



Davey | TEXTILE  
SOLUTIONS INC.®

## Sustainability Report

2023





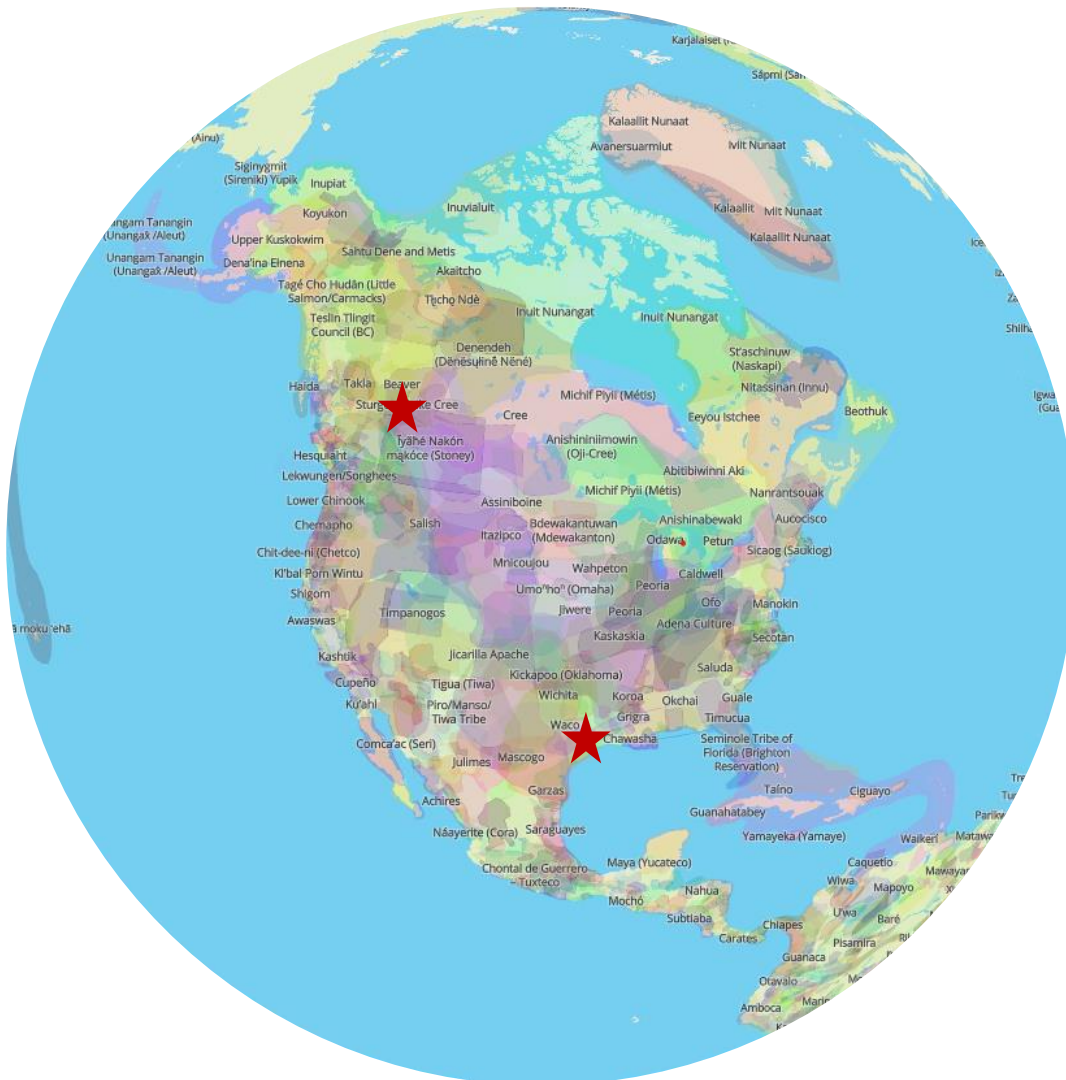
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# Territory Acknowledgement

Davey Textile Solutions Inc.'s Canadian facility is located on Treaty 6 Territory and within the Métis homelands and Métis Nation of Alberta Region 4. We respectfully acknowledge this land as the traditional territories of many First Nations, including the Cree, Blackfoot, Métis, Nakota Sioux, Iroquois, Dene, Ojibway/ Saulteaux/ Anishinaabe, Inuit, and many others. Our Houston facility is located on traditional land of Indigenous peoples, specifically the Atakapa - Ishak, Tāp Pīlam Coahuiltecan, the Sana band of the Tonkawa tribe, and Karankawa nations.



Our facilities in Edmonton, Alberta and Houston, Texas on a map of treaty territories.



# About Davey Textile Solutions Inc.

Davey Textile Solutions Inc. (DTS) is a manufacturer of high visibility (HV), flame resistant (FR) webbing as well as a converter and authorized distributor of retroreflective silver materials. DTS offers services through a 40,000 ft<sup>2</sup> manufacturing facility and warehouse located in Edmonton, Alberta, Canada and a distribution warehouse in Houston, Texas, USA. We presently serve customers globally and continue to expand by partnering with representatives in local markets.

Davey Fabrics was founded in 1986 by Al and Jan Davey, and after more than a decade of hard work and commitment to quality, the next generation – Grant Davey, Jim Davey, and Dan King – succeeded the business in 2000. Grant, Jim, and Dan transitioned the business from fabric supplier to manufacturer and distributor of Triple Trim in 2011, marking DTS as a leader in the industry by creating the first reflective and flame-resistant technology that could withstand industrial laundering. Now, these properties are standard across all oil and gas fields and the products available have grown exponentially.

Today, our Edmonton production facility utilizes a warper, 35 narrow-width looms, a finishing range, six laminators, and three chain-stitch sewing machines to manufacture over 60 converted products. DTS continues to grow its operations and improve the efficiency and sustainability of all production processes. Our capabilities have expanded within the past year through the addition of new equipment including eight narrow-width looms, a laminator, and a laser cutting system.

