

## CANADA'S ONLY BEARING TECHNICAL ROADSHOW IS NOW TOURING!



Learn more about NTN's  
Community Garden - Giving Back  
and Planting for Homeless Shelters

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Meet our Customer Success Team,  
going above and beyond to deliver  
the Ultimate Bearing Experience

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NTN Roller Bearing Application  
& Maintenance Seminar held in  
Mississauga

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**PRODUCT PROFILE**  
NTN Automation's Linear  
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# NTN

## CANADA'S ONLY BEARING TECHNICAL ROADSHOW IS NOW TOURING!

Don't miss this one-of-a-kind opportunity for your entire staff to personally interact with NTN's solution-focused portfolio. Visit our mobile showcase and learn about our innovative products and solutions. The NTN UBE Technical Roadshow features a wide range of products, from NTN KIZEI & ULTAGE Spherical Roller Bearings to NTN Sentinel Series and NTN Heavy Duty Mounted Units. Also on display is NTN's new TRIAGE Engineering Solutions portfolio offering a systematic approach to bearing troubleshooting with NTN's INSYNC remote collaboration technology.

NTN's UBE Technical Roadshow utilizes product demonstrations to share the latest technology for ball and roller bearings, wheel hub assemblies, seals, and linear motion products. Bearing endusers have the opportunity to see exactly how robust NTN bearings are and how much operational efficiency in improved production and reduced downtime they will bring to manufacturing plants across a wide range of industries.

NTN is bringing this roadshow to bearing users across Canada, with all demonstrations conducted live on-site at plant and manufacturing facilities. The implementation of NTN's roadshow has proven to be successful, receiving favourable reviews from industry partners on how easy the event is to organize and how effective it is for their employees.



**THE NTN ULTIMATE BEARING EXPERIENCE**  
Contact your territory manager and book it now!







## ROADSHOW TESTIMONIAL

"The NTN UBE Technical Roadshow is exceptional and our people are very impressed with the quality of the in-person instruction. We have also had great employee engagement and fun with the pit stop challenge competition. I appreciate what the NTN team has done for us at Irving Tissue. The NTN technical service specialists were extremely helpful and this program will help our employees. A truly excellent performance on this roadshow event, delivered by NTN and Motion Industries, thank you on behalf of Irving Tissue"

Jacques Richard,  
Maintenance Coordinator,  
Irving Tissue



**Engage with NTN's industry experts and learn more about the future of modern bearing technology!**

Registrations for NTN's state-of-the-art bearing technical roadshow are being accepted for the Canada wide program, which will take place June through October.

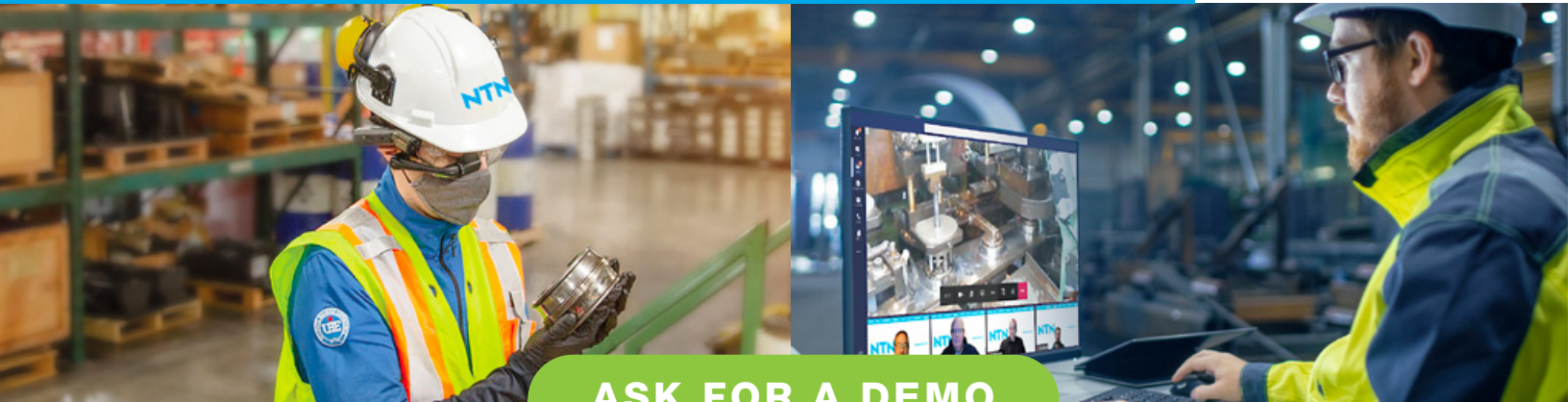
The mobile roadshow provides a great opportunity to connect in person with our industry experts to

discuss problematic bearing applications, receive tech tips and get a holistic view of NTN's innovative bearings portfolio at a hands-on level.

And if you're up for some competition, be sure try our NASCAR Pit Stop Challenge! Experience the speed and intensity of a NASCAR pit stop upon completion of the bearing demonstration. Try your luck at setting the fastest pit time as our Pit Stop Challenge travels across Canada for your chance to win a NASCAR Racing Experience.

To learn about the NTN Ultimate Bearing Experience Technical Roadshow, contact your NTN representative or NTN bearing distributor.

# NTN TRIAGE Engineering Solutions Powered by INSYNC Remote Diagnostics



**ASK FOR A DEMO**

NTN's innovative TRIAGE Engineering Solutions powered by INSYNC Remote Diagnostics combines HI (Human Intelligence) with AR (Assisted Reality) to help keep production processes running optimally. A cornerstone of the NTN UBE TRIAGE support system, NTN's INSYNC AR (Assisted Reality) has been designed to remotely connect NTN's engineering bearing experts to front-line maintenance staff, safely and instantly around the clock, ensuring manufacturing facilities can extract great value from NTN's bearing solutions now and in the future. The state-of-the-art system allows NTN experts based at NTN's Engineering Centre to send precise visual instructions remotely to maintenance technicians at any plant or manufacturing facility to ensure bearing maintenance issues can be fixed as quickly and efficiently as possible, minimizing downtime.

"HI + AR = UBE," says Mr. Paul Meo, President and CEO of NTN Canada. "NTN delivers The Ultimate Bearing Experience (UBE) through the new platform. Our TRIAGE approach accurately identifies a customer's problematic critical bearing application through a three-step collaboration process designed to bridge NTN's extensive engineering knowledge with ground-breaking bearing technology, bringing solutions to your fingertips, anywhere, anytime."

NTN has enjoyed continuous growth and expansion over the past 100 years, with over 1100 engineering associates and 15 research facilities around the world. As a company dedicated to "providing the Ultimate Bearing Customer Experience", NTN remains steadfast in providing the highest level of engineering service despite travel restrictions due to COVID-19.

In Canada, the company depends on its team of engineers, with over 350 years of combined bearing experience in the marketplace, to support end users at manufacturing facilities with complex bearing applications and troubleshooting. NTN's innovative TRIAGE Engineering Solutions platform offers a systematic approach to defining bearing troubleshooting requirements to support maintenance professionals. If maintenance technicians face complex or unusual servicing points, they can use NTN's INSYNC remote collaboration technology to connect directly with NTN's Engineering Technical Support Centre located at NTN's headquarters in Mississauga, Ontario. The NTN expert is then able to support the field technician through the diagnosis and bearing repair by augmenting images, diagrams and adding repair suggestions into their view.



#### **FASTER DECISION MAKING:**

Access to NTN expertise anywhere around the world 24/7 to enable faster decision making and bearing analysis.



#### **INCREASED SAFETY:**

Remote collaboration enables fewer personnel in the operational environment for increased workplace safety.



#### **INCREASED EFFICIENCY**

Carry out bearing maintenance quicker and more cost effectively. NTN's TRIAGE INSYNC ensures any bearing maintenance issue can be fixed as efficiently as possible.



#### **LOWER ENVIRONMENTAL IMPACT:**

Environmentally-friendly products that include energy-saving bearings & recyclable components to reduce carbon footprint.





# OUR CUSTOMER SUCCESS TEAM

Great work requires great people, and we think ours are some of the best.

We're a creative, friendly and diverse bunch, who truly enjoy what we do and the people we work with. Our team spirit, expertise and perspective helps us create bearing solutions that go far beyond just a

good idea. What does it mean to succeed? We define success by the transfer of our knowledge and of our experience in the bearings industry to our clients. Helping them achieve their business objectives is

our cause. The way we see it, we are not successful if we aren't using our expertise to help our customers achieve great things.



