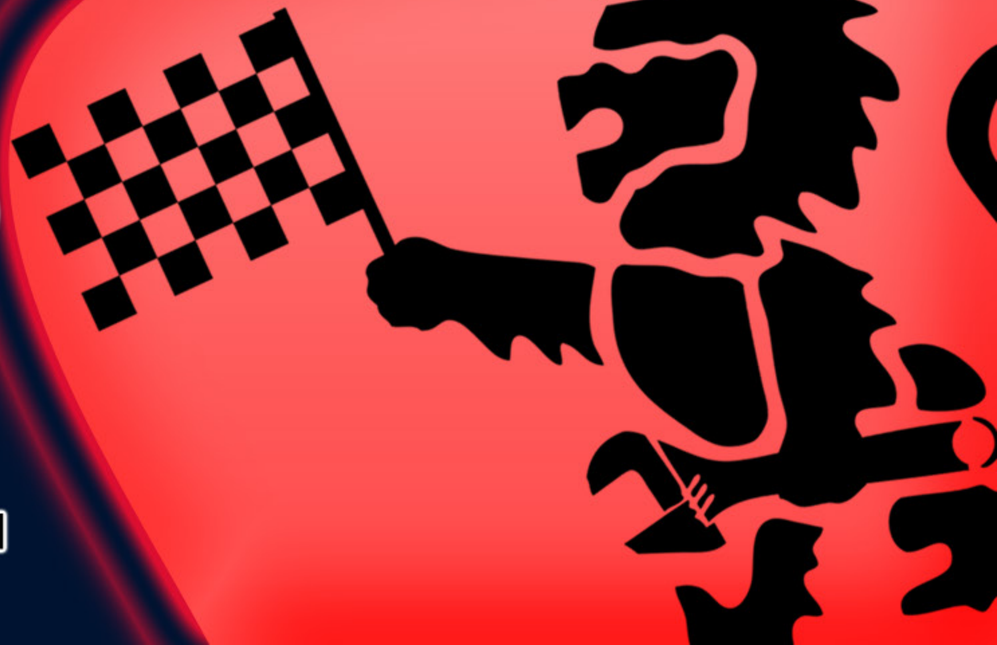