Greater production capacity has also meant growth in our DTS team. We currently have 66 employees at DTS Canada that make up our office and production departments, with an additional 6 employees serving customers through our US, Mexico, and South American operations.



Jan and Al Davey:  
The beginning of Davey Fabrics.



Davey Textile Solutions today in  
Edmonton, Alberta.



## Mission, Vision & Values

Our business practices are guided by our mission, vision and five core values; all of which have been developed and strengthened over 35 years of operations. In September 2022, we revealed our updated mission and

vision statements at our first annual Davey Day. The mission, vision and values are featured prominently in our workspace. Each day as our employees begin work, they are reminded of our guiding principles.

### Our Vision

The global leader in sustainable textile innovation through **technology** and **our people**.

### Our Mission

Keeping you safe through **innovative textile solutions** with a commitment to quality and service.

## Our Values

### Dedicated

Our employees are committed to creative innovative products to protect people.

### Family

We treat our employees like family and take care of each other.

### Integrity

We do the right thing by our employees and our customers.

### Passion

We are passionate about continually improving our products and serving our customers.

### Quality

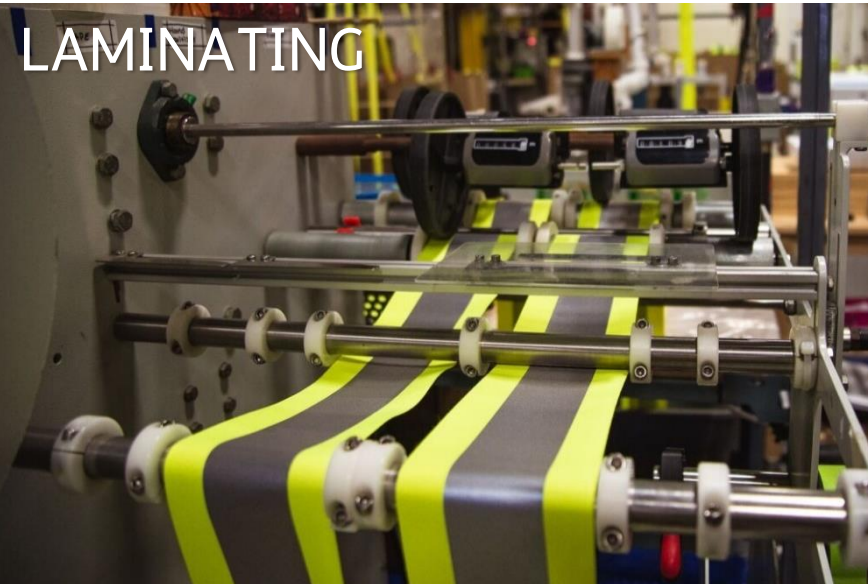
Committed to quality products and service excellence.



## Our Processes

Our process begins with warping, where yarn is removed from individual cones and drawn onto a large beam. Beams are then placed on a loom where weft yarns are interlaced between the warp yarns to create our plain- and twill-weave fabrics. This

unfinished fabric is then processed through our finishing range which involves scouring to remove oils and lubricants, UV and dimensional stabilization through two infrared chambers, and finally curing the fabric through two ovens. The finished fabric is then laminated or sewn with reflective silver, depending on customer preference.





# About our Sustainability Report

Davey Textile Solutions Inc. is all about innovation. We want to continuously improve our products and processes to meet customer expectations while increasing efficiency and reducing waste. As a family-oriented business, helping our employees and our community has always been part of our culture, but we haven't formally shared these positive actions with the public. Therefore, the purpose of this report is twofold: to communicate our initiatives and various goals related to our environmental, social, and governance practices and to hold ourselves accountable in achieving these goals.

As our first Sustainability Report, this document highlights the actions taken at DTS to reduce our environmental impacts, improve the wellbeing of our employees and society, and how we govern our business in an ethical and sustainable manner, including some initiatives that began prior to 2023. This report will be used as a baseline with which to compare our future practices to see just how far we go in our sustainability journey. You can read more about the sustainability frameworks we've drawn from to develop our Sustainability Strategy on our website.





## A note from our owners



**Grant Davey**  
President



**Jim Davey**  
CFO



**Dan King**  
VP Production and R&D

As with every year, 2023 brought its own unique challenges and opportunities that have helped us collectively grow to a more innovative, competitive, and resilient company. The addition of 8 new looms, our laser-engraving system, and a new laminating machine has allowed us to expand our operating capacity and offer new and exciting Canadian-made safety products to our customers. At the same time, we are exploring ways to make our processes more efficient and less wasteful to improve not only our environmental impacts, but the lives of our employees and our organization as a whole.

Davey Textile Solutions Inc. has always been focused on family, quality, and customer service. We are proud that this focus has been formalized into our company mission, vision, and values to continue to guide our business decisions and operating processes. We want to do right by our employees, our customers, and our planet. In practice, this means minimizing our environmental footprint, working closely with our suppliers to ensure we receive the best materials to deliver the best product to our customers, and operating with governance policies to sustain our business for years to come.

At DTS, we have a growth mindset and are always looking for ways to improve. We also want to be transparent with our practices, hence the creation of our first publicly available Sustainability Report. We are excited about our various environmental, social, and governance initiatives and to share them with you here. Should you have questions or feedback about the information in this document, we welcome your suggestions.





# 2023 Highlights

## FEBRUARY

Presentation on automation in production at the ARC Advisory Forum in Orlando, Florida.



## MARCH

Eight new looms in operation in the weaving department.



## MAY

Laser kiss-cut system in operation.



## MAY

Trade show booth at the Energy Safety Conference in Banff, Alberta.



## MAY

Commitment to Canada's net-zero carbon emissions by 2050 challenge.



## JUNE

Attended American Society of Safety Professionals (ASSP) Conference and Expo in San Antonio, Texas.



## JUNE

Presentation at the Do More With Data Summit.