## OUR LEADERSHIP



**Paul Meo**  
CEO, NTN Canada

Paul Meo is President and CEO of NTN Canada, overlooking both the sales and manufacturing operations headquartered in Mississauga, Ontario. Paul is responsible for providing strategic, financial and operational leadership for the company and closely coordinates and works with NTN Corporation's Board of Directors. Paul is a graduate of York University's Schulich Executive Program.



**Andrew Gidge**  
Vice President of  
Manufacturing

Andrew Gidge, P.Eng., brings 23 years of progressive experience and field knowledge in manufacturing environments. He has a history of positive results in driving employee satisfaction, leading production improvement efforts, maximizing team performance and increasing customer satisfaction.



**Sylvia Silveira**  
Vice President, Human  
Resources & Operations

Sylvia Silveira has been with NTN for over 13 years, overlooking the development and implementation of timely, effective and innovative Human Resources standards, policies, procedures and programs to satisfy the requirements of a diversified and unionized environment including labour relations & occupational health & safety.



**Phil Schmidts**  
Director of  
Aftermarket Sales

Phil Schmidts has been with NTN Canada for 21 years and is currently Director of Sales for the Canadian Aftermarket. Phil has held various positions within the company and has led the development of strategic partnerships in the automotive aftermarket, industrial OEM and industrial aftermarket divisions.



**Rita Payne**  
Director of Marketing  
& Communications

Rita Payne, MBA, is the Director of Marketing and Communications at NTN Canada with responsibility for brand management and corporate communications. Rita has more than 25 years' experience in global marketing and is an expert on strategic partnerships, developing product and brand strategies and executing commercial go-to-market plans.



**Ken Wells**  
Director of Operations

Ken Wells is the Director of Operations for NTN Canada, leading the UBE sales transformation initiative. Ken has been with NTN for 23 years and has led operations and sales management for the industrial aftermarket in Eastern and Central Canada. Ken holds an Economics degree from the University of Western Ontario.



**Marcus Wickert**  
Director of Engineering

Marcus Wickert, P.Eng., is a Mechanical Engineer with over 30 years of bearing experience. Marcus is the Director of Engineering for NTN Canada with a focus on bearing failure analysis, troubleshooting, root cause analysis, bearing training and education, bearings for Pulp & Paper, Metals, Forestry, Mining, and the Food & Beverage industries.



**Joe Kosichek**  
Director - UBE  
Engineering TRIAGE

Joe Kosichek, P.Eng., has over 30 years plus in the bearing industry, working in engineering, sales & marketing. He has returned to his engineering roots to promote the new NTN TRIAGE process helping us deliver our renowned first-class technical support in 2023 and beyond.



**Sophia Bernard**  
Controller

Sophia Bernard is the Financial Controller for NTN Canada. Her work is focused on providing accurate and timely financial records, by overseeing accounting functions and staff.

## OUR ENGINEERING & TECHNICAL SERVICE TEAM



**Mario Borsella**  
National Engineering  
Service Manager

Mario Borsella, P.Eng., is a Mechanical Engineer with 25 years of experience developing technical solutions to complex, problematic bearing applications covering a wide range of market segments across Canada. He leads the Canadian service team dedicated to providing after-sales technical support to ensure maximum bearing performance.





**Chris Rempel**  
Engineering Manager

Chris Rempel, P.Eng., provides bearing related equipment design and maintenance expertise to many of Canada's resource-based industries. He started with NTN in 2002 with a background in material handling equipment design. Focusing on Petroleum, Mining and the Pulp and Paper industry, Chris is very familiar with applications in extreme operating conditions.



**Al Rudaitis**  
Senior Applications Engineer

Al Rudaitis, P. Eng., is a Senior Applications Engineer who currently supports the IOE business unit at NTN Canada. Al graduated with a Bachelor's degree in Applied Science in Mechanical Engineering, then began his career with NTN in 1994. Al has over 29 years of bearing experience in both engineering and sales, spanning a wide array of market segments and products for the Canadian market.



**Christian Borsella**  
Applications Engineer

Christian Borsella, P.Eng., is an Applications Engineer at NTN Canada. His work is focused on delivering successful technical solutions and field engineering services to meet customer needs.



**Amjad Ramadan**  
Applications Engineer

Amjad Ramadan, P.Eng., works at NTN Canada's head office as an Applications Engineer. With more than 13 years of successful experience, his work is focused on the industrial aftermarket covering a wide range of market segments across Canada.



**James Foufas**  
Technical Service Specialist

James Foufas is a Technical Service Specialist for NTN Canada in Alberta. James completed a Bachelor of Science degree in 1999 from the University of Alberta and subsequently spent 18+ years in territory management and technical sales.



**Michael Redenius**  
Technical Service Specialist

Michael Redenius is a Technical Service Specialist for NTN Canada covering the province of BC. Michael brings 37 years of experience in forestry, mining, energy and agricultural industries in Canada and Europe. Michael is known for his ability to identify & resolve recurring maintenance issues, and to improve up time and the efficiency of processes.



**Matthew Meo**  
Technical Service Specialist

Mathew Meo has been with NTN since 2012 providing technical support services to a wide range of clients across many industries. He strives to provide a customer-centric solutions approach for any and all technical related issues.



**J.F. Doucet**  
Field Service Engineer

Jean Francois, P.Eng., is a Mechanical Engineer with over 11 years of experience managing technical support for bearing applications, with a focus on the industrial aftermarket. He has a wealth of knowledge in the pulp and paper, sawmill and energy industries.



**James Hassan**  
Applications Engineering

James Hassan has a mining mechanical engineering background with over 4 years of professional work experience in the bearings industry. His work has focused on developing technical solutions to problematic bearing applications within the Food Processing, Forestry, Aggregate, Mining and Steel market segments.



**Joseph Antony**  
Engineering Project Coordinator

Joseph Antony, PMP®, works at NTN Canada as an Engineering Project Coordinator. He joined NTN in 2018 and has over 10 years of project management experience. He plays an active role in numerous engineering projects and corporate initiatives.



**Pete Buller**  
Field Service Engineer

Pete Buller, P.Eng., is a Professional Engineer with over 30 years experience in the bearing industry. During this time he has held various roles and has experience in Sales, Engineering, and Technical Services. Based in Winnipeg, Pete is responsible for managing technical service support in Saskatchewan, Manitoba, and Northwestern Ontario.



**Shreyans Dedhiya**  
Field Service Engineer

Shreyans Dedhiya, P.Eng., is a Service Engineer with NTN Canada. His work is focused on delivering successful technical solutions and field engineering services to customers in Western Canada and Southern Ontario. Shreyans holds a university degree in Mechanical Engineering and brings over 10 years of experience.



**William Hui**  
Applications Engineer

William Hui, P.Eng., has over 20 years of engineering experience, 13 of which are in the bearing industry, supporting Tier 1 and OEM customers in the automotive industry. He is experienced in project management from initial design and development, through manufacturing to quality systems and root cause analysis.

## OUR SALES & TERRITORY MANAGEMENT



**Sean Barron**  
Sales Manager IAM

Sean Barron has over 27 years of experience directing strategic partnerships with industrial channel partners and executing the successful delivery of NTN bearing solutions to meet customer needs.



**Peter Vorvis**  
Sales Manager  
industrial OEM

Peter Vorvis, P.Eng., is a Mechanical Engineer with over 35 years of bearing experience, providing bearing related equipment design and maintenance expertise to the Canadian Machinery and Equipment Industry. Peter is the Sales Manager, Industrial OEM, Linear and Automation for NTN Canada focusing on linear motion products for the motion control and automation industries.



**John Kasunic**  
Sales and Engineering  
Manager, Automotive OE

John Kasunic, P.Eng., has over 26 years experience starting as an Applications Engineer with NTN in 1996. John has supported NTN's AOE customers as an engineer and sales manager before assuming the senior sales and engineering management role. John has vast experience in Automotive Applications and Engineering and Quality systems.



**Stephane Chaboud**  
Corporate Sales  
Manager IAM

Stephane Chaboud, Corporate Sales Manager IAM, brings over 10 years of project management experience in complex industrial environments overlooking the deployment of added-value services and products.



**Robert Pitt**  
Director of Sales AAM

Robert Pitt is responsible for sales to the Canadian Distribution Network of all NTN Automotive Aftermarket and Heavy Duty bearing products, including major Warehouse Distributors serving Jobber and Independent Installer organizations.





**Warren Allan**  
Project Leader

Warren Allan serves as a Senior Consultant to NTN providing analysis on bearing procurement and supply chain management programs for the pulp, paper and tissue industry. He specializes in delivering real business value through smart cost controls, continuous improvement initiatives, and supplier and customer relationship management.