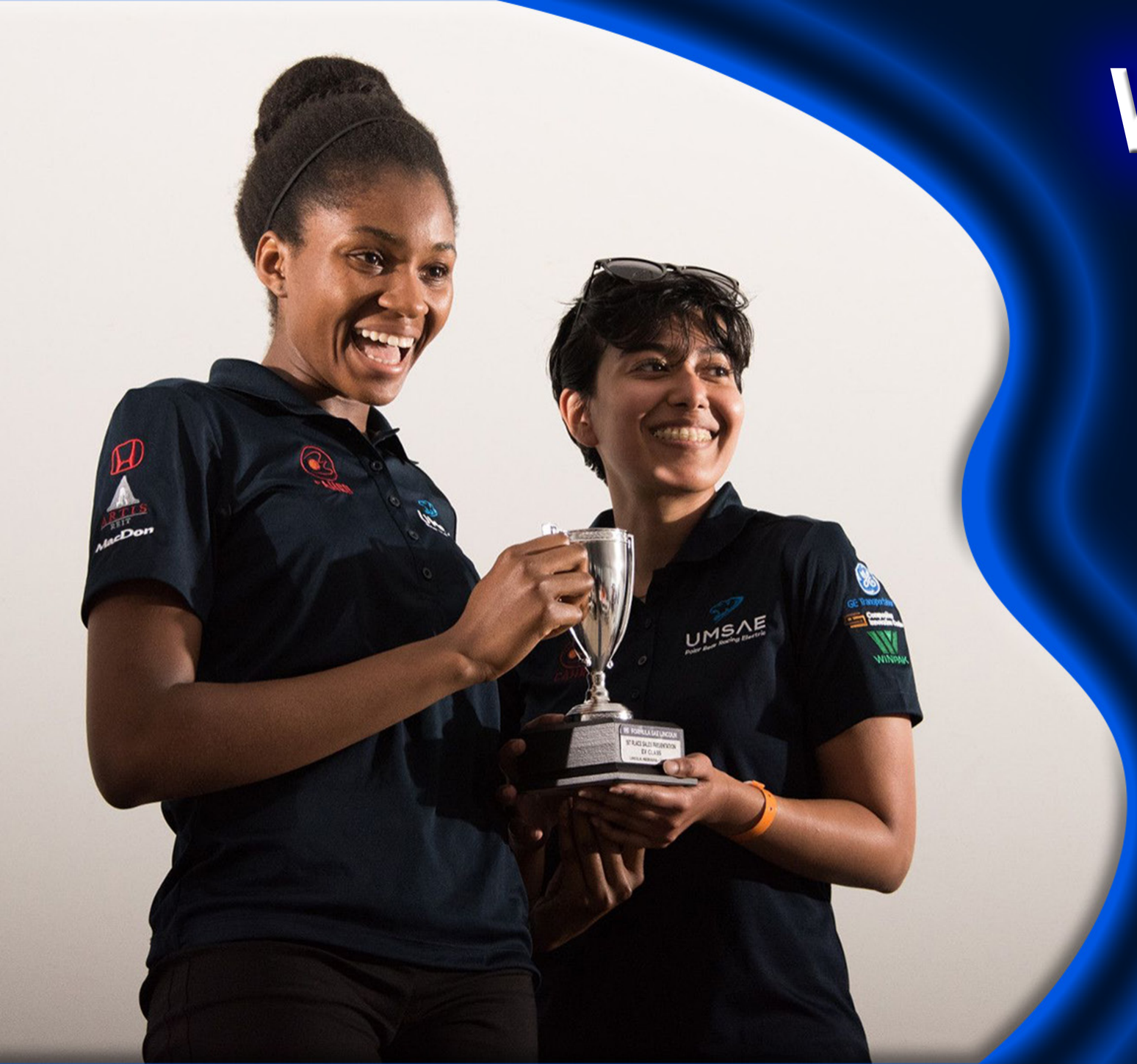
UMSAE