## JUNE

Creation of Fun Squad.



## JUNE

R&D Specialist, Lelia Lawson, pursues PhD research on lyocell from Alberta-grown hemp.



## SEPTEMBER

2<sup>nd</sup> Annual Davey Day.



## OCTOBER

2<sup>nd</sup> Annual Heritage Day  
Potluck.



## OCTOBER

Trade show booth at the  
NSC Safety Congress &  
Expo in New Orleans,  
Louisiana.



## OCTOBER – NOVEMBER

DiSC Training with all DTS  
employees.



## NOVEMBER

Trade show booth at the  
Advanced Textiles Expo in  
Orlando, Florida.



## NOVEMBER

Presentation on hemp-  
based lyocell at Scaling Up  
Bioeconomy Conference in  
Ottawa, Ontario.



## NOVEMBER

Presentation on hemp-  
based lyocell at the  
Canadian Hemp Trade  
Alliance National  
Conference in Nisku,  
Alberta.



## NOVEMBER

Raised \$4300 for men's  
health as part of our  
Movember participation.



## DECEMBER

Donated 86 kg of food and  
\$2000 to the Edmonton  
Food Bank and 3 bags of  
toys to Santa's  
Anonymous.





# Environmental



Our vision is to be a leader in sustainable manufacturing; therefore, environmental concerns are at the forefront of our business considerations. Whether it is recycling our waste, choosing chemicals with low toxicity, or having automatic sinks to reduce water consumption, we aim to reduce our environmental impacts in all aspects of our operations.

Being a leader and outspoken voice for environmental sustainability in the Canadian textile industry is important for DTS. We actively participate in several sustainability research groups and industry initiatives. Active participation ensures that the Canadian textile industry is receiving the support and guidance it requires to meet the ever-changing and ever-growing environmental needs of our planet.

## Raw Materials

DTS is invested in our raw material supply chain and the environmental practices of our suppliers. We have developed strong relationships with our suppliers and have gained insight into their business practices. Just like us, our suppliers are working hard to make environmental changes, with many participating in the same or similar environmental initiatives. Continuing to have open communication between industry stakeholders allows for transparency in sustainable practices while encouraging sustainable innovation.

Some of the collaborative work we have done with our suppliers to reduce our environmental impacts include investigating polyester yarn recycling, changing our yarn dyeing process to reduce unnecessary steps, and reducing packaging for materials shipped to us.

## Non-Hazardous Substances

We avoid the use of products and chemicals deemed hazardous by several global organizations including the Canada Hazardous Products Act, AAFA Restricted Substance list, US OSHA, U.S. Securities and Exchange Commission, EU REACH and EU RoHS. Furthermore, our production processes do not use per- and polyfluoroalkyl substances (PFAS) or perfluorooctane sulfonate (PFOS) substances. Our avoidance of hazardous substances protects human health and the environment.

## Effluent Studies

As of August 2020, DTS has been an active participant in an effluent toxicity study conducted by Environment and Climate Change Canada (ECCC) through our participation in the Canadian Textile Industry Association (CTIA). As a participant in the study, DTS provides samples of our manufacturing effluent from our finishing range to ECCC for toxicity testing against aquatic organisms commonly found in areas impacted by effluent release. DTS looks forward to the results of the study and is actively seeking more environmentally conscious process chemicals to reduce our impacts on aquatic environments.



It's been a pleasure working with Davey Textiles in our project on the identification of toxicity factors in textile mill effluents. Davey Textiles was a participant in the round robin phase of the project where we have tested effluents from multiple mills with a battery of aquatic lab tests. Thanks to Davey's participation we are able to move forward with the second phase of the project using tests selected for their ability to detect toxicity consistently. The staff at Davey, particularly Lelia Lawson, and her enthusiasm for the project, have allowed us to select Davey Textiles for the next phase of the project. Everybody wins when we can work with a partner like Davey Textiles, whose interest and commitment to environmental stewardship permits such collaborations.

-Dr. Mark Hewitt, Environment and Climate Change Canada



# Sustainability Collaborations

## Canada's Textile Recycling Pilot

In 2022, Toronto-based Fashion Takes Action (FTA), in collaboration with Environment & Climate Change Canada (ECCC), conducted a [pilot project](#) to determine the feasibility of mechanical textile recycling in Canada given the industry's current infrastructure and technology. The goal of the project was also to make a value-added product from "waste" material. As part of ECCC's Zero Plastic Waste initiative, polyester (a petroleum-based fibre) was the chosen feedstock for this project. Partners representing different stages in the supply chain were selected to create a new consumer product from recycled textile waste with additional industry stakeholders participating in working groups to guide the direction of the pilot. DTS participated in this pilot through involvement in the working group.

During the pilot, retail partner Canadian Tire ran an in-store take-back program at their SportChek locations in South-Western Ontario. Collection partner, Goodwill, was responsible for collecting all the donated materials and sorting out items that were not labelled as 100% polyester. From there, the sorted material was delivered to General Recycled to be chopped, shredded, and carded. Texel then needle punched the carded fibres to make various felted prototypes. Textile expert, Marianne Mercier, then designed a laundry hamper out of the felted material that was sold within Canadian Tire stores in Spring 2023. The final product was composed of 40% post-consumer polyester garments and 50% recycled PET and diverted approximately 1000 kg of polyester fibre from landfill.



The felted recycled polyester hampers.  
Photo from Fashion Takes Action.

## Roadmap to Textile Recycling in Western Canada

Following our participation in the FTA pilot project, DTS joined the Roadmap to Textile Recycling in Western Canada learning group, led by Textile Lab for Circularity. The purpose of this learning group was to study and map out the complex considerations and opportunities for scalable and efficient textile recycling in Western Canada. The Roadmap progressed through several stages to identify needs and opportunities, establish key stakeholders, evaluate technology and systems viability, prioritize policies and required actions, and sequence the steps for establishing a regional textile recycling system.