**Luc Bergeron**  
Territory Manager  
IAM, Quebec

Luc Bergeron has over 19 years of experience managing strategic partnerships with industrial channel partners, executing the successful delivery of bearing solutions to meet customer needs.



**Kelly Lusk**  
Product Manager -  
Linear, Automation &  
Robotics

Kelly Lusk brings over 20+ years of industrial aftermarket experience, and has worked for NTN Canada for over 8 years, across multiple roles from marketing and customer service to rebate development and corporate sales. Kelly Lusk currently serves as NTN Canada's Product Manager for Linear, Automation & Robotics.



**Giovanna Sacco**  
Corporate Sales Project  
Manager

Giovanna Sacco has over 17 years of Territory Sales project management experience within the forestry and steel sectors, overlooking customer service and technical support with bearing applications.



**Darren Hughes**  
Territory Manager  
IAM, BC & Manitoba

Darren Hughes is a Territory Manager at NTN Canada and covers the provinces of British Columbia and Manitoba. He has 35 years of experience in the bearing industry, with a vast knowledge base in bearing design and end-user applications.



**Roberto Alcaro**  
Territory Manager  
IAM, Ontario

Roberto Alcaro is a Territory Manager at NTN Canada and covers Central Ontario. He has over 4 years experience in the health care industry performing diagnostic imaging. Roberto is dedicated to providing the Ultimate Bearing Experience.



**Carly Tudball**  
Product Manager  
Automotive & HD  
Aftermarket

Carly Tudball was recently promoted to Product Manager, Automotive & HD Aftermarket. Carly has worked in a multitude of roles from technical support and marketing, to customer care for the automotive and industrial markets. Carly has more than 5 years of marketing and sales experience in the bearings industry, evidenced by her ability to consistently exceed the expectations of our customers and cultivate relationships with multiple high-value clients.



**Leton Inoue**  
Territory Manager  
AOE

Leton Inoue is an accomplished executive with over 15 years of experience in sales and supply management for automotive materials and components. Leton has a thorough understanding of the automotive industry and a proven track record of delivering results. He has worked in product development, marketing, sales, and business development.



**Glen Keats**  
Strategic Account  
Manager IOE

Glen has over 43 years of experience managing strategic industrial OE channel partners, executing the successful delivery of bearing solutions to meet customer needs.



**Roy Lao**  
Territory Manager IAM  
(AB, SK, Yukon)

Roy Lao has over 10 years of experience in Sales & Operations. He believes that excellent customer service and problem solving are not only fundamental to sales but are building blocks for growth & success.



**Monica Melvin**  
Territory Manager  
IOE, Ontario

Monica Melvin has over 19 years of experience managing strategic partnerships with industrial channel partners, executing the successful delivery of bearing solutions to meet customer needs.



**Ihab Abdelaziz**  
Corporate Sales  
Project Manager

Ihab Abdelaziz is a certified Project Manager and holds a MBA from UOWD. He joined NTN in 2022, managing corporate accounts of the industrial after-market segment & executing projects to ensure the successful delivery of NTN Ultimate Bearing Experience solutions. Ihab has more than 14 years of experience within different industries.



**Anthony Marcano**  
Territory Manager  
IAM, Quebec

Anthony Marcano is a Mechanical Engineering Technician with more than ten years of experience in the industrial field. Anthony brings vast knowledge in the field of gearboxes, bearings and lubrication, and works hard to execute the successful delivery of bearing solutions to meet customer needs.



**Bassirou Samb**  
Territory Manager  
IOE, Quebec

Bassirou Samb, MBA, joined NTN in April 2023 after working for 14 years in Alignment and 3D Metrology Services as an Account Manager covering pulp and paper, mining, plastics and aeronautic industries. His qualifications include a Bachelor degree in Mechanical Engineering and his mission is to help develop value added propositions for customers to resolve their issues.



**Hiromu Asano**  
Territory Manager  
IOE (ON) & AOE (ON/  
Quebec)

Hiromu Asano brings over 30 years of experience in sales & marketing, business development, and customer care from various industrial sectors including automotive manufacturers. Hiromu strives to deliver the Ultimate Bearing Experience to his customers ensuring reliable, accountable and customer centric service.



**Darrell McKay**  
Territory Manager  
Atlantic Canada

Darrell McKay has been with NTN for over 9 years and is currently Territory Manager for Atlantic Canada. Darrell brings over 30 years of experience in heavy industry with a focus on bearings and power transmission, with vast knowledge in preventative maintenance and mechanical support having achieved two red seals in industrial mechanics and welding.

## OUR CUSTOMER SERVICE TEAM



**Loren Almeida**  
Customer Service  
Manager

Loren Almeida, Customer Service Manager, has been with NTN Canada for 5 years overlooking customer care requirements. Loren is currently taking a French language course to acquire her bilingual certificate.



**Francois Pellerin**  
Inside Sales Specialist

Francois Pellerin will achieve his 40th year service anniversary with NTN this September. Francois brings a wealth of knowledge overlooking technical support and customer care for the industrial aftermarket, going above and beyond to ensure client needs are met.



**Daniel Guerin**  
Sr. Expeditor  
Aftermarket

Daniel Guerin has over 20 years of experience overlooking technical support and customer care for the industrial aftermarket.





**T.J. Tkachyk**  
Bilingual Insites  
Sales IAM

T.J. has over 14+ years of experience in Customer Service varying in multiple industries, 4 years in Technical Support (IT) roles, as well as 6 years in project co-ordination with an electrical utility. He is always striving to improve processes, and find improvements to aid in cost cutting and LEANING processes.



**Alexis Salazar**  
Bilingual Customer  
Service Rep

Alexis Salazar, Bilingual Customer Service Representative, has been in the bearings industry for 15 years. His main objective is to develop solutions to meet customer needs.



**Jim Dunlevy**  
Inside Sales / Customer  
Service Rep

Jim Dunlevy brings 35 years of experience providing customer support and care to all NTN sales divisions. For the past ten years, Jim has focused on supporting solutions for our Heavy Duty Truck market.



**Edison Salazar**  
Customer Service

Edison Salazar has been with NTN for 19 years. Edison takes pride in providing all of our customers with the Ultimate Bearing Experience.



**Chase Keats**  
Customer Service  
Representative

Chase Keats has over 5 years of experience overlooking customer service and technical support with bearing applications for industrial, OE and automotive channel partners.



**Paul Price**  
Inside Sales IOE  
Specialist

Paul Price, has over 34 years of experience overlooking technical support and customer care for the industrial original equipment (IOE) market. Paul strives to go above and beyond to ensure client needs are met.

OUR VISION: DELIVERING THE  
**ULTIMATE**   
BEARING EXPERIENCE

**NTN**

We are pleased to introduce our new special column, "Michael's Corner". NTN Technical Service Specialist, Michael Redenius, provides his tech tips, product information, and industry news to help provide solutions to meet your diverse needs. We hope that our readers will enjoy these timely updates on exciting bearing topics.



# MICHAEL'S CORNER

## THE SPECIALIST

### NTN REVOLUTIONIZES BEARING EDUCATION WITH THE NTN CAMPUS



In the rapidly evolving world of engineering, staying ahead of the curve is crucial. Recognizing the need for continuous learning and professional development, NTN Canada has introduced the NTN Campus, an innovative online education platform that brings decades of engineering expertise to industry partners on demand.

Michael Redenius, in his key role as Technical Service Specialist, emphasizes the value of NTN's online education courses, stating, "Courses taught by NTN experts make decades of engineering expertise available on demand through the NTN Campus." This statement highlights the immense knowledge and experience that professionals can access through this ground-breaking platform.

A team of engineers meticulously designs the NTN Campus curriculum to enable industry partners to maximize machine uptime using the latest NTN product innovations. By tailoring the educational content, each virtual campus becomes a unique experience using a customized platform that meets their specific training needs. This personalized approach ensures that professionals can acquire the skills and knowledge necessary to excel in their respective fields.

One of the standout features of the NTN Campus are live webinars and demonstrations hosted jointly with NTN's distributor partners. These are pre-selected in advance to highlight how NTN's "Ultimate Bearing Experience" innovations can add value to various operations. Through real-time presentations, industry partners gain valuable insights into the practical applications of NTN's solutions, allowing them to envision the positive impact on their workflows.

To foster an engaging and interactive learning environment, each NTN Campus virtual event integrates live technical presentations, multifaceted chat capabilities, gamification and spaces to share multimedia documents. Attendees have the freedom to explore these resources at their leisure, absorbing knowledge at their own pace. This immersive approach ensures that participants remain actively engaged throughout their learning journey, maximizing the benefits they derive from the platform.



