

Circular Economy in Action

Knowledge Series #1

March 30, 2023

Driving the Circular Economy through Procurement

CONSTRUCTION
DE DÉFENSE
CANADA



DEFENCE
CONSTRUCTION
CANADA



Canada
Procurement Assistance Canada
Ontario Region



PUTTING CIRCULAR
ECONOMY CONCEPTS
INTO ACTION



BACKGROUND

- Established in 1978 as Recycling Council of Ontario with initial focus on waste reduction
- Instrumental in facilitating partnership between government and municipalities to create the Blue Box program
- Unique membership: spans entire value and supply chains
 - Governments at all levels; industry producers, collectors, processors; educators, academia, researchers; corporations, SMEs, start-ups; public
- Policy and Advocacy | Resources and Services | Programs and Pilots



ABOUT THE KNOWLEDGE SERIES

- Offered bi-monthly sharing news on the advancement of the Circular Economy in Canada.
- Opportunity to profile CIC member initiatives and other Canadian case studies – focusing on innovative solutions, business models and unique partnerships.
- Subjects will range but will including cross-cutting measures; policy, procurement, finance as well as sectors (construction, food service, plastics, textiles)
- Will continue to be complimentary for all CIC members, nominal fee fee non-members.



We Invite you to Join Us

Shirley@circularinnovation.ca



MEMBERSHIP

- Multi-sectoral perspectives on current issues as we bring together representatives from entire value chains.
- Access to resources, tools and best practices from CIC programs to support CE ambitions and net zero commitment
- Stay informed on the advancement of circular economy around the globe with a focus on Canada
- Network with other likeminded organizations
- Access to learnings from CIC various pilot projects and research
- Subscription to the Daily News Headlines, e-Newsletters, and Member Bulletins.
- Reduced rates to attend forums, workshops, seminars, and special events hosted by us and some of our members.



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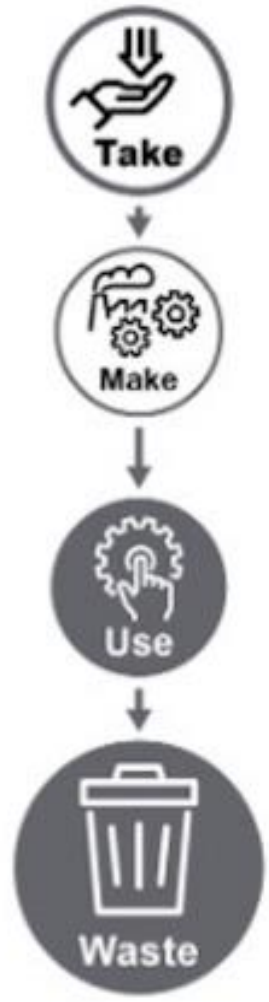


PUTTING CIRCULAR
ECONOMY CONCEPTS
INTO ACTION



SHIFTING THE ECONOMY

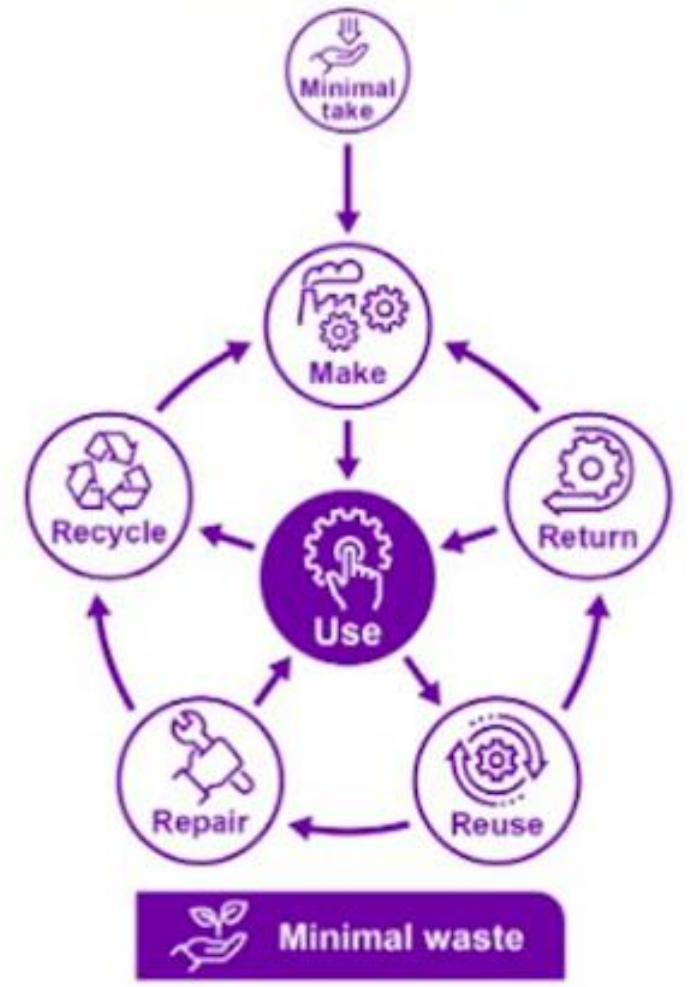
— Linear Economy —



— Recycling Economy —



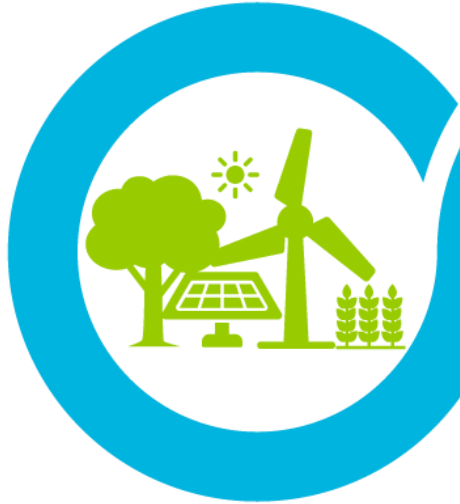
— Circular Economy —



PUTTING CIRCULAR ECONOMY CONCEPTS INTO ACTION

CIRCULAR BUSINESS MODELS

Circular Supplies



Renewable, recoverable, or biodegradable sources serve as inputs in design and production