DTS contributed our knowledge and insights as a business-to-business textile manufacturer and represented the only Alberta company in the Roadmap. Following the completion of the learning group meeting, TLC plans to publish the Roadmap with the learning group's findings to share results of this investigation and set the stage for next steps in making Western textile recycling a reality.

## CTIA's Canada Green Textile Strategy

DTS has been a member of the Canadian Textile Industry Association since 2020. CTIA is a non-profit organization working to grow and promote the Canadian textile industry at a national and global scale. In 2022, CTIA launched its new initiative, Canada's Green Textile Strategy (CGTS), to position Canada as a sustainable textile manufacturing location, on the basis that parts of Canada utilize renewable energy. As part of this strategy, CTIA will be submitting a report to the Canadian government with recommendations for supporting and promoting the Canadian textile industry from the perspectives of industry stakeholders. DTS has been an active member in the development of CGTS and continues to participate in committee meetings and report writing.

## Carbon Emissions

In 2022, DTS participated in a pilot carbon emissions report project organized by CTIA and Global Innovative Tech (GIT). As a participant of the project, DTS supplied GIT with production information regarding electricity and natural gas usage. The project resulted in an analysis of scope 1 and scope 2 emissions, serving as a baseline greenhouse gas (GHG) inventory for DTS.

The project results revealed that Canada is in a favorable position for sustainable textile manufacturing as several provinces are powered by renewable energy. While Alberta has not yet made the transition to renewable energy sources, we are taking our own strides to reduce our energy consumption and consequently our carbon emissions.

## Net-Zero Commitment

In May 2023, DTS joined Environment and Climate Change Canada's (ECCC) Net-Zero Challenge. The Net-Zero Challenge is a

voluntary initiative that aims to encourage businesses to develop and implement credible and effective plans to transition their facilities to net-zero emissions by 2050. By committing to the challenge, DTS is joining a group of over 100 Canadian businesses committed to reducing their manufacturing and operating emissions.

As a member of the Net-Zero Challenge, DTS must meet several deadlines to ensure constant progress towards a net-zero future. Building on the work of the GIT carbon emissions report, we updated the baseline GHG inventory with 2022 energy usage data. Using the updated baseline data, we are creating realistic and achievable emissions goals for now and the future. Our first step in this journey is gaining an understanding of our energy use by equipment through an energy metering and management program. We look forward to keeping the community informed of our goals as we make progress towards net-zero manufacturing.

## Lean/Six Sigma

DTS knows that waste exists in all aspects of business. For this reason, we have long incorporated the Lean/Six Sigma ideology into our production processes to target sources of physical, time and space waste within our operations. The process of Lean/Six Sigma is rooted in the Japanese word Kaizen, which translates to "change for the better", a word synonymous with the process of continuous improvement and self-criticism. Kaizen is at the core of our manufacturing culture; DTS is always in a state of self-reflection, looking to improve our processes. Lean/Six Sigma training has shown DTS that continual improvement is only possible with the collaboration of all. All employees are encouraged to pursue Lean/Six Sigma training and are supported through process improving projects. As of September 2023, DTS has trained 14% of all

staff in Yellow Belt (classroom basics), 21% in Green Belt (Yellow Belt + project) and 7% in Black Belt (Green Belt + more project work using Six Sigma statistics + supervision of Green Belt). Through the Lean/Six Sigma process, DTS has realized savings to manufacturing of approximately \$500,000 (assuming about \$50,000 savings per project).

## Waste Analysis

Understanding our waste streams is essential for effective waste reduction and elimination. In the spring/summer of 2023, DTS began a comprehensive analysis of our production waste, focusing on department of origin and reason for disposal. With this analysis, we were able to create targeted reduction efforts tailored to each production department through quality control measures and process improvements. The targeted reduction efforts aim to prevent waste from occurring through close monitoring of equipment status and increased quality inspections. The results of our targeted efforts will be known upon further waste analysis to be completed in early 2024.

## Polyester Recycling

One of our major production materials at DTS is polyester, a petroleum-based product that can be recycled through mechanical and chemical means. Although waste elimination is the goal, polyester yarn and fabric waste are currently unavoidable in our production processes. In an effort to divert polyester from landfill, an exploration of polyester recycling options was conducted. After contacting several options globally, it was found that our yarn supplier would be the only recycling option for our small recycling demand. However, it was concluded that our small amount of polyester waste does not justify the transportation emissions associated

# Future Initiatives

## Sustainability Education

DTS believes that sustainability education helps our business and community make informed decisions regarding environmental impacts. We aim to provide information on basic sustainability concepts and initiatives to our employees, customers and the public through internal education initiatives and public social media posts. It is our hope that our educational efforts will create an impact within DTS and the greater community.

## Environmental Sustainability Leadership

DTS strives to be a leader in sustainable manufacturing. Participating in the sustainability initiatives happening in the Canadian textile industry allows us to lead by example and advocate for SMEs within the industry.

with diverting the waste material back to Taiwan for recycling. Textile recycling is an emerging market and we hope that polyester recycling options will become more abundant in the near future. DTS is keeping tabs on future opportunities to divert polyester waste from landfill. In the meantime, our efforts to reduce waste include greatly reducing our waste polyester.

## Waste Diversion

Diverting production waste is a major area of focus for DTS. Although our main goal is to prevent waste from occurring, unfortunately waste does occur, making it our responsibility

to divert waste to the best of our ability. We have successfully found avenues to divert plastic, paper, cardboard, reflective silver and converted trim wastes.

DTS has a comprehensive recycling system with GFL Environmental Inc. and waste logic. Paper, cardboard, and plastics are recyclable through the GFL Environmental Inc. system. HDPE plastic dye tubes originating from our yarn suppliers are diverted to Alberta Recycled Plastic Lumber, where the tubes are shredded and compressed into plastic lumber for decking materials. As of March 2023, DTS has diverted over 37,000 dye tubes (approximately 4,000KG) from possible landfill to Alberta Recycled Plastic Lumber. Reflective silver material off cuts and converted trim unable to be sold are diverted to Edmonton-based Reflective Advantage, a company making reflective garments for the safety of pedestrians and their pets.