# NTN

## NTN Canada CEO, Paul Meo, Wins **Business Person of the Year Award!**



**#MBOTAWARDS**  
**WWW.MBOT.COM/AWARDS**

We are pleased to announce that NTN Canada's CEO, Paul Meo, has been chosen as the Business Person of the Year for 2023, an award run in association with the Mississauga Board of Trade. Mr. Paul Meo proudly accepted the award with the Honourable Mississauga Mayor Bonnie Crombie on May 25th at the Mississauga Board of Trade 2023 Business Awards of

Excellence. The award honours an outstanding individual who has best demonstrated exceptional business leadership, vision, business acumen and community involvement contributing to business development and quality of life in Mississauga. Paul has created a culture where his people thrive, demonstrating commitment to not only growing NTN's business, but also investing in those that continue to push it forward day after day.

"It is an honour to be recognized by the Mississauga Board of Trade and I am grateful to be considered worthy of this award," said Paul Meo, President & CEO of NTN Bearing Corporation of Canada. "As a leader it is my humble privilege to advocate every day on behalf of my family; My family at home, my employee family, my customer family, my supplier family, and my City of Mississauga community family. It's fantastic to be recognized individually but I cannot emphasize enough how incredibly proud I am of those five families. Their innovation, hard work and team spirit are a blessing for me and have truly supported me in this journey. I thank them not only for their role in contributing to a strong company but to building a strong community with a successful future for everyone."



Over his 39-year career with NTN Bearing Corporation of Canada, he has propelled the business to new heights. His work has improved the careers of many, fostered better relationships within the industry, and ultimately, led to the betterment of the communities he is a part of.

As a company dedicated to “providing the Ultimate Bearing Customer Experience”, NTN’s employees have embraced an innovation mindset under Paul Meo’s leadership, as illustrated by the recent launch of the NTN Campus. This unique online learning platform enables bearing users to access a blend of training tools including webinars, virtual instructor-led training, demonstrations, remote diagnostic simulations, and other interactive content.

Paul Meo is known for pushing the boundaries of what’s possible with knowledge and innovation. Another recent transformation example spearheaded by Paul Meo is NTN’s TRIAGE INSYNC remote collaboration technology. The state-of-the-art system combines HI (Human Intelligence) with AR (Assisted Reality) allowing NTN experts to send precise visual instructions remotely to maintenance technicians at manufacturing facilities to ensure bearing maintenance issues can be fixed as efficiently as possible. Plans are underway to roll out Meo’s TRIAGE concept globally so that NTN’s wider customer base can benefit from numerous program benefits, ranging from improved safety to increased service capacity.

Through the years, Paul has demonstrated that he not only invests in his people, but also in his local community.

He has dedicated countless hours of community service and inspired others throughout the company and distribution network to give back to those less fortunate. Throughout his tenure, Paul has spearheaded community campaigns to support people experiencing or at risk of homelessness including women and children fleeing violence, seniors, and people dealing with mental health and addiction issues.

Under his leadership, NTN Canada has launched a new corporate social responsibility initiative ‘Happier Smiles, Happier Faces’, aimed at empowering the next generation to achieve their full potential. The launch has inspired NTN’s employees and industry partners to devote their time, energy, and passion to making a positive contribution to their workplace and communities through direct giving and volunteer work. NTN employees have also initiated a community garden to grow and deliver fresh vegetables to those in need at the Good Shepherd & Haven Toronto shelter. Other activities include charity walk events and clothing drives to raise money for Covenant House, Fondation St Julien, Iris Kirby House Foundation, and SickKids Hospital Foundation. With Meo’s encouragement, business leaders in NTN’s distributor network have contributed to fundraising campaigns for these organizations and the response has exceeded expectations, raising over \$36,465 in donations.





As President & CEO of NTN Canada, Paul Meo overlooks both the sales and manufacturing operations headquartered in Mississauga, Ontario. Paul is responsible for providing strategic, financial and operational leadership for the company and closely coordinates and works with NTN Corporation's Board of Directors. Paul is a graduate of York University's Schulich Executive Program and the CMOE (Centre for Management & Organization Effectiveness). Mr. Meo joined NTN in 1984. In 2001, he was appointed VP of Sales & Marketing. Since 2014, Mr. Meo has served as President & CEO of NTN Canada. As CEO, he is responsible for building and nurturing a growth-minded, high-performing management team. He continues to serve as a volunteer executive of many boards and committees including the Humber College Board of Directors for the Digital Business Management Program, Haven Toronto Homeless Shelter and the Mississauga Board of Trade. Paul Meo is also the Sector Leader for manufacturing on MBOT's Mississauga Economic Recovery Group.

## MBOT 2023 Business Awards of Excellence Ceremony





Everyone at NTN would like to take this opportunity to congratulate Paul on his fantastic achievement and we are looking forward to him taking the company to even greater heights. With this latest recognition, the company continues to solidify its position as a key player in the bearings marketplace.

## Congratulatory Message

From Mr. Eiichi Ukai, Director Representative Executive Officer, President,  
Executive Officer CEO (Chief Executive Officer), NTN Corporation

Congratulations on winning the Mississauga Board of Trade's 2023  
Business Person of the Year Award!

I'm sincerely proud of your leadership and your long contribution to  
the local society. Your continuous challenges in NTN group are  
highly appreciated. I wish you all the best.



Mr. Eiichi Ukai,  
Executive Officer CEO, NTN Corporation

## About MBOT

Established in 1961, the Mississauga Board of Trade (MBOT) is the main "voice of business" in Canada's sixth largest city. MBOT offers a wide variety of valuable business services and professional development programs, networking events and marketing opportunities, to help business grow, prosper, and get connected. <https://www.mbot.com/>



## About NTN

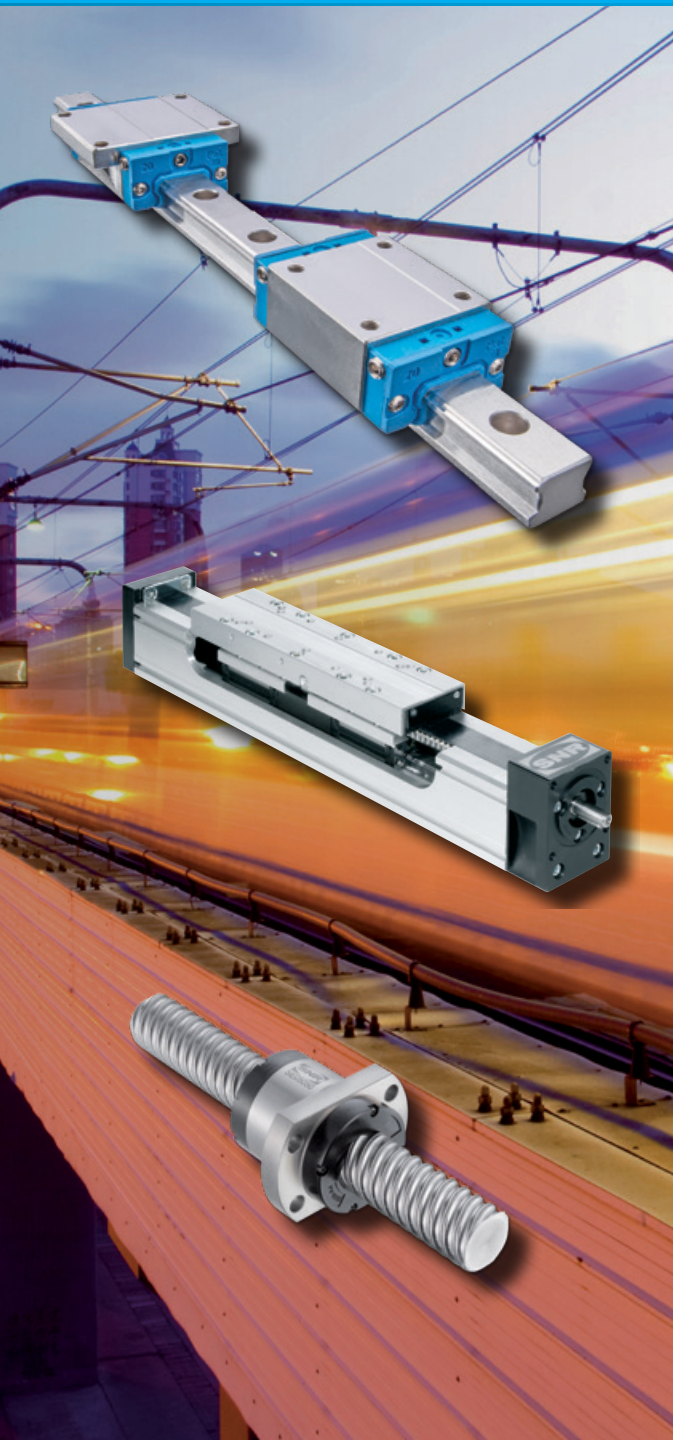
Founded in 1918, NTN is one of the world's largest producers of premium quality ball and roller bearings, long recognized for the most stringent quality standards in the industry. With plants around the globe and a strong domestic manufacturing network, over 80% of the products sold by NTN in North America are made by one of the ten plants the company operates in Canada and the USA. NTN is also a leading provider of bearing services which include technical support, maintenance and reliability services, engineering consulting and training. NTN's company vision is "to transform into Canada's leader of the Ultimate Bearing Experience." [www.ntn.ca](http://www.ntn.ca)

The NTN logo features the letters 'NTN' in a bold, white, sans-serif font, set against a blue background.