SPONSORSHIP PACKAGE

2023
2024





WHO WE ARE

The University of Manitoba Society of Automotive Engineers, better known as UMSAE, is a non-profit student organization made up of 4 distinct teams. We develop our professionalism, project management & design skills through creating vehicles to compete in international competitions.

With roots going back as far as the Mini-Indy SAE competitions in the 1980's, UMSAE has given countless students the opportunity to apply their education to real world challenges, and to represent Manitoba on a global scale.

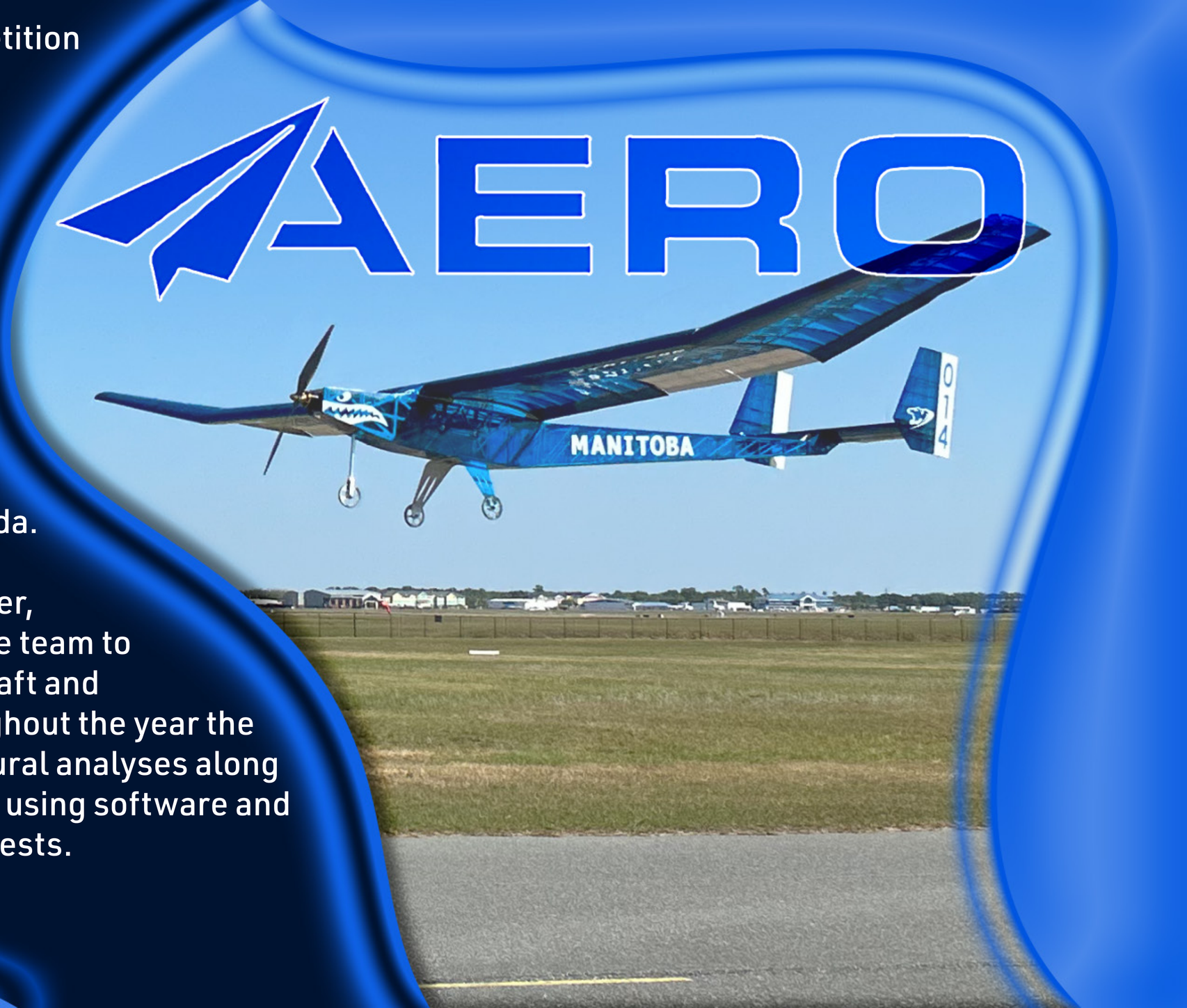
UMSAE OUTREACH

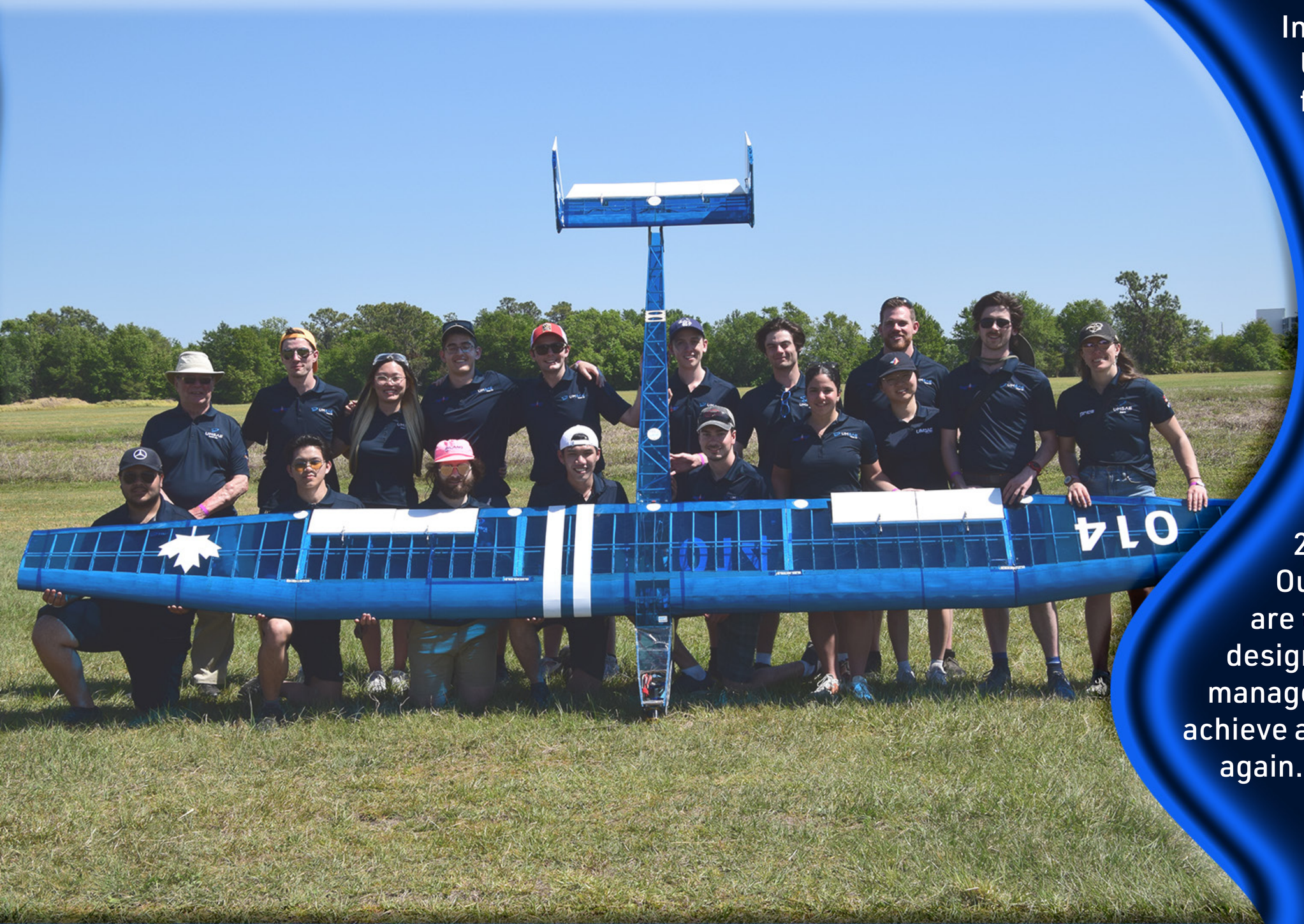
In 2018, we kickstarted a new initiative for our organization in the form of the A World In Motion (AWIM) Learn Twice program, run by SAE International. AWIM gives our students the opportunity to give back to local communities while also benefiting our organization and engaging our membership.

UMSAE members mentored and instructed primary school students in STEM programs involving hands-on learning experiences. Our post pandemic ambitions include expanding the program to include more instructional sessions and reaching more schools and age groups.

The objective of the Aero Design Competition is to design an RC aircraft according to design specifications and requirements that change every three years. For the 23-24 season, Aero will be challenged to produce a sub-sectioned high-aspect ratio aircraft that can lift the heaviest possible payload. In order to succeed in this design challenge, the team must balance the reliability of their aircraft against its lifting capacity in order to complete multiple flights at competition in Lakeland, Florida.

Additional limitations on maximum power, wingspan, and takeoff distance force the team to think critically when designing the aircraft and anticipate its maximum payload. Throughout the year the team performs aerodynamic and structural analyses along with materials and performance testing using software and experiments including full-scale flight tests.