## Quality Assurance

Product quality directly impacts end-user safety, our customer service, and our sustainability initiatives. High quality standards not only ensure the best products for our customers, but also improve process efficiencies. Our quality assurance initiatives target quality improvement at each stage of production, preventing waste from occurring. We regularly hold training sessions with employees about our quality specifications. Our production employees are at the core of our quality assurance processes; their attention to detail and production knowledge ensure that problems are caught before they happen.

## Shipping & Transportation

As a global business, we utilize several methods of transportation for shipping and receiving materials from our suppliers and to our customers. Transportation methods include air, ship, truck, and train freight. Our raw materials come from suppliers located in Eastern Canada, USA, Taiwan, and South Korea, while the majority of our finished products are sold to customers located in Canada, USA, Mexico, Colombia, Nicaragua, and China.

As part of our commitment to ECCC's Net-Zero Challenge, we have determined our Scope 3 emissions related to our upstream and downstream transportation to be the most relevant category to our business. At this point in time, DTS has not done a comprehensive analysis of transportation emissions due to lack of preliminary and secondary data but, DTS will continue to explore avenues for data compilation and analysis to determine where improvements can be made.

One important transportation method we practice to reduce our emissions is to back ship product between our Canada and USA warehouses. This means that no empty trucks run between our facilities, reducing the total trips required and thus, our transport emissions.

## Lyocell From Hemp

Polyester and cotton fibre make up the two biggest fibre segments globally at 54% and 22%, respectively<sup>1</sup>. However, polyester is an oil-based/petrochemical fibre that is energy intensive to manufacture and does not biodegrade at the end-of-life. While

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<sup>1</sup> [textileexchange.org](https://textileexchange.org)

cotton offers biodegradability, it is a very water- and chemical-intensive plant to grow. In contrast, lyocell, a regenerated cellulosic fibre manufactured in a non-toxic closed loop system, offers a more sustainable alternative to polyester and cotton. Virtually any cellulosic material (including waste) can be used as feedstock for the lyocell process.

Due to the environmental benefits and functional performance of lyocell fibres, we began investigating the opportunity to use Alberta-grown [hemp](#) as a source of cellulosic feedstock for lyocell. Hemp plants require less water and chemicals (i.e., fertilizers and pesticides) to grow. Furthermore, hemp grows at a faster rate compared to conventional crops. After conducting

extensive background research, we are now in the experimental stage of manufacturing lyocell fibres from Alberta-grown hemp. Our Research and Development Specialist, Lelia Lawson, is currently pursuing her PhD at the University of Alberta to move us forward to the proof-of-concept stage. Once we have successfully expanded to a pilot scale, we plan to commercialize the business within a year. This is a very exciting opportunity for us as lyocell fibres can be made flame-resistant through additives in the polymer stage, meaning that it has the potential to replace FR fibres in our production process that have higher environmental impacts. You can read more about our lyocell initiative and Lelia's research [here](#).



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# Environmental Targets

## Efficiency

Efficiency is a key component to our near and future net-zero and sustainability initiatives. By reducing demand, we are reducing the emissions from energy generation, reducing waste from entering the environment, and supporting financially sustainable manufacturing processes. Basic analysis of our production processes has allowed initial efficiency changes to be made. Efficiency changes include reducing waste through improved quality inspection, customer demand driven production, removing redundancies in production procedures and equipment upgrades. However, we are striving to implement greater impact efficiency targets. We are currently in the exploration phase of implementing energy management systems throughout our processes. Energy management systems will optimize our production processes resulting in the highest output for the lowest energy demands.

## Waste Reduction

Our initiatives for improved efficiency synchronize with our desires to reduce waste in all production processes. For years, DTS has utilized waste reducing frameworks in the manufacturing segment of business operations. Our initiatives include utilizing the Lean/Six Sigma framework for identifying and eliminating process wastes, analyzing our waste data and waste diversion. We are constantly revisiting our waste reduction targets and always searching for improvements in waste reduction and diversion.

## Renewable Energy Sources

Efficiency and waste elimination can make considerable impacts on the reduction of resource use in manufacturing; however, we must also consider the sources of energy we are using. Energy sources are a major roadblock in achieving net-zero depending on the geographical location of production. Long term emissions reduction plans has DTS exploring alternative energy sources and supplemental renewable energy for production and building processes. We explored common and unconventional alternative energy sources, including solar power, nuclear power, wind power, combined heat and power (CHP) and waste-to-energy systems. CHP and waste-to-energy systems proved the most viable of the options; we will continue to explore these options into the future.

We are open to all viable options for improved energy efficiency and renewable energy sources as we persist in pursuing our goal of a net-zero future.



## Social



### Product Safety and Quality

At DTS, safety is the core of our business. Our products are used for the safety of end users, ensuring they stay safe on the job site and make it home safe to their families. For this reason, we take the quality of our products seriously.

DTS manufactures high visibility and flame-resistant materials, which meet compliance requirements of Canadian CSA Group Z96 for high visibility and Canadian General Standards Board (CGSB) 155.22 for flame-resistance. DTS meets compliance for American standards of American National Standards Institute (ANSI) 107 for high visibility and National Fire Protection Association (NFPA) 2112 for flame-resistance. We are continuously guided by our customers' safety standard requirements. Currently, we are reviewing the International Organization for Standardization (ISO) and European Standard (EN) standards to determine the applicability to our customers' needs.

In addition to meeting standards requirements, DTS maintains membership on many global standards committees, including CSA Z96, CGSB 155.22, AATCC and ISO through the Standards Council of Canada (SCC). DTS considers involvement with these standards essential for ensuring the ever-changing customer needs are reflected in the standards they are required to meet.