Benefit from NTN Automation's in-stock inventory & fast response time

NTN's Automation division offers a full-line of linear motion products backed by Web-based 3D Modeling and Linear Configurator Tools



With more than a century of experience in the industry, NTN's Automation division offers a full line of linear motion products to meet the needs of any application. Our sales and engineering teams work closely with our customers to configure linear motion solutions that meet the requirements of their applications through an extensive portfolio that includes linear guides, profile rails, ball screw, bushings and shafting to provide complete linear motion solutions.

#### Flexibility

Our intelligent modular system allows different ranges to be quickly and easily combined

#### Security and Reliability

We have extensive experience in several areas of mechanical engineering and full operational reviews

#### Cost Reduction

A modular principle and the breadth of the range offers a single supply source

As labour shortages continue to hamper manufacturing production, the demand for automated solutions have grown rapidly. Driven by the need for quality, reliability, efficiency and safety, automation saves time and money when properly configured and implemented. NTN partners with our customers when searching for a solution that best matches your application needs, so that you can differentiate yourself in your market.

NTN Automation has in-stock inventory & provides a fast response time of 48 hours to cut to length and ship your orders to serve a wide variety of needs nationwide. Our Automation team has a wealth of knowledge and is ready to help you with your most challenging applications. We round out our services with exceptional tools to configure your custom linear guide solutions and to find comparable alternative parts.

## THE 3D LINEAR MODELING & CONFIGURATION TOOL

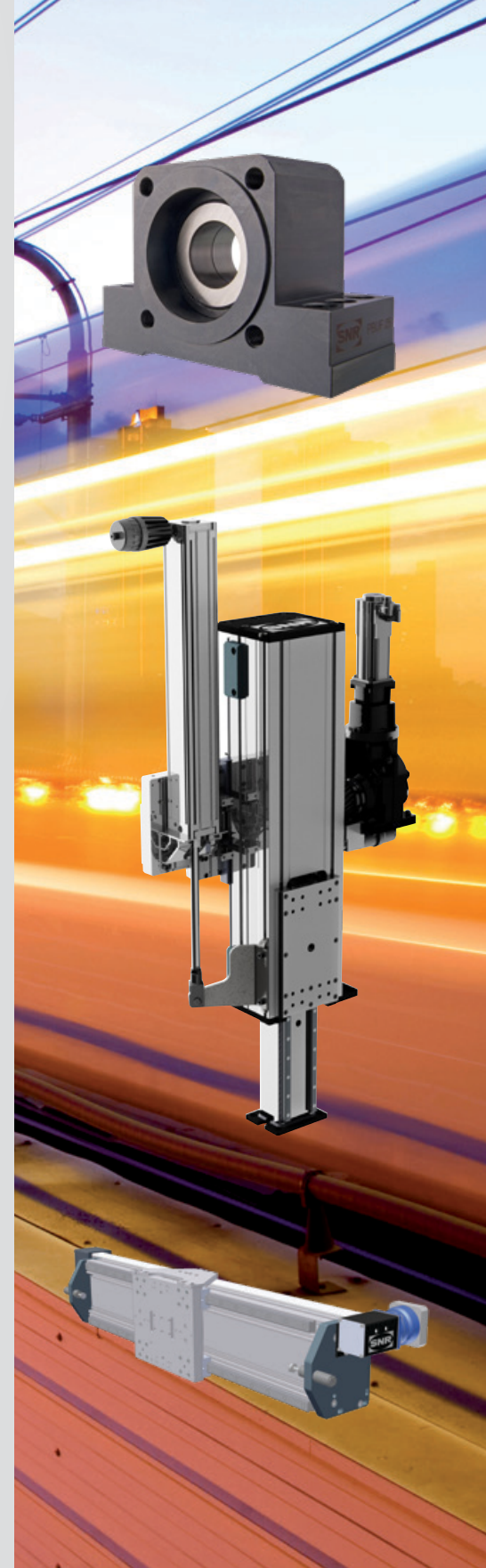
allows users to conduct an in-depth search of linear axis, linear guide, or bushing and shafting components, as well as our AXE series of linear axis modules. This configuration tool guides users to specify options for each component or module as they build a custom solution that fits their specific application. Configurable options are too numerous to list, but include load ratings, dimensions, materials and coatings, seals designs, and mounting options, among dozens of additional specs. Users are able to view and manipulate a 3D model of the components/systems as they work through the configuration process. Users can then generate CAD models that are compatible with over one-hundred CAD formats and generate PDF datasheets that feature an embedded interactive 3D model, so they can manipulate the 3D model in the PDF. At the end of the configuration process, users are also able to generate part numbers for their specified product, for ease of ordering. Users of this tool can also create a user account which enables them to easily access previous configurations, and save their user and CAD preferences.

## THE LINEAR GUIDE CONFIGURATOR TOOLS

allows users to configure rail and carriage linear guide components and create a custom system. Like the tool above, users have a multitude of options to spec when configuring these components and systems. As options are selected, the configurator tool builds custom part numbers for each of the rail and carriage components, as well as a combined system part number. These part numbers can be exported to a PDF datasheet which can be used for ordering full systems or individual components.

## FINALLY, THE LINEAR GUIDE INTERCHANGE TOOLS

allows users to input part numbers from dozens of linear brands, or search by brand, series and size, and interchange that information into NTN's equivalent part number. As with the tools above, there are numerous possible configurations for each component, so it is critical to match all the specs and options in order to interchange between manufacturers. This interchange tool guides users through the interchange process, allowing users to select the applicable options, and then displays the equivalent NTN part numbers. Users can then view or download engineering drawings for the component or select the part and open a configurator where they can further adjust the configuration options of the selected part, before arriving at a final part number.



This suite of tools empowers NTN Automation customers to research and specify parts that meet the needs of their highly engineered, custom linear motion applications. With 3D renderings and engineering drawings at their fingertips, and a platform that is accessible from any web browser, these tools are an expansive and versatile resource for our linear motion customer-base.

To test drive these tools today, visit: <https://ntnamericas.com/technical-resources/linear-modeling-configurator/>



DRIVE TRANSFORMATION  
**NTN100**  
PHASE 2



# NTN Pillars



## Safety

Promote a safe work environment with our employees, customers and business partners.



## Quality

Maintain the highest quality of our products, our work and our people, all of which define our company.



## Compliance

Meet all laws and compliance standards for our organization and ESG priorities to improve our environment and society.



## Cost

Improve our cost and profitability to create stakeholder value.



## Delivery Time

Improve our time, speed and flexibility to exceed our customers' needs.



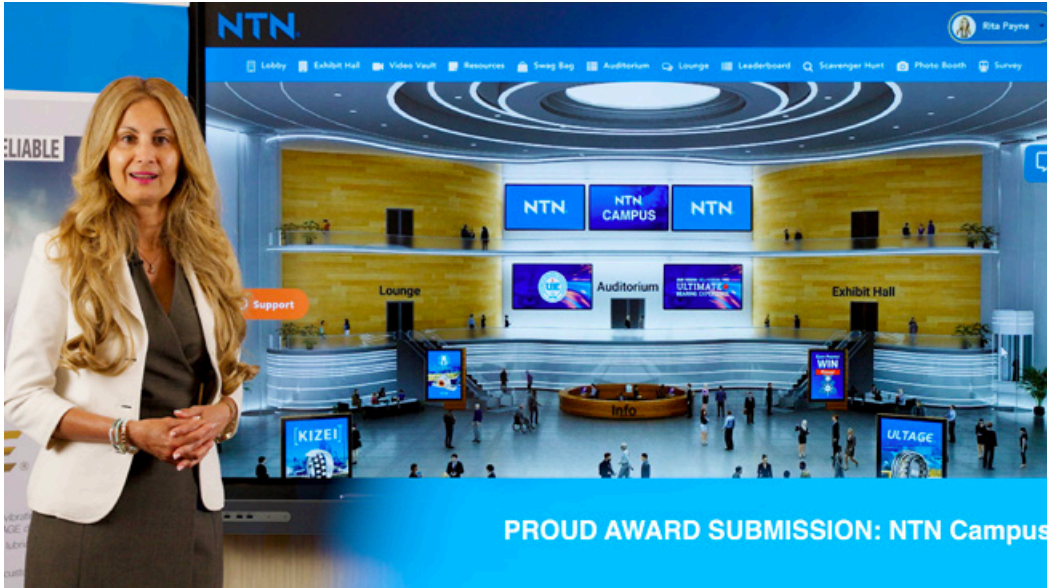
# NTN CANADA WINS

NTN Global Proud Award Competition

# PROUD AWARD



## NTN Campus



PROUD AWARD SUBMISSION: NTN Campus

We are thrilled to announce that NTN Bearing Corporation of Canada is the award winner for the Social category of the prestigious NTN Global Proud Awards, recognizing excellence for the introduction of the NTN Triage Insync Remote Diagnostics and NTN Campus platforms. This esteemed recognition is a testament to our commitment to delivering customer value through knowledge sharing and project teaming using NTN's innovative bearing technologies.