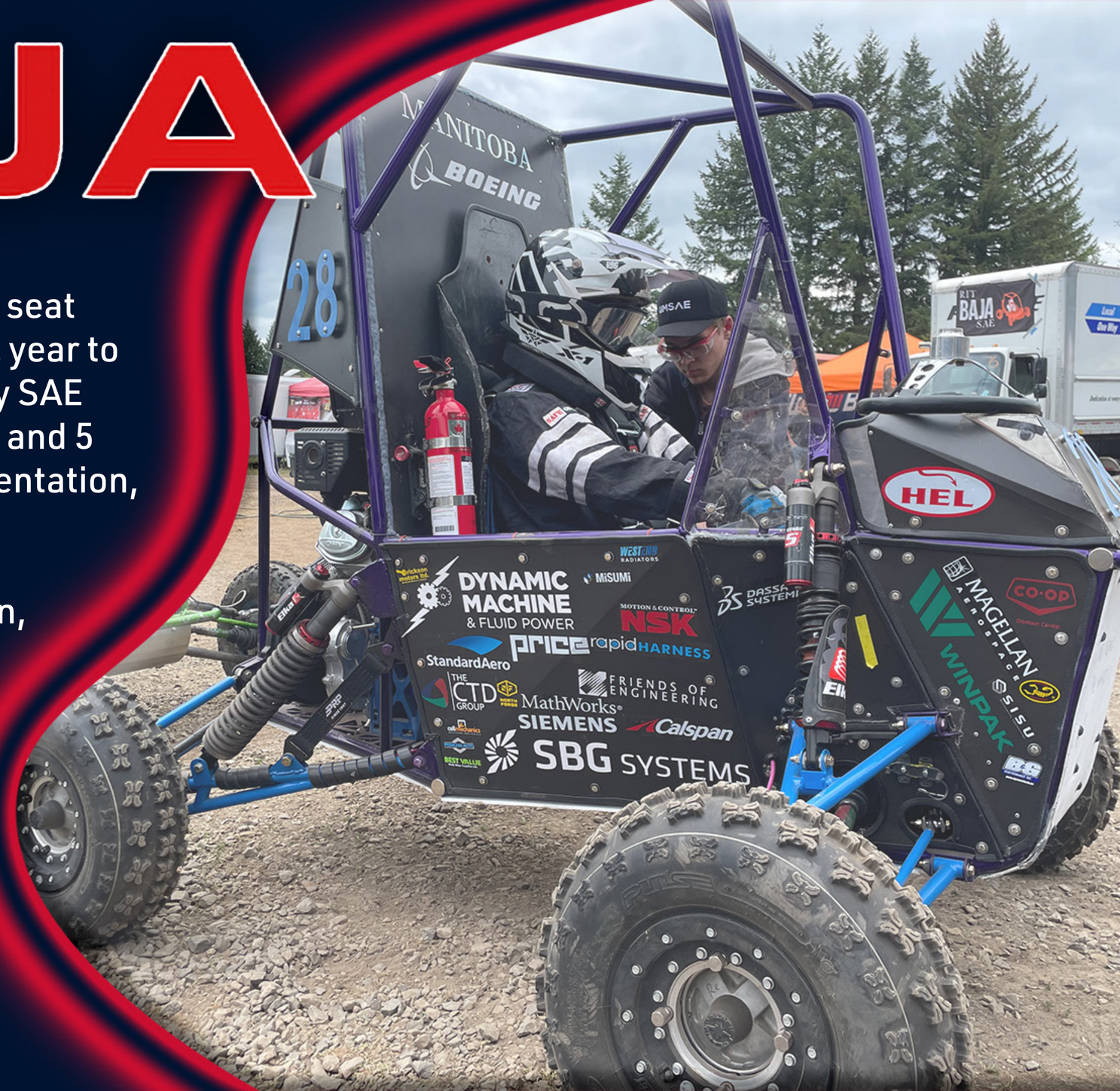
In the spring of 2023, UMSAE Aero placed first overall in a field of competitors from universities all over the world. UMSAE Aero has reached the podium each of the last five years it has gone to the Aero Design East competition, including first place finishes in 2018, 2019 and 2023.

Our goals this year are to further optimize our design, construction, and management processes and achieve a podium finish once again.