Product As Service



Purchase service or result rather than product or asset

Product Life Extension



Prolong lifespan, utilization, and value through repair, remanufacture, resale

Sharing Platform



Maximize assets by spreading usage and value amongst several users

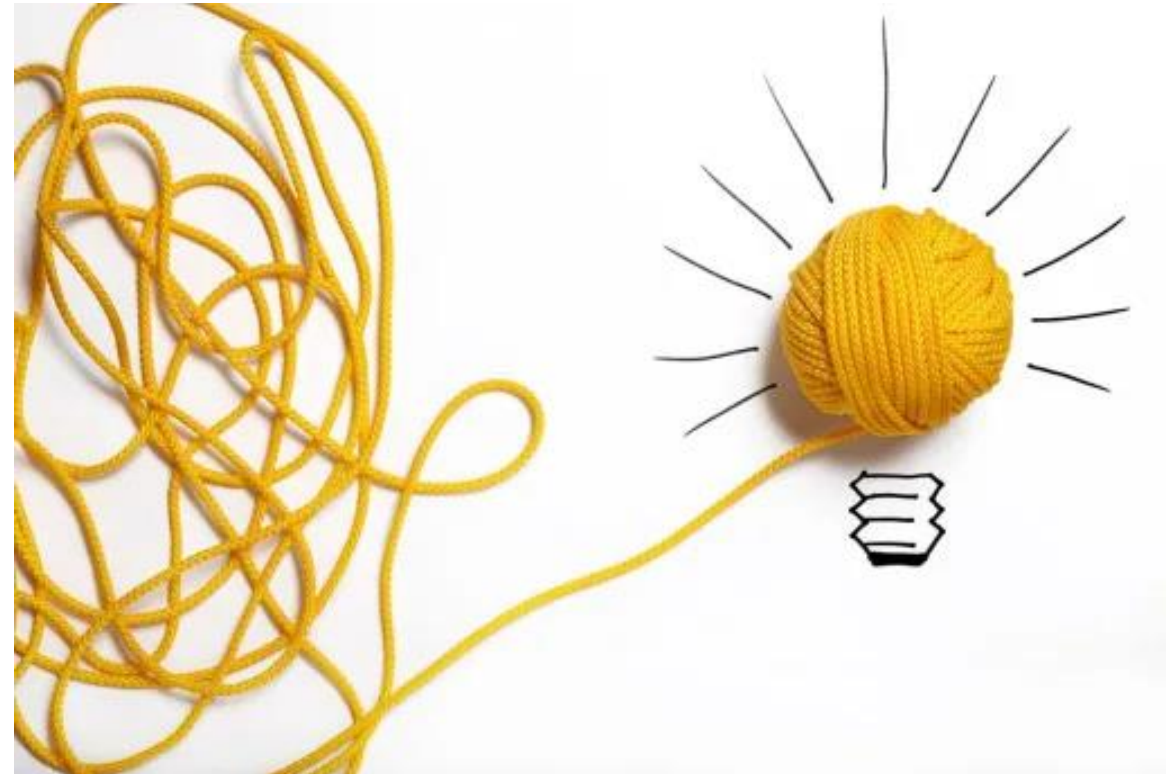
Resource Recovery



Acquire additional use and value from existing resources by avoiding disposal and impacts from new extraction

PUBLIC PROCUREMENT

- Public procurement in Canada represents on average 15% of Canada's GDP = \$400 Billion Annually
- 80% of all public procurement or \$320 billion is spent at the local level



BENEFITS FOR ENTERPRISES



- Improves customer interaction and loyalty
- Increases attractiveness of brand
- Increases productivity:
 - Including circular principles can simplify product complexity, making life cycles more manageable
- Provides added value to bid proposals
 - Demonstrate to procurer you product or service delivers circular economy and policy commitments
- Reduces dependence on non-renewable and scarce resources
 - Protects against resource cost volatility
 - Buffers against scarce resource supply and unstable supply chains
- Supports policy objectives including climate change mitigation and adaption
- Pre-empts regulatory pressure and gain competitive advantage

Introduction to federal procurement

Understanding the fundamentals of doing business with the Government of Canada

Procurement Assistance Canada

Canada.ca/PAC

2023/03/30 – for Circular Innovation Council – Lunch' n Learn event



Procurement Assistance Canada

- Supports smaller and diverse businesses through the federal procurement process
- Engages, assists and informs businesses on how to sell goods and services to the Government of Canada
- Works to reduce barriers to ensure fairness in the process
- Looks for opportunities to advance supplier diversity through targeted outreach and advocacy





Getting started, the fundamentals.

Opportunities for smaller and diverse businesses

- Government of Canada is one of the largest buyers of goods and services in Canada.
- Buys a wide range of goods and services each year, with contract values ranging from hundreds to billions of dollars.
- On average, smaller businesses in Canada win the majority of the total value of contracts awarded each year.

How much does the government buy?

- Government of Canada is one of the largest buyers of goods and services in Canada
- The government spends approximately \$24B annually on goods, services, construction and maintenance projects
- Awards over 500K contracts and processes close to 2M credit card transactions each year

Contracting with the Government of Canada

- Public Services and Procurement Canada (PSPC) is the main procurement arm of the federal government.
- It is important that all procurement activities be conducted in an open, fair and transparent manner, and that all suppliers have an equal chance at doing business with us.
- Federal laws and regulations as well as Treasury Board of Canada policies guide the Government of Canada's procurement process.

Increasing the diversity of bidders

- Procurement Strategy for Indigenous business
- Better buying
- Green procurement
- Procurement Assistance Canada

Green procurement

- Integrating environmental considerations into the procurement decision-making process.
- Greening Government Strategy
 - Targets for federal government light-duty vehicle purchases
 - Prioritizing commodities with the greatest impact in reducing plastic waste
 - Implementing Smart Buildings, a technology that improves energy efficiency



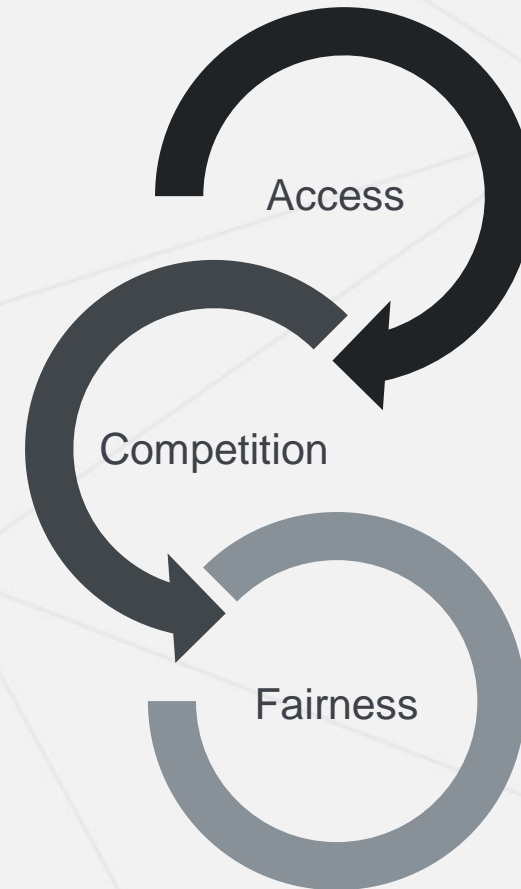
Finding opportunities

Competitive procurement

- Procurement over \$25,000 for goods and \$40,000 for services is done through the solicitation of bids and quotes from potential suppliers using a variety of methods
- The most common types are:
 - A Request for Proposal (RFP)
 - A Request for Standing Offer (RFSO)
 - A Request for Supply Arrangement (RFSA)
- The tender notice will indicate the method of procurement being used and will outline the solicitation documents

Low dollar value procurement

- Although the majority of contracts below \$25K for goods and below \$40K for services are awarded using a competitive process, non-competitive approaches are used in some circumstances
- The aim is to get best value for Canadians while enhancing access, competition and fairness to businesses
- A familiar way of working, but an exhaustive list of potential clients can make it challenging to identify the best fit
- Suppliers may be identified through networks and research as well as various federal supplier registration systems



Government Electronic Tendering Service (GETS)

- The official source suppliers should rely on to find Government of Canada tenders
- Easy to navigate and suppliers can search for new contract opportunities as well as see past contract awards

The screenshot shows the GETS website interface. At the top, there is a header with the text "Tender opportunities" and a sub-header "Browse our list of business opportunities and sign up for notifications to stay up to date." Below this is a search bar with the placeholder text "Enter a keyword to search public service tenders." and a "SEARCH" button. To the right of the search bar is a "FILTERS" dropdown menu. Below the search bar, there are "Current filters" for "Awarded" and "Open", and a "Clear all filters" link. To the right of the filters, there are links for "Follow this search" and "Bookmark this search". Below the filters, it says "Showing 50 of 108,164 results". A disclaimer states: "Content in some tender notices may not be available in both English and French. This is because the *Official Languages Act* does not apply to all public sector institutions. [Learn more about our official languages requirements.](#)" Below the disclaimer, there are three tabs: "Tender notices" (935), "Award notices" (106632), and "Contract history" (597). To the right of these tabs is a "Results per page" dropdown menu set to "50". Below the tabs, there is a table with the following columns: "Title", "Category", "Open/amendment date", "Closing date", and "Organization". The first row of the table is: "TSPS - [Communication Consultant to Net-Zero Advisory Board](#)", "Services", "2022/08/15", "2022/09/02", "Environment Canada".