Each year NTN Corporation runs an internal competition inviting subsidiaries to submit innovative projects to honour employees' ESG activities to improve corporate value and contribute to social and environmental sustainability. The NTN Global Proud Awards select regional winners and global winners in two categories, Social and Environmental based on sustainability ratings in the areas of

economics, environment, and society, selecting the top subsidiary companies and awarding the best of these with the "President's Award" commendation for global recognition.

Of the 73 top-ranking projects this fiscal year, NTN Canada received the "President's Award" global commendation for social sustainability, as well as the "Excellence" and "Special" commendation for the Americas region for the implementation of two projects: (i) NTN Campus and (ii) TRIAGE Engineering Solutions powered by INSYNC.

The launch of the NTN Campus, the first of its kind for the bearing transmission industry, enables bearing users to access a blend of training tools including webinars, virtual instructor-led training, demonstrations, remote diagnostic simulations and other interactive content.



### NTN CAMPUS TEAM:

**Rita Payne**  
Director of Marketing & Communications



**Loren Almeida**  
Customer Service Manager



**Sean Barron**  
Sales Manager IAM



**Luc Bergeron**  
Territory Manager IAM



**Darren Hughes**  
Territory Manager IAM



**Kelly Lusk**  
Product Manager - Linear, Automation & Robotics



**Monica Melvin**  
Territory Manager IOE



**Melissa Nunez**  
Graphic Designer



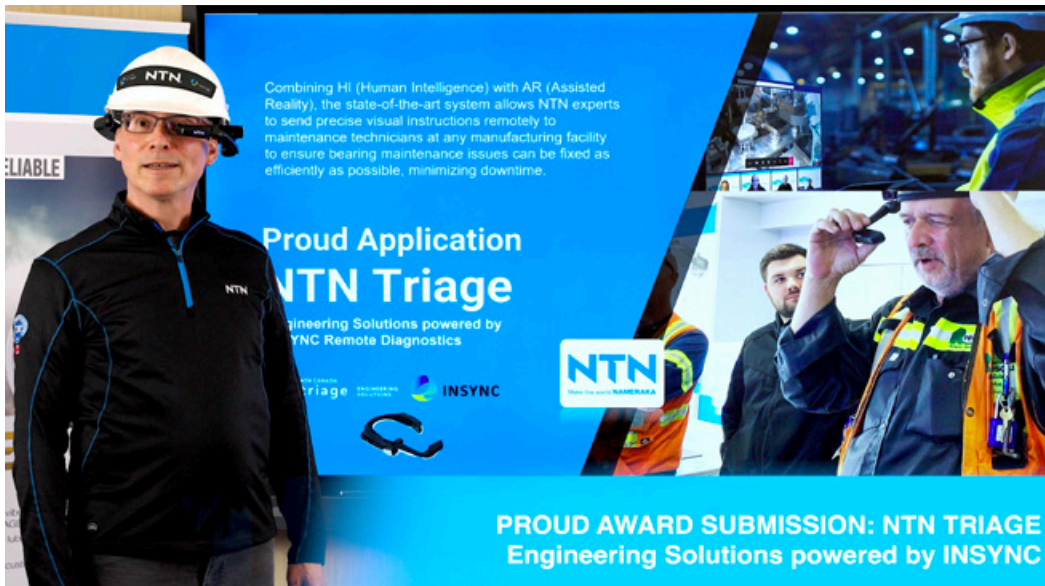
**Carly Tudball**  
Product Manager Automotive & HD Aftermarket



**Ken Wells**  
Director of Operations



















It is also being harnessed for the onboarding of new customers to offer industry specific training. The NTN Campus accomplishes the following ESG objectives:

- Knowledge Transfer & Human Resource Development - The NTN Campus makes it possible to share knowledge findings and best practices to meet our customer needs for training on the successful use of bearing technology.
- Increased Efficiency - Training comes directly to our customers virtually, reducing their cost exposure. This opens our educational offering to a wider number of attendees across Canada and worldwide.
- Reduced Carbon Footprint - The virtual nature of the NTN Campus contributes to our efforts to reduce pollution caused by travel, as well as the waste produced from printing training materials.

NTN Canada's innovative TRIAGE Engineering Solutions powered by INSYNC was also honoured with the President's award for its ability to accurately identify and solve a customer's problematic critical bearing application through a three-step collaboration process. This approach leverages NTN's extensive engineering knowledge with ground-breaking bearing technology, bringing solutions to customers, anywhere, anytime. The deployment of remote collaboration headsets to the end-user facilitates real time on-site bearing inspection allowing NTN experts to send precise visual instructions remotely. ESG benefits include:

**T**echnical  
**R**esources  
**I**nspection  
**A**pplication  
**G**uidance  
**E**xpertise

- Better service provision - Enhanced ability to react to immediate facts for proactive services & greater bearing reliability.
- Improved safety - Fewer personnel in the operational environment increases workplace safety.
- Lower environmental impact - Environmentally-friendly products that include ULTAGE long life bearings for energy savings.
- Increased efficiency - NTN's Engineering Triage Process makes deployment faster and allows more efficient use of personnel.
- Faster decision making - Access to NTN expertise anywhere around the world 24/7 to enable faster bearing analysis.

- Marcus Wickert**  
Director of Engineering 
- Joseph Antony**  
Engineering Project Coordinator 
- Joe Kosichek**  
Director - UBE Engineering TRIAGE 
- Mario Borsella**  
National Engineering Service Manager 
- Chris Rempel**  
Engineering Manager 
- Al Rudaitis**  
Senior Applications Engineer 
- Amjad Ramadan**  
Applications Engineer 
- James Hassan**  
Applications Engineering 
- Christian Borsella**  
Applications Engineering 
- Shreyans Dedhiya**  
Field Service Engineer 
- Matthew Meo**  
Technical Service Specialist 
- Jean-Francois Doucet**  
Field Service Engineer 
- Pete Buller**  
Field Service Engineer 
- James Foufas**  
Technical Service Specialist 

# NTN Reduces Bearing Maintenance Costs for Steel Tube Producer

A leading manufacturer of diversified steel pipe and tubes was experiencing frequent bearing failures within their tube forming line. The failures were leading to operational downtime resulting in significant production losses. Frustrated by daily downtime and pressured by steadily increasing production demands, mill maintenance proactively reached out to NTN for a long-term solution that would extend bearing life.

## The NTN Solution

NTN's Technical Service and Engineering group first met with the maintenance team to evaluate the equipment's history, failure modes, constraints, and design objectives. Shielded ball bearings were originally specified in the forming rolls but then converted to open-style spherical roller bearings with little to no external sealing. This conversion was now only lasting an average of one to two operational campaigns.

The challenging operating environment included hard particle contaminants and coolant flushing over the rolls. Furthermore, this steel tube producer recently starting manufacturing thicker steel tubing, requiring the switch from ball to spherical roller bearings to handle the heavier radial loads.



## VALUE ADDED BREAKDOWN

**INCREASED BEARING LIFE**  
**\$45,020**

**MAINTENANCE REDUCTION**  
**\$5,100**

**UPTIME IMPROVEMENT**  
**\$1,528,800**

**ANNUALIZED COST SAVINGS**  
**\$1,578,920**



Bearing failures were catastrophic requiring a minimum of two hours of production downtime when replacing a roll. This problem reduced mill output, with a resulting cost of hundreds of thousands of dollars in lost production and maintenance costs as repairing the rolls was a lengthy, labour-intensive process.