BAJA

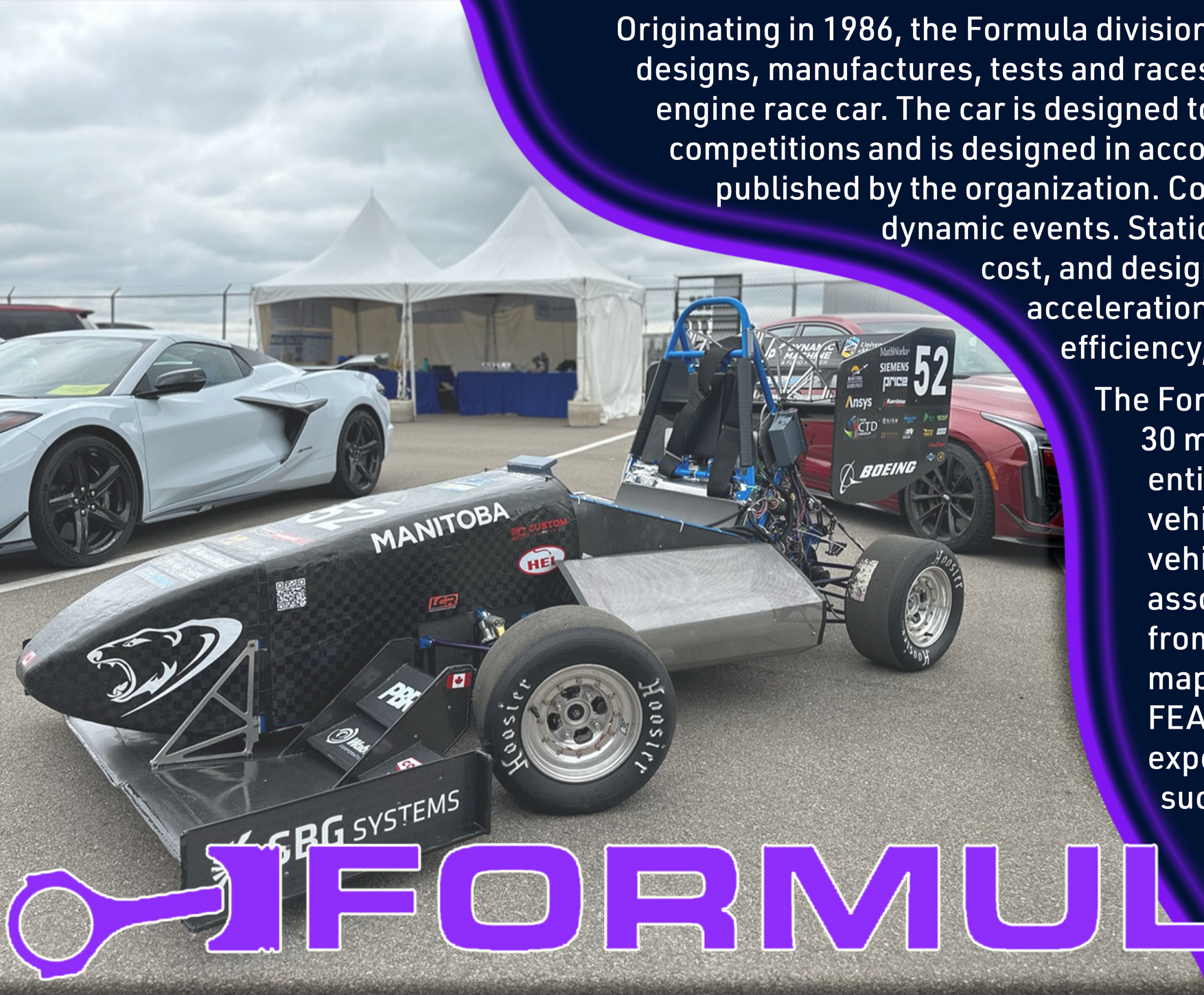
The UMSAE Baja team designs and builds a single seat four-wheel drive off-road vehicle every academic year to compete in an international competition hosted by SAE International. The competition consists of 2 static and 5 dynamic events. These events are: the sales presentation, the design presentation, acceleration, sled-pull, maneuverability, suspension, and a four-hour endurance race. The Baja team functions to design, manufacture, test, and promote the vehicle as a prototype for a production off-road vehicle.

The dynamic competition events subject the Baja vehicle to rough, muddy terrain and difficult obstacles. The Baja team must design a vehicle that is robust and rugged, but still able to maintain a competitive speed.



During the design phase, each engineering student must try to balance trade-offs in areas such as lightweight design vs. durability, or top speed vs. low end torque, while keeping manufacturabity and serviceability as key foundations of their designs. With most of the design and building done in-house, we are able to keep these attributes at the forefront of our work.

In the summer of 2023, UMSAE Baja competed in Washougal, Washington and placed 33th overall among 86 international teams with the endurance and hill climb events being the high-lights, where the team placed 24th and 27th out of 86, respectively. Like any major project, the team is limited by time, money, and manpower, especially during the school year. Despite these constraints, the team is competitive every year, striving to improve performance, design, and manufacturing, thanks to the support of great sponsors like you!