Tender opportunities | Browse our list of business opportunities and sign up for notifications to stay up to date.

Enter a keyword to search public service tenders. SEARCH FILTERS

Current filters

X Awarded X Open

[Clear all filters](#)

[Follow this search](#)
[Bookmark this search](#)

Showing 50 of 108,164 results

Content in some tender notices may not be available in both English and French. This is because the *Official Languages Act* does not apply to all public sector institutions. [Learn more about our official languages requirements.](#)

Tender notices 935 Award notices 106632 Contract history 597 Results per page 50

Title	Category	Open/amendment date	Closing date	Organization
TSPS - Communication Consultant to Net-Zero Advisory Board	Services	2022/08/15	2022/09/02	Environment Canada

Benefits of using GETS

- No registration required
- Search using plain language and filters
- Find data for any tenders, previous contracts, or current standing offers and supply arrangements
- Subscribe for updates





Learn more about the procurement process

PAC Ontario Region - Seminars

- Doing Business with the Government of Canada
 - 1st Wednesday of the month – 10:00 AM to 12:00 PM
- Bidding on Opportunities
 - 2nd Wednesday of the month – 10:00 AM to 12:00 PM
- Supplying Professional Services to the Government of Canada
 - 3rd Wednesday of the month – 10:00 AM to 12:00 PM
- Obtaining Security Clearance
 - 4th Wednesday of the month – 1:00 PM to 3:00 PM

One-on-One sessions (on-line) offered every week for seminars 1-3 for 30 minutes at 1:00, 2:00 and 3:00 pm on the topic of the week **OR** on-demand by calling 1-800-668-5378 or email tpsgc.pasaontario-appaontario.pwgsc@tpsgc-pwgsc.gc.ca to book an appointment

- 1 Pacific**
- British Columbia
 - Yukon

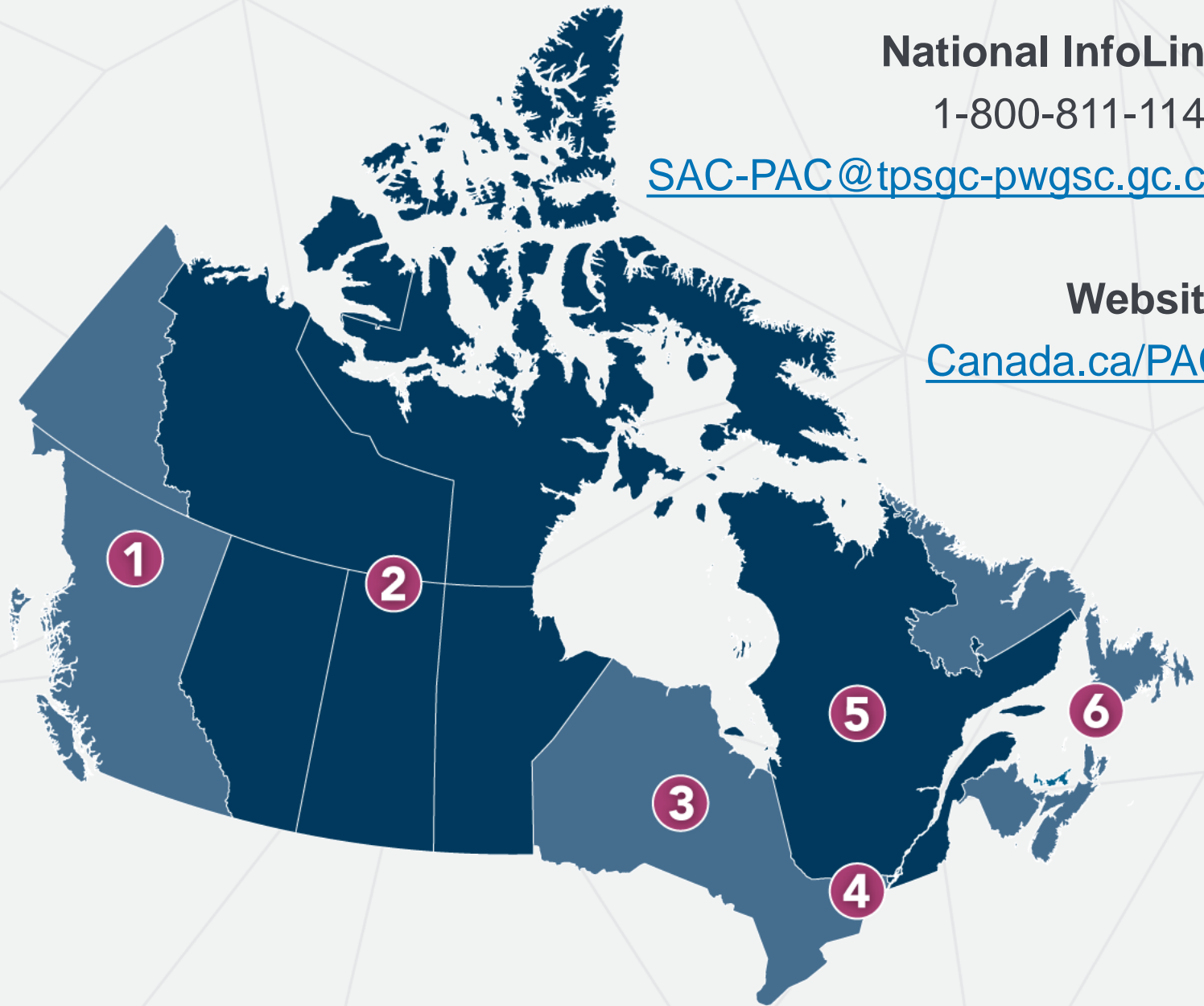
- 2 Western**
- Alberta
 - Saskatchewan
 - Manitoba
 - Northwest Territories
 - Nunavut

- 3 Ontario**

- 4 National Capital Region**

- 5 Quebec**

- 6 Atlantic**
- Newfoundland and Labrador
 - Prince Edward Island
 - New Brunswick
 - Nova Scotia



National InfoLine

1-800-811-1148

SAC-PAC@tpsgc-pwgsc.gc.ca

Website

Canada.ca/PAC

DEFENCE
CONSTRUCTION
CANADA



CONSTRUCTION
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CANADA



Introduction to Defence Construction Canada

Presented by Mark Smith,
Procurement Technical Specialist



DCC – Who are we?

