, QC H3B 2M9

www.cn.ca/investors

CN Investor Relations understands the importance of communicating the CN story and the most current and timely information to our shareholders, the financial community and other stakeholders. The Investors section of our website holds a wealth of information to keep investors and potential investors informed and up-to-date.

Weekly key metrics

Current

CN reports our performance measures weekly. These measures represent some of the key indicators of railroad performance. We report both key weekly volumes dates for RTMs and carloads, and key weekly operating metrics, such as car velocity and through network train speed.

www.cn.ca/investors/ key-weekly-metrics

www.cn.ca/investors/ stock-information

Upcoming webcasts and events

Our executive team is regularly interacting with the investment community through our quarterly investor call and industry conferences. We provide a comprehensive schedule of upcoming investor events on our website, including webcast information. Don't miss out on the latest news and events from CN.

www.cn.ca/investors/ webcasts-and-events



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stock information

We have a host of tools that provides helpful data about CN's common shares on the Toronto Stock Exchange (TSX: CNR) and the New York Stock Exchange (NYSE: CNI). These tools include: stock information, interactive charts, stock price history and splits, an investment calculator and dividends.

Latest financial results and reports

We understand the importance of accessing the latest and historical financial and other company reports, including the Investor Fact Book, Annual Report and Sustainability Report. Each month, we update our Investor Presentation to showcase our commitment to share our great CN story.





www.cn.ca/investors/ reports-and-archives

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A Solid Track Record of Creating Value for Shareholders







"In 2019, as we celebrate CN's 100th anniversary, we take the opportunity to look back on how far we've come: from a collection of disparate railways and life as a Crown corporation helping to build a nation, to our privatization in 1995 and growth through Mid-America to the Gulf of Mexico. As we look forward to our next 100 years, CN is well-positioned to lead the industry in safety, sustainability, innovation and growth."

> JJ RUEST President and CEO