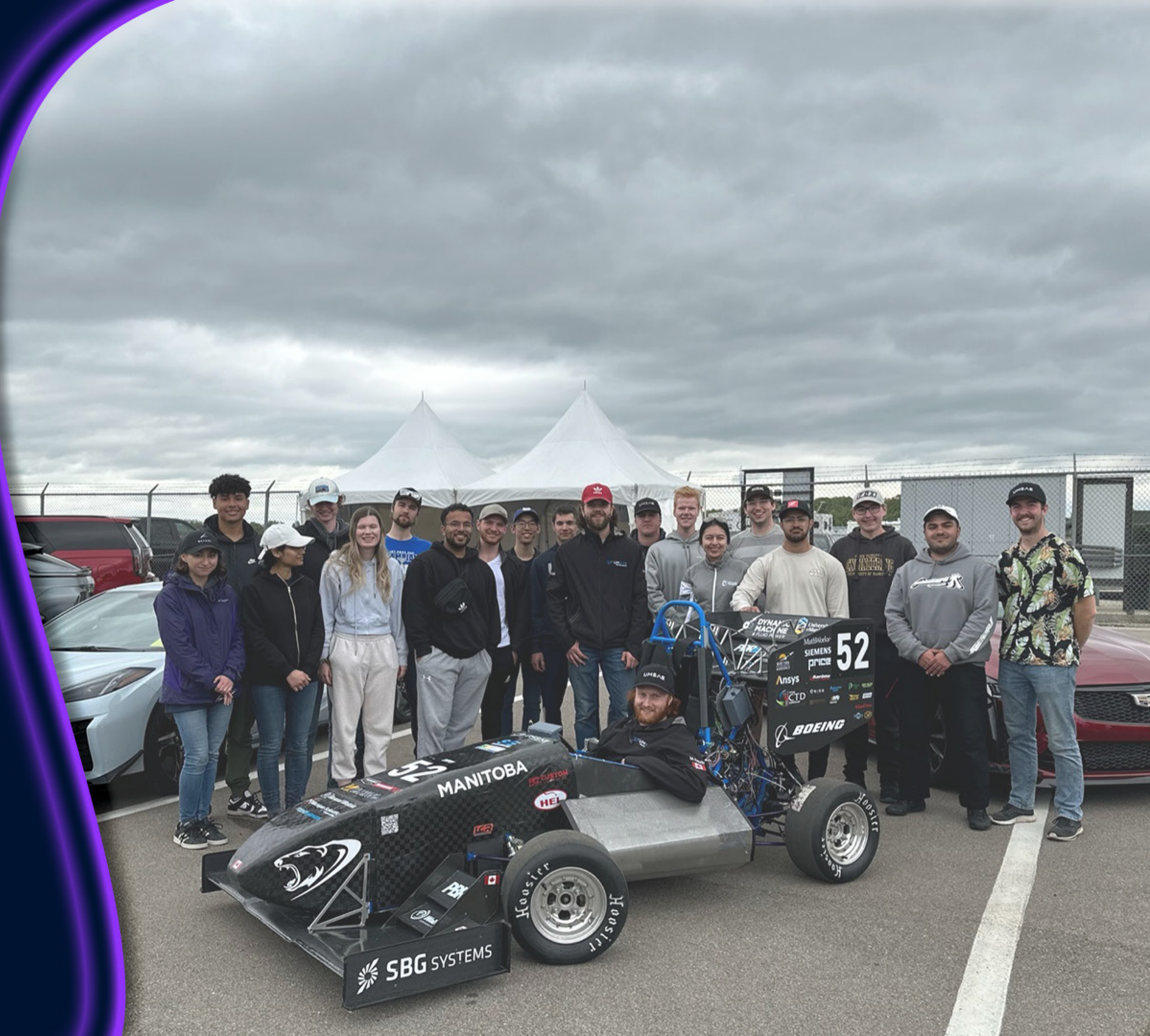
FORMULA

Originating in 1986, the Formula division of Polar Bear Racing annually designs, manufactures, tests and races an open-wheeled, combustion engine race car. The car is designed to compete in SAE International competitions and is designed in accordance with regulations published by the organization. Competitions consist of static and dynamic events. Static events include presentation, cost, and design. Dynamic events include acceleration, skid pad, autocross, fuel efficiency, and endurance.