- DCC solicits, awards and manages Construction, Maintenance, Professional Services and Environmental contracts
- Crown Corporation established in 1951
- Reports to Parliament through Minister of PSPC
- One principal client – Department of National Defence (DND) - the custodian of the largest real property portfolio in the federal government

Internet Website

www.dcc-cdc.gc.ca



Welcome to DCC

DCC Has 33 Sites Across Canada

~1100 employees

Head Office in Ottawa

Regional Offices in:

- Ottawa
- Halifax
- Kingston
- Montreal
- Edmonton
- Victoria



Annual Contract Volume

- Contract payments of roughly \$1 billion per year
- Average of about 1750 contracts awarded each year (in Construction, Architecture & Engineering, Environmental, Facilities Maintenance, Energy Performance, Service, Goods)
- Average Construction Contract Awards:
 - Approx. 100 contracts per year tendered over \$1 mil
 - Approx. 850 contracts per year tendered under \$1 mil

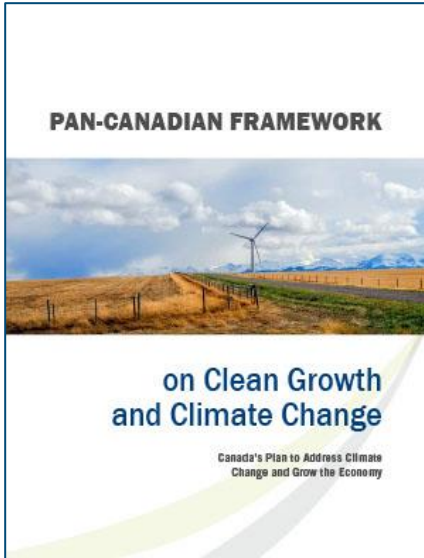


DCC Infrastructure Project Examples

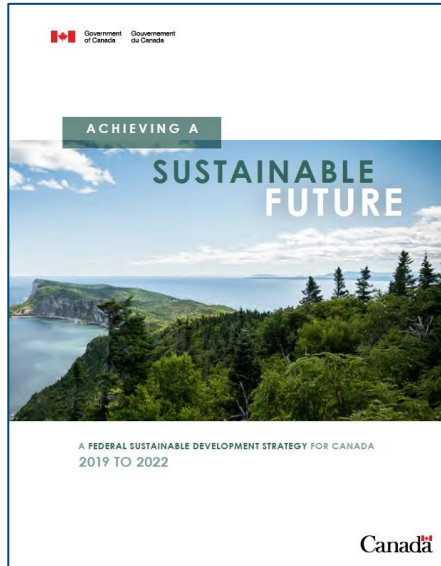
- Jetties, wharves
- Hangars & Training facilities
- Canadian Forces Housing
- Roads & Parking
- Runways
- Underground Utilities



Drivers for DND Sustainable Development



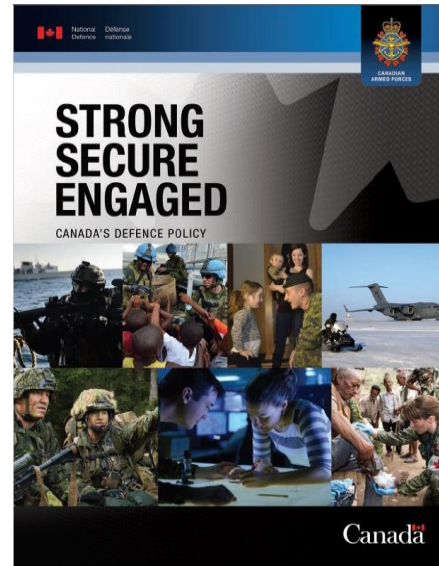
Pan-Canadian Framework on Clean Growth and Climate Change



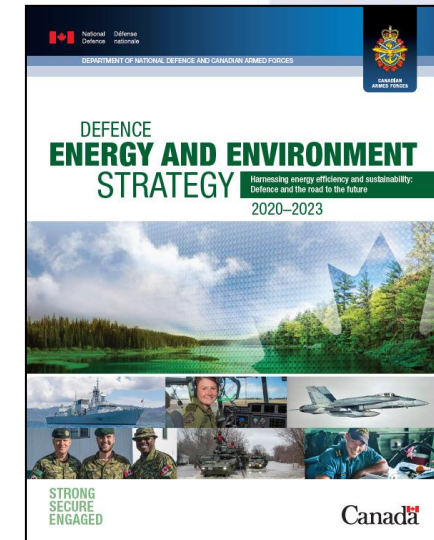
Federal Sustainable Development Strategy (FSDS)

And

Greening Government Strategy (GGS)



Strong Secure Engaged (SSE) Canada's Defence Policy



[Defence Energy and Environment Strategy \(DEES\)](#)

And

Green Building Directive (GBD)



Greening Government – Key Targets

TARGET	2025 OR SOONER	2050
GHG Emission Reduction	40% from RP and commercial light duty fleet	90% from RP and commercial light duty fleet
Net Zero	New construction and major renovation Recommissioning	Entire RP portfolio and National Safety and Security Emissions
Climate Change	Resilient new and major recap for buildings/infrastructure	Resilient RP portfolio
Low Carbon Operation	LCCA / GHG options analysis methodology	
Materiel	Disclose and reduce embodied carbon by 30%	Disclose and reduce embodied carbon by 30%
Waste	75% diversion of non-hazardous operational waste and plastic from landfill	diverting at least 90% by weight of all construction and demolition waste from landfills (2030)



Explosive Ordnance Disposal (EOD) NetZero Carbon Ready Project – CFB Gagetown

- **Name:** EOD Net Zero Carbon Facility and Solar Farm
- **Location:** CFB Gagetown
- **Goal:** Operate as a NetZero Facility
- **Estimate Cost:** \$41 million
- **Features:** DND's first Net Zero Ready Facility
 - Green energy with solar array
 - LEED Silver Building Designation
 - Geothermal Heating and Cooling Systems
 - Onsite water well and treatment facilities
 - Storm water collection for non potable water use
- **Target GHG Savings:** 116 T

Low Carbon Energy Generation for Heating Existing Building – CFB Kingston

- Project conducted under the Innovation for Defence Excellence and Security (IDEaS) program, which includes a “Test Drive” element to operationally test innovative solutions that are at a high readiness level.
- Objective: acquire, install, and operate a low carbon energy generation system for heating an existing building in order to assess the effectiveness and costs of such a technology.
- RFP including the following evaluation criteria:
 - Propose a solution that utilizes the building’s existing hydronic distribution system, with minimal modifications, does not require modification of the building, and carbon emissions from the system during operation are < 55 tonnes carbon eq per year.
 - Attestation that the major components of the proposed solution have completed a Solution Readiness Level of at least “successful simulated demonstration of a near-end state solution and testing in a simulated environment” and are ready to undertake a real-world demonstration.
 - The solution must fit within the site constraints of CFB Kingston
 - The solution must meet the required peak demand of 1160kW at a water temp. of 85C output water temperature for at least a 3-hour duration.
 - The solution must be able to provide automated digital performance monitoring data.
 - Design-Build team criteria: comparable design project, comparable construction project, resumes of key personnel, schedule.
- Successful firm was Black & McDonald, who proposed a solution that consisted of 5 major components: Air Source Heat Pump, Water Source Heat Pump, a Thermal Storage Tank, Photovoltaic Solar Panels, and a Natural Gas Boiler.