NTN's team immediately established three design objectives: improve sealing, maintain high bearing load capacity, and minimize dimensional changes. Streamlining dimensional modifications to the rolls would be paramount for a workable solution. The NTN team recommended that the facility switch to ULTAGE® W-type sealed spherical roller bearings. Our ULTAGE® line of spherical roller bearings offer industry-leading load capacity and speed ratings, as well as robust integral sealing to ensure superior resistance to external contamination. These factory pre lubricated bearings with integral seals are also compact and simplify assembly.

An NTN Service Engineer was on site to support mill maintenance with the installation of the ULTAGE® test bearings. The equipment was closely monitored during the test period and the new bearing design immediately outperformed the competitor's bearing in the highly contaminated environment.

The mill personnel were so satisfied with the solution and improved life that they decided to implement a complete change-out of the existing bearing design using NTN ULTAGE® sealed spherical roller bearings.

## The Result

After 12 months of service life, the NTN ULTAGE® sealed spherical roller bearings performed beyond expectations. To date, none of the ULTAGE® bearings have actually failed.

Although the cost of purchasing an NTN sealed spherical roller bearing is higher than the competitor's open-style version, the increased bearing life has resulted in an annual savings of \$45,020 in bearing acquisition costs.

The collaboration between mill maintenance and NTN's engineering and sales support team has reduced operating costs and resulted in the mill buying fewer bearings than ever before. Now, with NTN ULTAGE® high-performance sealed spherical roller bearings, the mill has extended their maintenance intervals helping to boost productivity while lowering their grease usage.

The facility has been able to increase production by 80%, while significantly reducing maintenance expenditures, resulting in an annual cost savings \$1,578,920.



## INDUSTRY TESTIMONIAL

### Tooling Maintenance Lead Hand, Steel Industry

"I would rate the application of NTN bearings as a great success. The longevity offered by NTN's sealed ULTAGE spherical roller bearing has minimized maintenance time and maximized productivity. These bearings have proven to be far superior to our current option, allowing for improved machine throughput and increased run time. Day after day, we can count on NTN bearings to perform reliably without any issue. The NTN solution has resulted in a tremendous cost savings as bearing change-outs have decreased in frequency and are now carried out according to a predictive maintenance schedule, approximately once every 18 to 24 months.

Furthermore, NTN's quality and timeliness of engineering service has been outstanding. An emphasis has been placed on striving for total customer satisfaction, by providing an effective and efficient solution that caters to our changing needs. Given we are a large company with a growing level of demand, I can confidently say that NTN has provided service which has surpassed our expectations."



Increased  
service life



Reduced  
maintenance cost



Environmental  
Protection

# NTN

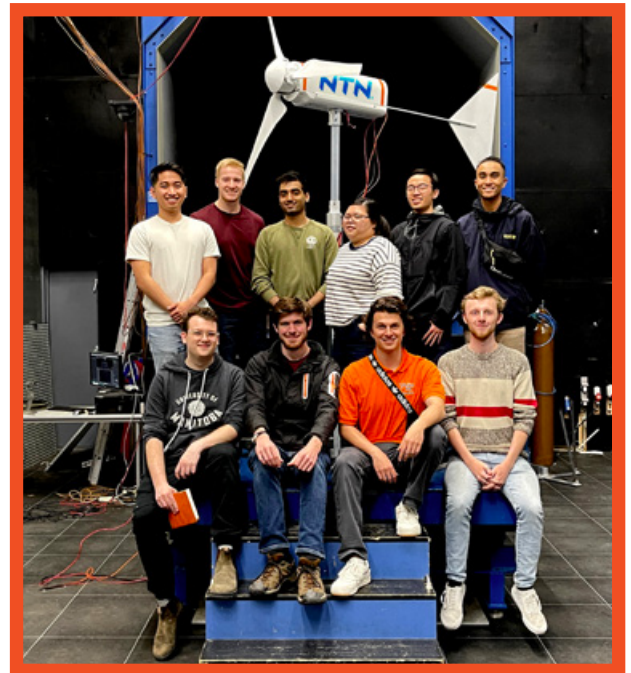


# University of Manitoba

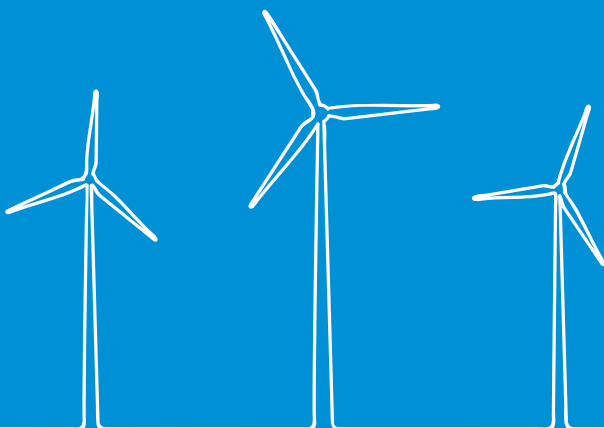
## NTN Sponsored University Team Wins the International Small Wind Turbine Contest

NTN is a proud sponsor of the University of Manitoba's Wind Energy Design Team (WE Design), a student-led design competition team comprised of undergraduate and graduate students from biosystems, civil, computer, electrical and mechanical engineering. The team, not unlike many other student teams, provides an opportunity for students to develop professional skills in the designing, manufacturing, and project management of a small-scale wind turbine.

Utilizing a wind turbine designed with NTN automation linear bearings, the team was able to compete at the International Small Wind Turbine Contest (ISWTC) in Delft, Netherlands against eleven other design team from universities across the globe. After days of testing and adjudicating, the team was declared as the first-place winners in the "Most Sustainable Design" category.



**Team Lead, Hunter Waytt, describes what it was like on the first day of testing as "nerve-racking".**



"Everything goes completely silent in the controls booth as everyone stares intently at the turbine, waiting for any sign of movement. The room hums a little bit with the sound of the wind tunnel starting up in the room over, and nobody... not even the judges or competition organizers can take their eyes off this thing. And that's when it happens... in a split millisecond the turbine does one full rotation. Two rotations. Before you know it, everyone has moved their focus onto one another, cheering and celebrating a successfully built prototype."



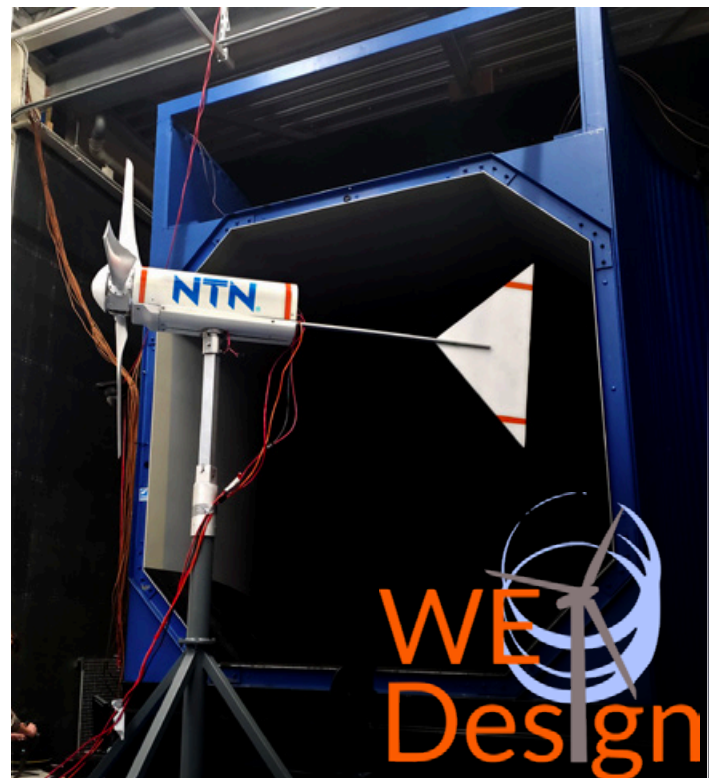


Waytt credits the hard work of his teammates, advisors and the generosity of NTN and other supporting sponsors with this team success at the competition. NTN contributed linear bearings for the pitch mechanism of the turbine application and provided consultation to help the students engineer a design that would be both modular and easy to install.