### Safety Standard Compliance Education

Safety standards must be followed for the optimal protection of end-users; however, standards can become complicated to interpret for those unfamiliar with them. To

provide clarity, DTS offers training webinars to help customers understand safety requirements in both the Canadian and American markets, ensuring heightened safety for end-users. No matter the industry of end-use our sales team can organize webinars for all customers upon request.



### MEET THE INSTRUCTOR:

Gail Burak,  
B.H.ECOL., PHEC., CHSC

Gail has extensive experience in the garment manufacturing industry across Western Canada. Gail's expertise in flame resistant and high visibility work wear has allowed her to provide technical support for customers, for both 3M™ Scotchlite™ Reflective Material and 3M™ Thinsulate™ insulation.

Gail began developing this training program as an extension of her work with textile safety, and it quickly grew towards a team effort to inform workers, managers, and manufacturers on the importance of high visibility products and their functionality.

Now, the training has evolved into a series of topics and is expected to continue to grow in areas of international standards, product evolution, and design to help our customers better understand and use reflective products.



## Employee Health and Safety

Employee health and safety is a top priority for DTS. Our Health and Safety (HSE) Coordinator ensures that our manufacturing and office spaces remain safe for all employees. Employees are encouraged to report health and safety concerns to the HSE coordinator for investigation.

In compliance with the Occupational Health and Safety Act of Alberta and the Occupation Health and Safety Code, DTS organizes a joint health and safety committee (JHSC). The committee prioritizes the health and well-being of employees, aims to prevent accidents and aids in fostering a healthy work environment. The JHSC is comprised of at least 4 individuals, with 50% of the JHSC employees not associated with management. The duties of the JHSC are to inform employees of health and safety risks, receive and respond to health and safety concerns expressed by employees, uphold the requirements of regulatory acts, investigate workplace incidents, and develop measures to prevent workplace safety incidents. The JHSC meets on a quarterly basis to

## Policies for a Healthy, Safe and Supportive Working Environment

At DTS, we prioritize a Healthy, Safe, and Supportive Working environment. The Employee Handbook serves as a compass, guiding us towards a cohesive, safe, and thriving work environment. It provides clear and comprehensive guidelines on our policies, ensuring everyone is on the same page regarding expectations, conduct, and responsibilities. We also adhere to stringent safety protocols outlined in the handbook to maintain a secure working environment, minimizing potential risks and hazards. By adhering to local, provincial, and federal standards, we reinforce our commitment to

employee well-being and ethical business practices

## Employee Training

### DiSC

DiSC is a valuable behavior assessment tool that allows people to identify their, as well as other's, communication styles and preferences. The Everything DiSC learning experience also deepens self-awareness, inspires appreciation of others, and fosters effective communication and collaboration. DiSC isn't just a one-time assessment; it's a journey of continuous growth. "A-Ha" moments that inspire behaviour change and transform workplaces, engage every employee regardless of title, position, department, or function. DiSC training has allowed for greater teamwork, strengthened team communication, and reduced conflict in the workplace. Our Human Resource Administrator is a Certified Practitioner and internally facilitates our DiSC training for our employees.

### Leadership Training

Developing strong leadership skills is crucial for fostering a positive work environment, enhancing team collaboration, and ultimately achieving better business outcomes. DTS employees in leadership positions have participated in advanced leadership training supplied by a third-party leadership organization. Through training, those in leadership roles were able to explore their own sense of purpose, build common visions and goals and strengthen the skills associated with leading lasting change. As many employees may not have held leadership roles prior to joining DTS, we want to ensure they can gain knowledge required to lead, collaborate, and contribute positively to our organization's success.



## Graphene Based End-of-Life Sensor

Effective performance of fire protective garments is vital for personal safety. However, these garments can become degraded due to moisture, heat, UV, or flames without showing any visible signs of damage. Consequently, the wearer of the garment may not be fully protected, despite thinking the garment is safe to wear.

We have been developing a graphene-based end-of-life sensor in collaboration with the University of Alberta and several industry partners to determine when fire protective garments no longer provide sufficient protection. When the sensor is exposed to various aging conditions, the conductivity of the graphene will diminish, indicating that the garment has been degraded and should be retired. Firefighters then test the resistivity of the sensor during their routine garment inspections to determine if it is still safe to use.

Our Research Assistant, Diana Yehia, is leading the project for us at DTS. Currently, we are in the proof-of-concept stage for the sensor and are anticipating commercialization by 2025.



### First Aid Training

Injuries happen both in and outside the workplace. However, as a manufacturer, we have additional hazards in our workplace that can pose greater risks to our employees. Therefore, we want our employees to have the skills and training to respond appropriately to an emergency. As of our last training session in 2022, we have 23 staff with intermediate first aider training. We follow Occupational Health and Safety guidelines and provide the minimum requirement of first aiders to operate a shift of production.

### Social Committee

DTS believes that a strong organizational community results in better working relationships, strengthened team communication and improved product quality. In the spring of 2023, DTS organized a social committee, dubbed the "fun squad", to bring non-work experiences and activities to our employees, families, and the community. Events planned by the social committee include Davey Day, a day for employees to show their friends and family DTS operations; Heritage Day, a day for our diverse workforce to share their favourite meals with their coworkers; and the winter holiday party, an evening to enjoy food and conversation with our coworkers outside of the workplace. The social committee looks forward to planning more activities during and outside of work hours to continue building a strong work culture rooted in the respect and understanding of those in our work community.

### Community Engagement

#### Edmonton Food Bank

For more than 20 years, DTS has run a two-week non-perishable food collection campaign to support the Edmonton Food



Bank during its busy holiday season. A campaign enjoyed by all, employees and customers enthusiastically make donations. This year, DTS employees and customers contributed approximately 86 kg of food for donation.

In addition to food donation, DTS contributes an annual financial donation to the Edmonton Food Bank, with donations totaling more than \$50,000 over the years. Time is another donation avenue for community engagement. Employees that are able and willing have volunteered their time to the food bank through group volunteer work opportunities organized by DTS.