Finding DCC Opportunities

- We advertise all of our procurement opportunities and distribute tender docs on MERX (www.merx.com)
- 2 ways to find DCC opportunities on MERX:
 1. Use the search function and search for “Defence Construction Canada” or a specific location e.g. “4 Wing Cold Lake”, OR
 2. Simply go to www.merx.com/dcc to find only DCC’s solicitations
- When the value of an opportunity crosses the threshold of one of Canada’s international trade agreements then the opportunity will also be posted on CanadaBuys.ca

MERX Subscription Options

Monthly Annually (Save up to 50%)

<p>Organization ✓</p> <p>\$4/month Billed annually</p> <p>Access to all opportunities for this organization</p> <p>Defence Construction Canada</p>	<p>1 MONTH FREE</p> <p>Local</p> <p>\$30/month Billed annually</p> <p>Access to all opportunities within the entire province</p> <p>Choose a province ▼</p>	<p>Regional</p> <p>\$45/month Billed annually</p> <p>Access to all opportunities within the entire region</p> <p>Choose a region ▼</p>	<p>National</p> <p>\$80/month Billed annually</p> <p>Access to all opportunities within the entire country</p> <p>All of Canada</p>
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Security Requirements

- Many DND projects have security requirements that require businesses to hold an organizational security clearance in order to be awarded a contract.
- Clearances are issued by PSPC's Contract Security Program (CSP).
- A contractor's application to the program can be sponsored by DCC.
- Advanced Procurement Notices (APNs) alert contractors to upcoming projects and provide opportunity to initiate the sponsorship process

Open Construction Source Lists

- Changes to the Official Languages Act will impact how DCC supports DND in the delivery of its infrastructure and environmental programs.
- DCC will be creating, at each DND location, Open Construction Source Lists (OCSLs) that will be used to implement construction contracts (commercial, residential, industrial, institutional, civil) under \$10 million.
- DCC will begin using these OCSLs on **April 1, 2023**. Contractors/suppliers registered on them will receive invitations (via MERX) to bid on DND projects under \$10 million.

Open Construction Source Lists

- There are 31 OCSLs for Bases/Wings across Canada.
- The OCSLs are “open” until March 31, 2026, meaning that businesses can register to be on them at any time.
- Only required information is 1) language preference (EN or FR) and 2) legal name of your business.
- To register just go to MERX and place a bid (no-price bid) on each OCSL for which you would like to receive invitations to bid.

Indigenous Business Participation

The Federal Government has mandated that a minimum of 5% of the total value of all federal contracts is allocated to Indigenous-owned businesses.

Since the start of FY 19/20, DCC has:

- Awarded 226 contracts to Indigenous-owned businesses, with a combined award value of \$126M
- Tendered 26 contracts with Indigenous Benefit Plans for subcontracting to Indigenous businesses

In Fiscal Year 2021-2022, 7.3% of the overall value of DCC's contracts were awarded to Indigenous businesses.

Thank you for your interest in Defence Construction Canada

www.dcc-cdc.gc.ca

Mark Smith

Technical Specialist, Procurement (DCC Head Office, Ottawa)

mark.smith@dcc-cdc.gc.ca





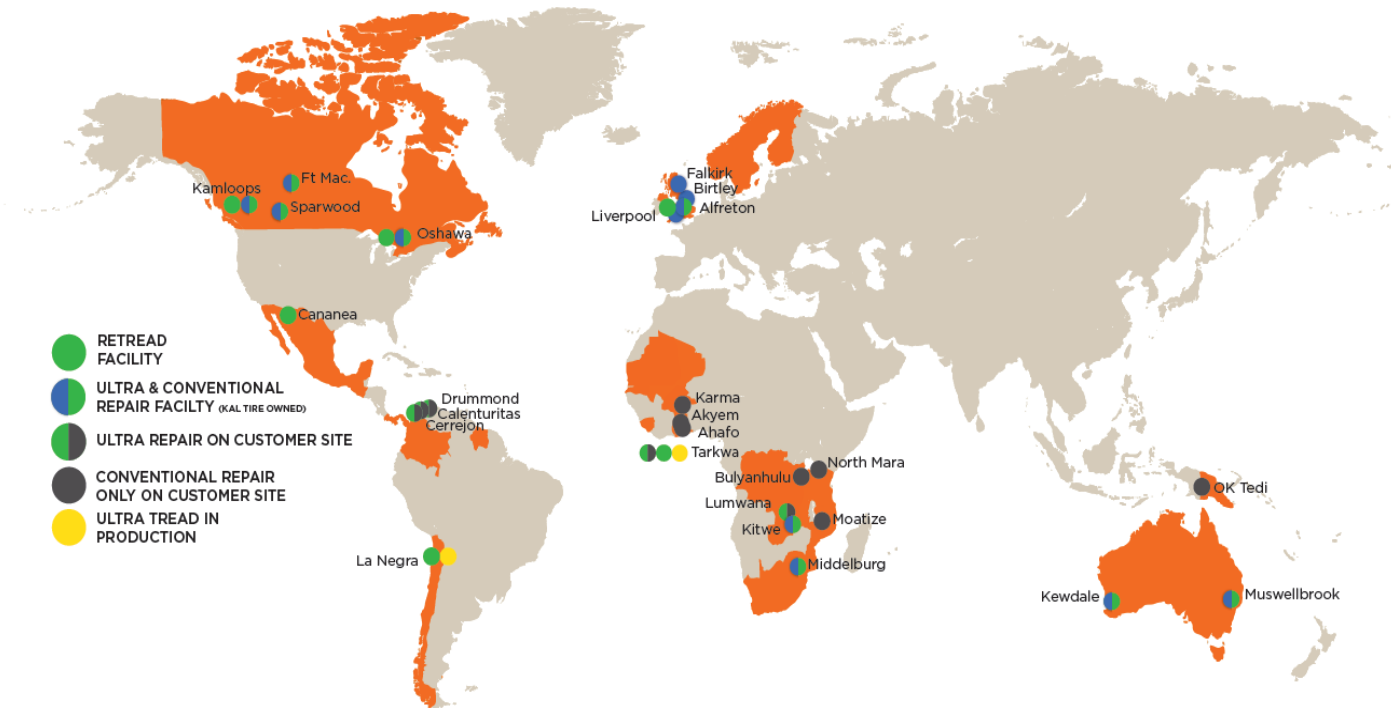
Circular Solutions

Proudly Canadian

- Founded in 1953 by Tom Foord and headquartered in Vernon, BC

Canada's largest independent tire dealer and one of North America's largest commercial tire dealers

- 4,500 employees in Canada, 6,500 employees world-wide
- 290 retail and commercial stores coast-to-coast, 7 warehouse facilities, 12 retread facilities, and 6 OTR repair and retread facilities