**“We compete against teams led by graduate students and professors with years of experience in the field,” said Waytt. “This was all made possible by the tremendous amount of support we received from our university and a few key companies, like NTN, who nudged us in the right direction this year. We are grateful to NTN for supplying bearings and engineering consultation to support our victory in the face of brilliant competitors. It is completely surreal what you can accomplish when you dedicate yourself to a cause you believe in.”**

NTN Canada will continue to sponsor the team as it prepares for the next competition, hoping to capitalize again on their skills and talents. "It is wonderful to see the engineering students from the University of Manitoba embracing NTN technology and to see their commitment to learning is already paying off, having won the International Small Wind Turbine Contest (ISWTC) in the Most Sustainable Design category," said Pete Buller, Field Service Engineer at NTN Canada. "NTN values this opportunity to assemble the brightest students from Canada's leading universities and share with them the bearing technology trends that will shape the future."

NTN Bearing Corporation of Canada and the Price Faculty of Engineering congratulates the WE Design Team on this exceptional win.



WE Design's Wind Turbine incorporating NTN linear bearings displayed in the testing tunnel at the International Small Wind Turbine Contest in Delft, Netherlands.





# NTN Community Garden

## Giving Back: Planting for Homeless Shelters in Need

On June 15, 2023, NTN Canada employees came together to plant a wide variety of vegetables in their community garden plot located at their headquarters in Mississauga, Ontario. The garden will provide employees with the opportunity to till, seed and harvest a small communal plot before work and after, during lunch

breaks and on weekends. The garden will be open every day and employee volunteers will be welcome to walk through the gardens and join in planting activities. The garden will allow employees to spend time outdoors, learn to grow and harvest herbs and vegetables and to socialize in a pleasant environment.







All produce, from crisp lettuce and vine-ripened tomatoes, to green onions, brussel sprouts, carrots and crunchy cucumbers, will be donated to feed the hungry at the Haven Toronto Shelter in hopes of helping the homeless receive fresh, nutritious meals to improve their diet and their overall health.

The plants at NTN's community garden will also contribute to a cleaner environment by adding oxygen to the air and helping to reduce air pollution. In addition, the community garden's root system will help water penetrate deep into the soil, where it is stored and released slowly rather than running off quickly and overwhelming drainage systems.

Through community involvement and a genuine desire to help the homeless population, NTN's employees are excited about establishing their Community Garden. The benefits of community gardening – fresh air and exercise, green space, and the chance to build NTN community spirit will make the effort well worth it.





# NTN's ULTAGE<sup>®</sup> SAFD Bearing Units Double Bearing Life on Dust Removal Fans

A major producer of hot briquetted iron was experiencing insufficient bearing life on the dust removal fans used in its bag house. The company experienced multiple failures annually, with each failure costing them over \$60,000. In total, the frequent failures were resulting in an annual cost of nearly \$900,000 to maintain production.

NTN's Engineering and Sales support team ran a comprehensive diagnosis of the fans and discovered the competitor's bearings were failing due to housing fracture and bearing seizure as a result of the application conditions.

## The NTN Solution

NTN's team of experts recommended ULTAGE SAFD bearing units as a replacement for the competitor's bearings. ULTAGE SAFD bearing units have ductile iron housings which have been proven to better withstand the high impact loads expected in this application. Additionally, NTN's team recommended that the lubrication be switched from grease to oil to reduce rotational friction and heat, thus further extending replacement intervals.

## The Result

NTN's ULTAGE SAFD bearing units lasted for nine months, giving them double the life of the bearings previously used in the application! The increased uptime, decrease in annual maintenance, and the reduced acquisition cost resulted in \$438,400 in annual cost savings for the customer.



## VALUE ADDED BREAKDOWN

**UPTIME IMPROVEMENT**

**\$384,000**

**MAINTENANCE REDUCTION**

**\$42,667**

**REDUCED ACQUISITION COST**

**\$11,733**

---

**DOCUMENTED COST SAVINGS**

**\$438,400**

**ANNUALIZED COST SAVINGS**

**\$438,400**





# ULTAGE®



## SAFD PREMIUM BEARING UNITS FEATURES & BENEFITS

- Premium ductile iron housing to withstand high impact and extreme low temperature range
- Serialized cap and base eliminate risk of mismatching components during installation, ensuring superior fit
- Lubrication access points - plumb virtually any grease or oil system into the housing without costly modifications
- Integrated flat spots for vibration and temperature monitoring
- Grade 8 bolts provide superior strength to keep the cap and base secure
- Exact machined ISO G7 tolerances with wide bearing seat to accommodate 22200 and 23200 series bearing inserts offers greater flexibility
- Hardened steel ball allowing for quick and easy removal of the cap during inspections and general maintenance
- Unique X-support reinforced housing design delivers ultimate strength in the most demanding applications



## Beyond Bearings

Training. Installation Support. Trouble-shooting. And more.



### Technical Training Unit

On-site, mobile training unit offering specialized, hands-on instruction from NTN engineers



### Product Training School

Three days of in-depth instruction from NTN engineers at headquarters ([www.ntn.ca/company/product-training-school](http://www.ntn.ca/company/product-training-school))



### eKnowledge

WEB-BASED TRAINING PROGRAM

Six online product training modules covering different bearing types and nomenclature

([www.ntnamericas.com/eknowledge](http://www.ntnamericas.com/eknowledge))



### NTN Bearing Finder

Customizable search tool featuring exhaustive data sets, comprehensive part interchanges and interactive CAD drawings ([bearingfinder.ntnamericas.com](http://bearingfinder.ntnamericas.com))

# MAINTENANCE TRAINING SCHOOL



## NTN Roller Bearing Application & Maintenance Seminar held in Mississauga

As manufacturing industries face up to the challenges of an aging workforce and skills gap, upskilling and reskilling are becoming essential business practices for bearing end-users looking to increase their facility's capabilities with roller bearing preventative maintenance.

NTN's Roller Bearing Application & Maintenance Seminar, held May 16-18, 2023, was an excellent opportunity for bearing users to come together, exchange insights, and gain valuable knowledge on the proper handling of bearings and mechanical components to help reduce costly downtime.

During the seminar, there were engaging presentations, interactive discussions, and insightful workshops that

provided a holistic view of innovative bearing technology. The presenters introduced bearing designs and materials that are empowering industries with unparalleled efficiency and productivity, leading to optimized operations, enhanced customer experience, and improved sustainability.

The delegates were also given the opportunity to tour NTN's manufacturing facilities specializing in the production of radial ball bearings, angular unit bearings, rocker arm bearings, and SPW mounted roller bearing units.

The annual program offers engineering and maintenance attendees unique networking and learning opportunities. Hands on educational sessions include installing mounted units, hydraulic mounting of large bore spherical roller bearings, mounting of cylindrical bore bearings and end play setting of tapered roller bearings. A main focus is in-depth Bearing Failure Analysis combining lectures with reinforcing real life case studies that are illustrated by the industries leading authorities on bearing analysis and failure prevention.

The next NTN Roller Bearing Application and Maintenance Seminar will take place May 14-16, 2024, at the company's headquarters. This intensive, 3-day course on the design, application and maintenance of anti-friction bearings leaves the new or seasoned participant with skills for immediate implementation.





Plant operations and maintenance technicians from a wide range of industries attended the NTN Roller Bearing Application & Maintenance Seminar held at NTN's Canadian headquarters in Mississauga.

“Feedback from participants always focuses on how much they enjoy our hands on approach to training and practical real life examples,” says Marcus Wickert P.Eng., Director of Engineering at NTN Canada. “I definitely see an increased demand in our industry for companies to train their maintenance staff on bearing best practices. We respect this investment so we go out of our way to deliver the NTN Ultimate Bearing Experience which includes first in class training platforms.”



Workshops highlight best installation practices and common maintenance problems that result in premature bearing failure. Participants learned the fundamentals of current bearing technology including bearing types, design and materials; product features and benefits; theoretical bearing life calculation, tolerances and precision grades, radial internal clearance and shaft and housing fit selection.

Ideally suited to anyone involved in the design, maintenance of machinery and specifically, those with duties that include the installation and maintenance of anti-friction bearings, the program is structured so that it is not specific to any industry.

## Sign Up Today

For more information contact  
NTN Bearing Corporation of Canada  
Tel. (905) 564-2700  
Toll Free 1-800-405-6720  
Email us at [trainingprograms@ntn.ca](mailto:trainingprograms@ntn.ca)

**Download Roller Bearing  
Application and Maintenance  
Seminar Brochure (PDF)**





## OE CROSSES THE LINE INTO THE AFTERMARKET.

NTN BCA offers a full-line of premium wheel hubs, bearing and seals delivering the Ultimate Bearing Experience. As the #1 supplier of OE-quality hub assemblies, we fulfill more than 30% of the demand for North American OE vehicle production. This gives NTN the advantage of providing highly-engineered replacement parts that meet or exceed the OE engineering specifications. We leverage this expertise to offer application full-line coverage for both domestic and foreign nameplates delivering premium quality, design, and bearing performance.



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