### Santa's Anonymous

Each year, DTS sets up a collection point for donations to 630 CHED Santa's Anonymous. Founded in 1955 by Jerry Forbes, Santa's Anonymous is a local Edmonton charity whose mission is to see every child receive a new toy at Christmas. The charity now supports over 25,000 children.

Annually, DTS collects approximately 50-100 toys destined for children who may otherwise not receive a toy at Christmas.



### Plaid for Dad

Plaid for Dad, a campaign organized by the Canadian Cancer Society, is a day of raising funds and bringing awareness to prostate cancer screening and research. Each June, DTS staff participate by donning their best plaid outfits on the Friday before Father's Day. Funds can be donated through the Canadian Cancer Society webpage.

### November

Each November DTS staff participate in the Movember initiative, raising funds and bringing awareness to men's physical and mental health. Founded in 2003, Movember operates in 20 countries and has funded more than 1,250 projects aimed at improving men's health. For the month of November, those participating can grow out their facial hair or participate in a fitness challenge to spark conversation around men's health. Donations collected are distributed by Movember to men's health organizations globally. In 2023, DTS raised \$4,300 for the initiative.

### YOUCAN Youth Services

DTS partners with local organization YOUCAN Youth Services, whose mission is to "engage young people to transform their lives by interrupting the cycle of harm". We are grateful to have accepted employees from the program into DTS over the past couple of years through their Ready - Willing - Able model. At DTS, we work on a "train up" model, meaning many of our team members don't have previous experience in their roles before joining us. This allows us to offer hands-on training in textiles to a broad range of interested workers.

DTS's financial contributions to YOUCAN Youth Services, exemplified by our support for events like the YOUCAN comedy nights,



underscore a holistic commitment to our organization's mission. Through nurturing a connection beyond employment, DTS plays an active role in enhancing the general welfare and achievements of at-risk youth in Edmonton.

## Manulife/RRSP

Recognizing the impact of employee well-being on productivity and community vitality, we prioritize the health and support of our workforce. We provide a robust health and wellness plan within our benefits package, aiming to contribute to the overall well-being of our employees. Furthermore, DTS has partnered with Homewood Health to enhance our commitment to employee well-being. This offers an extensive Employee and Family Assistance Program (EFAP), providing comprehensive support for mental and emotional health, Life Smart Coaching including Health, Life Balance, and Career guidance. We also offer the opportunity for our employees to join our RRSP Matching Program to ensure continued support for retirement planning.

## Employee Voices

Empathy and understanding stem from clear communication. At DTS, employees are encouraged to voice their concerns and suggestions in the workplace. Our middle and upper management are always available for discussion and encourage employees to approach them with concerns they have. Management can often be found in the production areas engaging with employees. Additionally, our Human Resource Administrator encourages employees to discuss any concerns they may have regarding the workplace and/or personal concerns impacting the work environment. We also make use of a safety app that allows employees to confidentially report any HR or health and safety concerns.

## Employee Training

As one of Alberta's few textile manufacturers, we specialize in a niche market, leading to a high proportion of new hires without prior industry experience. We offer comprehensive on-the-job training and continuous skill development for our employees. Standardized operating procedures (SOPs) govern nearly all manufacturing processes, requiring employees to undergo training and demonstrate competency. Cross-training across departments is common, enhancing employees' understanding of our complete manufacturing processes. We continually improve our processes based on best practices and update our SOPs to reflect these improvements, ensuring that knowledge is retained even with staff turnover. Implementation of a new online learning management system in the coming year will enhance employee development and provide a centralized platform for accessible, scalable, and cost-effective training. This will help us foster a culture of continuous improvement and upskill our workforce.



"Reflective Advantage is focused on developing products to promote pedestrian safety and visibility at night. We have dealt with Davey Textile Solutions for 10 years. They demonstrate their commitment to reduce waste and decrease the environmental impact of their operations by donating reflective silver ends from their production and a variety of other retroreflective products to us (which would otherwise end up in a landfill).



- Irene Dixon, Owner of Reflective Advantage



## Practicum Students

DTS is a firm believer that students bring innovative and unique perspectives to the workplace, benefiting business and community outcomes. For years, DTS has offered University of Alberta Human Ecology students practicum placements. By supporting and encouraging students at the beginning of

their professional careers, DTS hopes to create a positive learning environment where innovation thrives. Former DTS practicum students have gone on to pursue careers in the Canadian textile industry and gone on to support advances in Canadian textile research. DTS is happy to have retained some former practicum students as full-time employees who continue to support the business.



The team at Davey Textile Solutions is a pleasure to collaborate with. They are highly responsive when solicited for information and prototypes and have shown continuous support for our research while asking the right (tough) questions. I also appreciate their vision and the dedication they bring to putting the values of the company into action. I feel very fortunate to have been able to partner with them over the last 6 years on the development of graphene-based end-of-life sensors for fire-protective fabrics and more recently on made-in-Canada high-performance Lyocell fibres using local sources of cellulose and an environment-friendly process.

-Dr. Patricia Dolez, Associate Professor at the University of Alberta





# Governance



## Ethical Governance

Ethical governance plays a pivotal role at DTS, by promoting responsible and sustainable practices throughout the production process. In a country known for its commitment to environmental stewardship and social responsibility, ensuring that DTS adheres to ethical standards is essential. Ethical governance encompasses fair labor practices, environmental sustainability, and transparent supply chains. By upholding these principles, DTS not only protects the rights and well-being of their workers but also reduces the industry's environmental footprint.

## Policies for a Healthy, Safe and Supportive Working Environment

DTS operations are governed and guided by an extensive list of policies for the safety of employees, customers, and business operations. DTS employees are governed by a code of conduct for the creation of a safe and supportive work environment. The code of conduct ensures all federal, provincial, and municipal laws and regulations are upheld by DTS and our employees. Furthermore, the code of conduct guides our employees on acceptable and unacceptable workplace behaviors, ensuring all stay physically and mentally safe at work. Other safety-based policies guide safe practices for first aid, incident reporting, maintenance reporting, hygiene, bullying and harassment reporting.