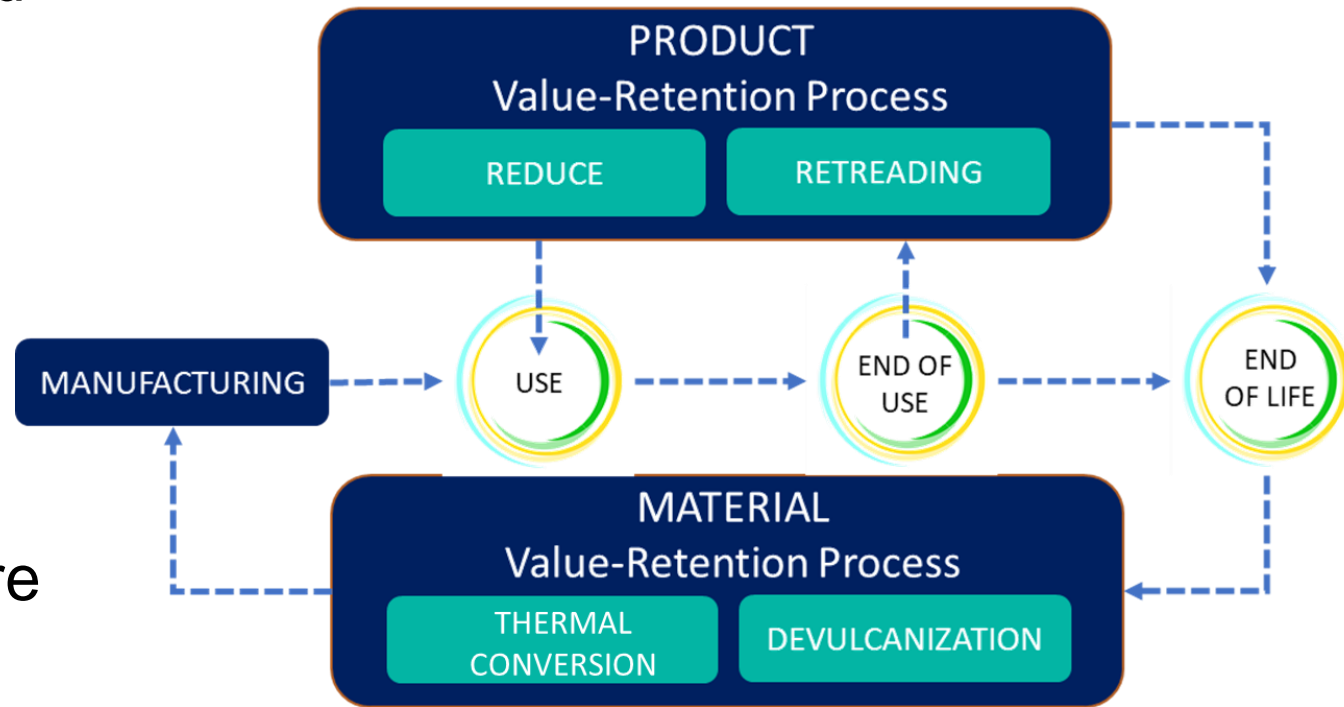


Circularity Road Map

Kal Tire's sustainability is centralized around Value Retention Circularity within the Tire Life Cycle.

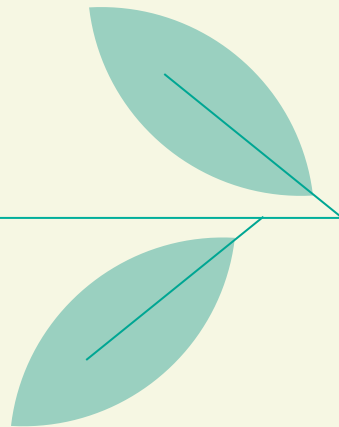
Product Value-Retention: Keeping tires on the road longer

Material Value-Retention: Cycling tire material back into tires



9,692,625,572

Volume of Tires Collected in Canada 2010-2020 (lbs)



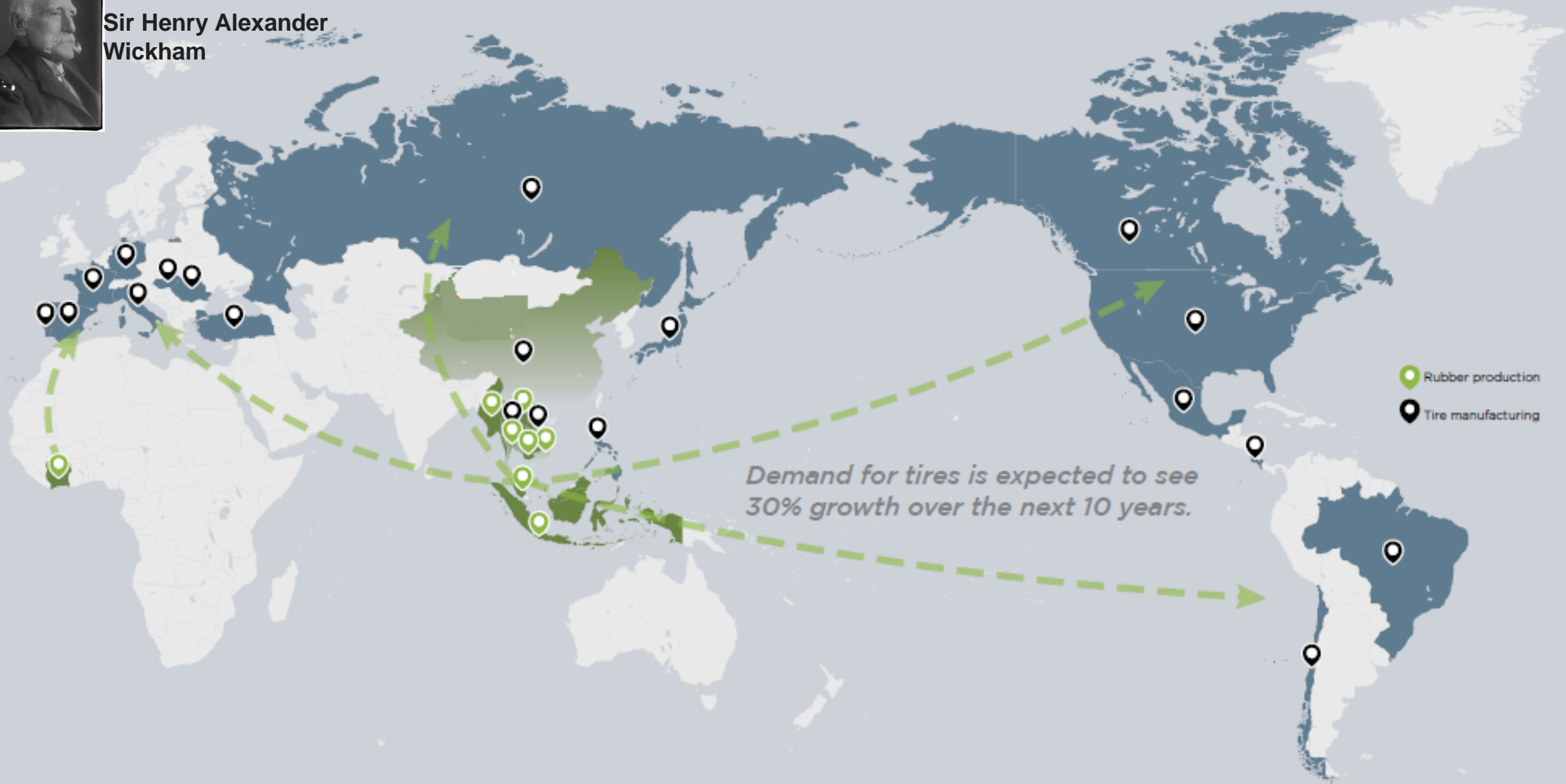
500ml Water Bottle = 9.5g

**1 Commercial Tire =
5,600 Single Use Water Bottles**



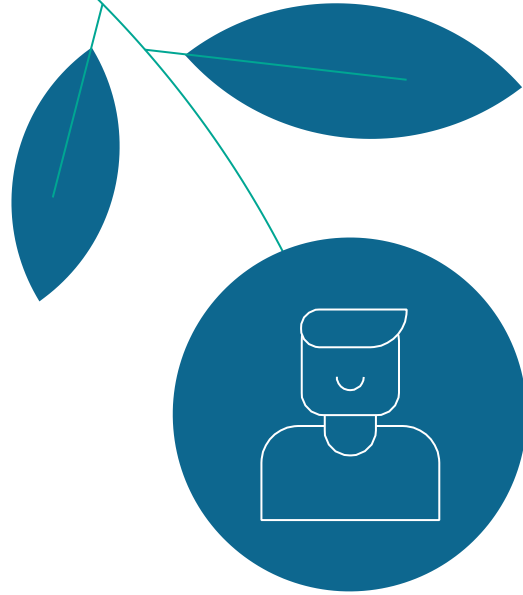


Sir Henry Alexander Wickham



- Rubber production
- Tire manufacturing

Demand for tires is expected to see 30% growth over the next 10 years.



RETREADING, DEVULCANIZATION & THERMAL CONVERSION

RETRADING

INSPECTION



CURING



FINAL PRODUCT



↓
BUFFING



↑
TREAD



- ✓ Supports Canadian economy and local jobs.
- ✓ Better environmental choice.
- ✓ Up to 50% cost savings vs. purchasing brand new tires.

Up To

80% CO₂ REDUCTION

Compared to purchasing a New Tire





VULCANIZATION (or curing)

Rubber: Ridged/Structured

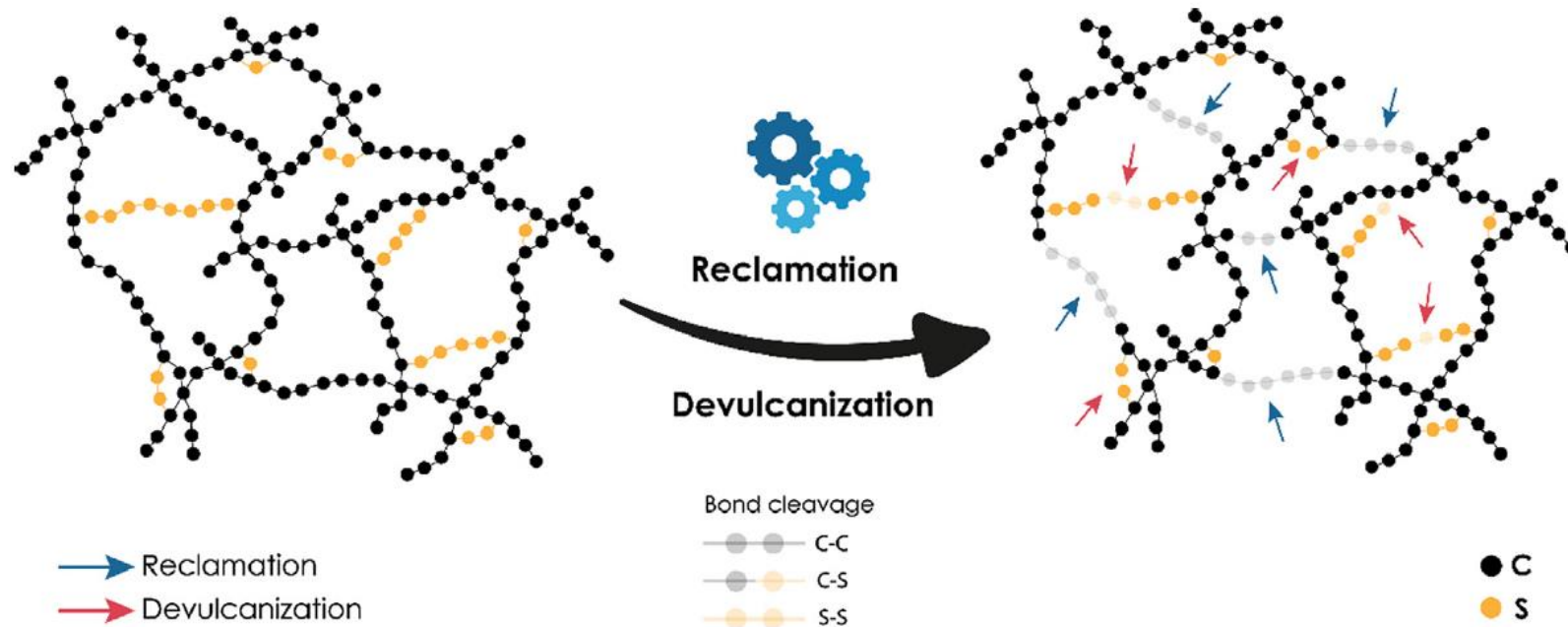
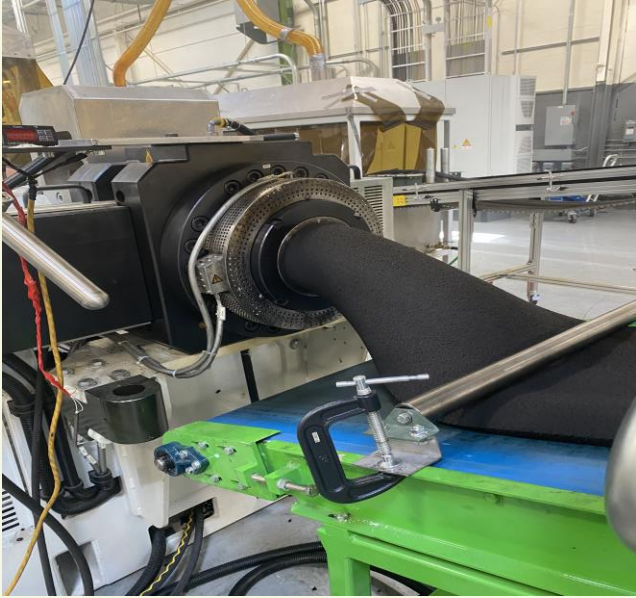


Fig. 6. Schematic representation of reclamation and devulcanization processes in a cross-linked rubber network.