In addition to safety, our policies support employee growth in the workplace. Our educational assistance policy helps us provide financial support to employees wanting to upgrade their education and hone their skills to improve their job performance.

DTS policies protect our customers and their information. We have strict guidelines on using customer information that comply with government regulations, ensuring our customers' privacy is maintained.

## Legal Compliance

DTS currently utilizes considerable resources in ensuring compliance with government regulations. These resources include in-person participation on standards committees, travel, and salaries to coordinate sample testing, as well as contractor costs (e.g., UL and Groupe CTT) for compliance and certification testing to CGSB, NFPA, ANSI, ISO, CSA, etc. standards. These costs increase as we expand into new geographic territories, where each country typically maintains its own set of standards and regulations.

## 50-30 Challenge

The 50 – 30 Challenge is an initiative co-created by the Government of Canada, diversity groups and the private sector that aims to attain gender parity (50% women and/or non-binary people) and significant representation (at least 30%) of under-represented groups on boards and senior management positions to build a more diverse, inclusive, and vibrant economic future for Canadians. The challenge allows a variety of organizations to participate across three separate program streams including small and medium enterprises (SMEs), non-profit organizations, and those without Boards of Directors or senior management teams.

DTS has registered to participate in the challenge and is committed to achieving this target. At the current time, we have 64.7% of our middle management as female and 27.8%





as underrepresented groups. Due to legalities and privacy considerations around 2SLGBTQ+ status, we expect our actual percentage of underrepresented groups to be higher than estimated.

The Government of Canada provides a toolkit for those organizations who have signed up for the 50-30 Challenge. We are actively working through the toolkit to determine what actions DTS must take to continue meeting the 50-30 Challenge in years to come.

## Customer Service

Our commitment to delivering quality service and products to our customers is paramount to the success of our business. For this reason, we have very close relationships with our customers to ensure we understand and meet their needs. Moreover, positive customer relationships provide invaluable feedback about our products, enabling continuous improvement and innovation. Some of our customers have been with us for over 10 years. By prioritizing customer satisfaction, DTS wants to ensure not only its immediate success but that we also lay the foundation for long-term viability and growth in an ever-evolving market.

## Automation/IIoT

As the demands of consumers and the complexities of production have evolved, there is an increasing imperative to integrate automation and the Industrial Internet of Things (IIoT) into textile manufacturing processes. This transformation is driven by the need for enhanced efficiency, improved quality control, reduced operational costs, and

greater sustainability. Since 2017, we have been exploring how we can incorporate automation and IIoT in our warping, weaving, finishing, lamination and sewing departments to quantify production, alert operators of failing machinery, and detect quality control issues.

IIoT projects are typically phased through 5 elements: Digitization, Monitoring, Diagnostics, Controlling and Autonomous Operations<sup>2</sup>. Following these phases, our initial focus was digitization which included designing and implementing sensors on devices to transform analog signals to digital before transferring this resulting data to some form of data store.

These efforts tie into our goal of predictive maintenance, where we can anticipate when equipment will begin to fail and/or cause quality issues and can mitigate these issues before they begin.

## Cybersecurity

As we increasingly rely on automated machinery, data analytics, and equipment management systems, we also become more vulnerable to cyber threats. Protecting sensitive manufacturing processes, intellectual property, and customer data is paramount, as a breach could result in significant financial losses, damage to the company's reputation, and potential legal repercussions. As DTS becomes more reliant on Industry 4.0 technologies and the Internet of Things, investing in robust cybersecurity measures becomes an integral part of business continuity and sustainability, safeguarding not only the company's assets but also our future

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<sup>2</sup> D. R. V. P. C. a. E. I. S. McCarthy, "IIoT - World Webinar," International Data Corporation (IDC), 09 September 2021. [Online].



growth and competitiveness in an increasingly digital landscape.

To this end, we have hired a third-party company to conduct a complete review of [our cybersecurity system](#). The resulting plan will be instrumental in safeguarding the

company's data and intellectual property from cyber threats, and the implementation of the plan will be a crucial step in ensuring that DTS continues to prioritize cybersecurity in the future. In addition, we have recently updated all computer systems to Windows 11. All computers are password protection and Microsoft Office use requires multifactor authentication.



For over two years, BJM Controls has been in a productive collaboration with Davey Textile Solutions. As a contractor, I can attest to the pleasant and secure work environment they provide. The positive treatment of their staff is evident in the way they in turn interact with me and my team. Davey operates on the principle that you can't enhance what you don't quantify. They are committed to waste reduction, and as such, all waste is quantified. Understanding the source of waste is the first step towards reducing it, and this can only be achieved through measurement. Once identified, strategies can be implemented to decrease waste and the effectiveness of these strategies can be measured. Davey is also invested in the growth of their employees. They are staunch advocates of Lean Six Sigma and assign their staff projects often aimed at enhancing their environmental performance. Over the course of our collaboration, I have witnessed a company that is unwavering in its pursuit of operational excellence. Every employee is aware of this commitment, and I have been consistently impressed by their dedication to improving their operations.

- Brent Mitchell, owner of BJM Controls



## Local Suppliers


We have longstanding relationships with several of our suppliers, many of which are in Canada. Specifically, most of our yarn is sourced from spinners in Quebec. De-risking our supply chain means having more than one supplier for a particular input. Therefore, we have had to source outside of Canada to ensure we have materials when needed. However, we prioritize supporting the local economy by purchasing Canadian when possible. As there are currently no lyocell fibre producers in Canada, our work on the lyocell from hemp initiative will also help mitigate supply chain risks by having an onshore source of fibre. This strategic choice aligns with environmental objectives, fostering sustainability and responsible resource management. Furthermore, supporting local suppliers bolsters the social fabric of the community by stimulating economic growth and job creation.





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