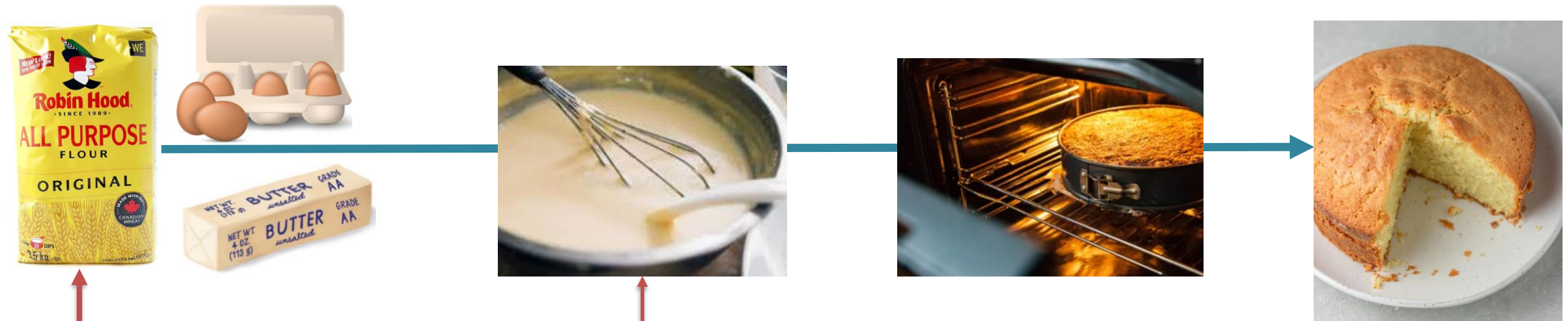
DEVULCANIZATION

Rubber: Pliable

DEVULCANIZATION OF RUBBER – KAL TIRE



Sustainability Processes – Thermal Conversion and Devulcanization

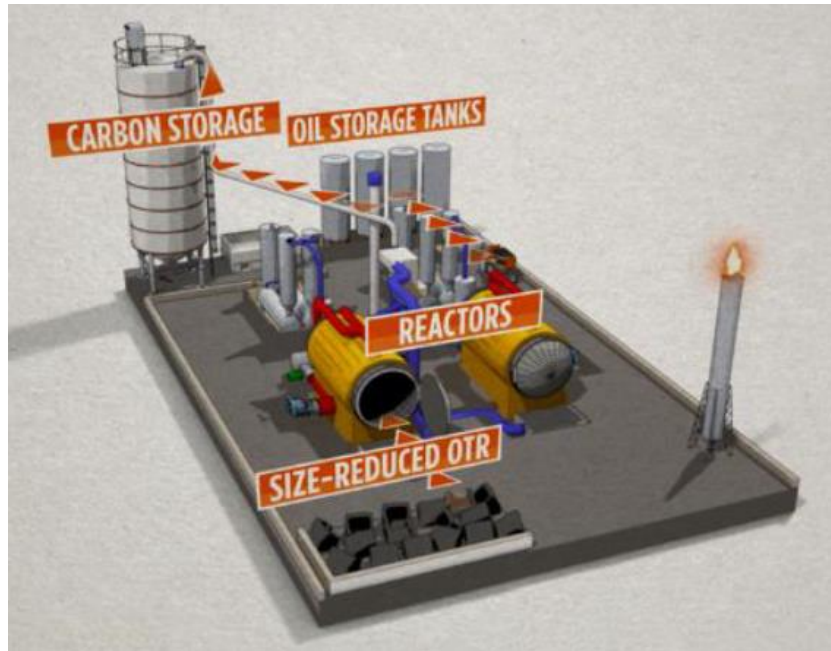


Devulcanization take the cake and turns it back into **Batter** to be put back into the next cake.

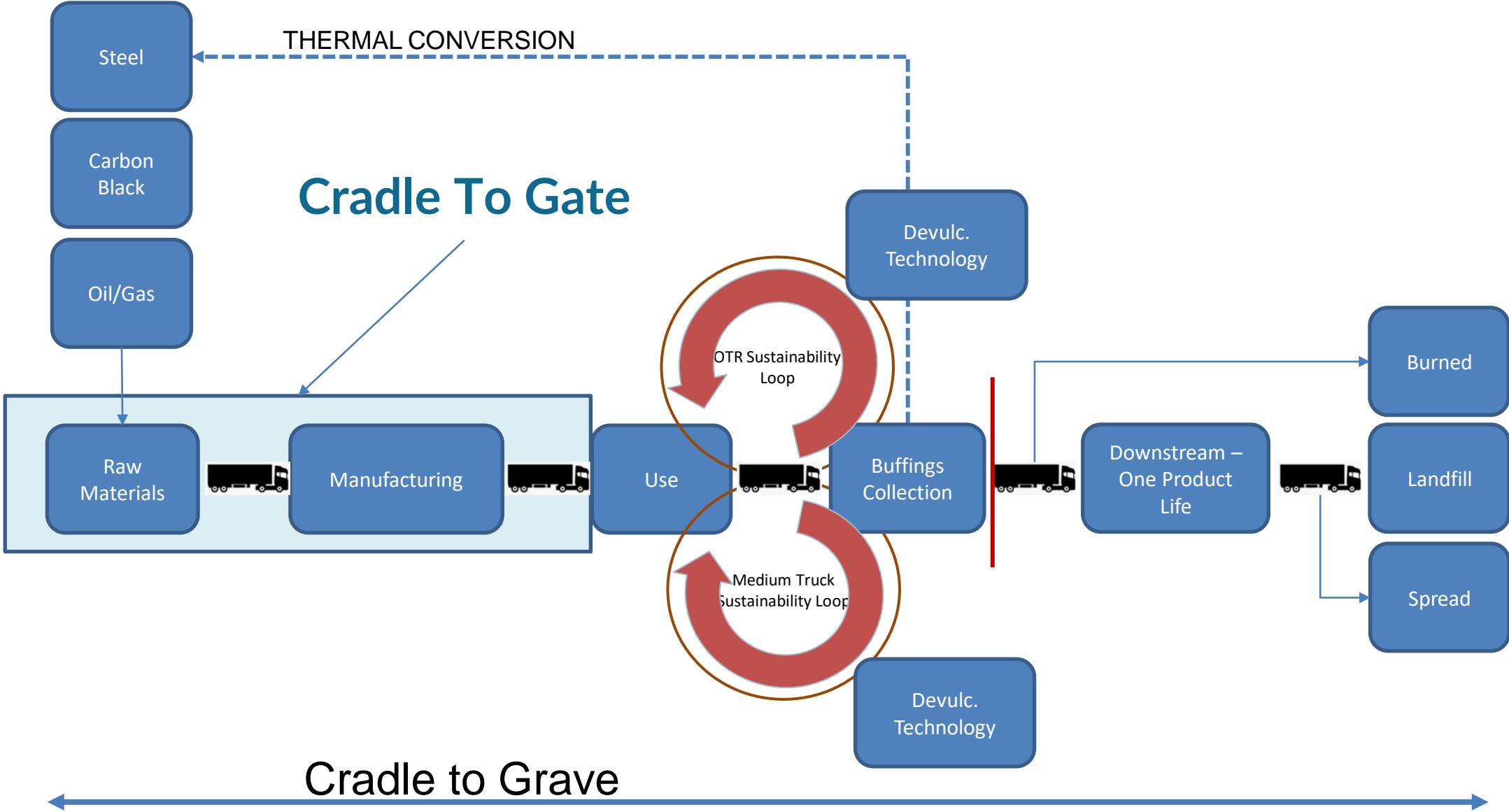
Thermal Conversion take the cake and turns it back into base ingredients.

THERMAL CONVERSION

aka. Pyrolysis



Life Cycle Analysis: Scope 3 Calculations



DOCUMENTED PROOF TO DEMONSTRATE PROGRESS.

With the Carbon Calculator, we can support these solutions with a unique and independently validated calculator to help customers track and quantify the sustainability gains they are achieving through Kal Tire network.



CARBON CALCULATOR

Kal Tire is pleased to inform that

<Customer Name>

has saved <XIX,XIX>kg CO₂ through Kal Tire's tire and retreading program as an alternative to purchasing new, single-use product.

This has also avoided the use of:

-  <XXX>kg of rubber
-  <XXX> tons of steel
-  <XXX>kg of carbon black & silica



CONTACTS

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Christine Abbott Photography



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PUTTING CIRCULAR
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