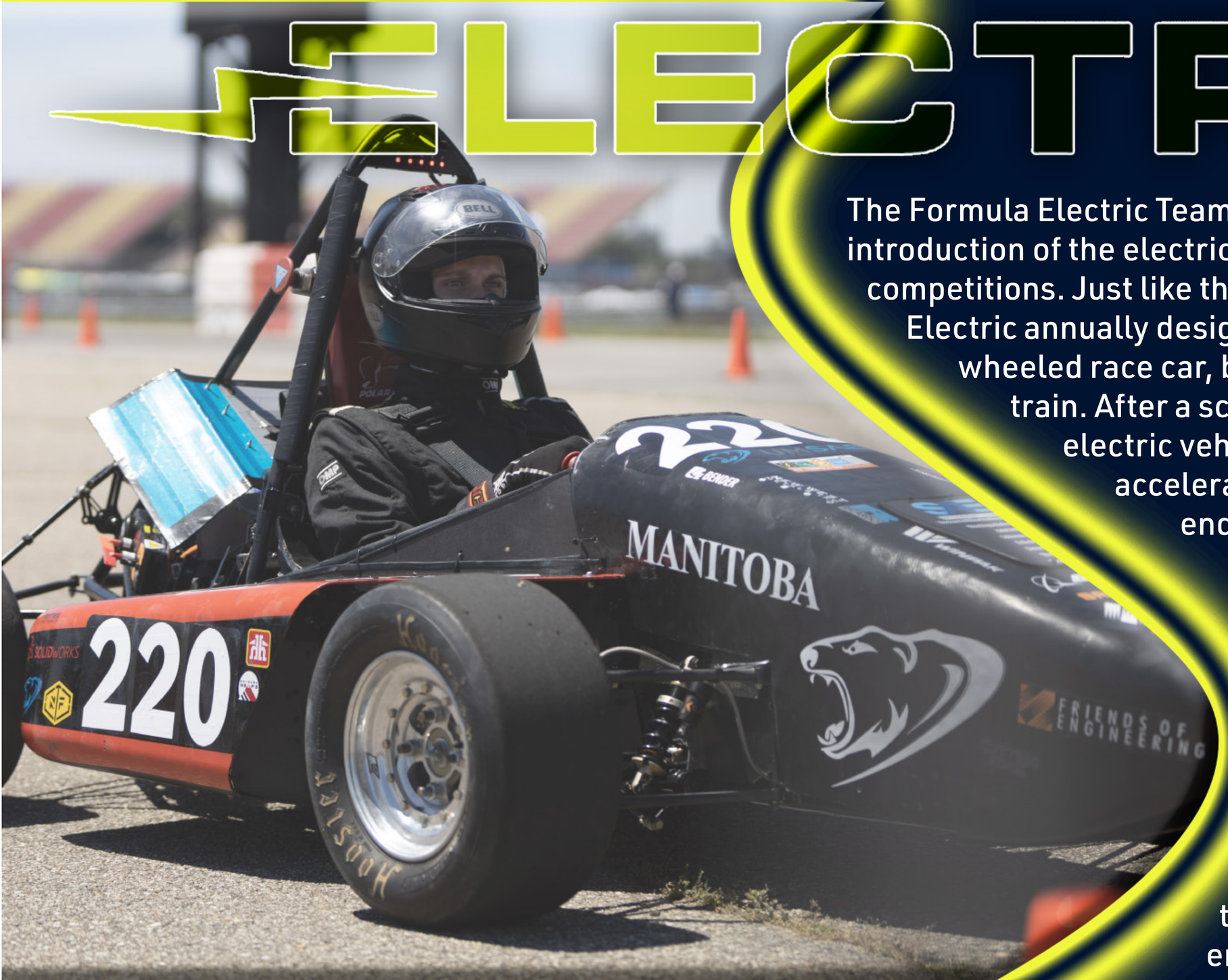
The Formula Team consists of approximately 30 members who are responsible for the entire design and construction of the vehicle. Due to the complexity of the vehicle, members are exposed to a wide assortment of engineering challenges, from aerodynamic design to engine mapping. Using tools such as CAD and FEA, members can gain valuable experience and prepare themselves for successful engineering careers.

The Formula Team participates in annual competitions located in the United States. Competitions which attract teams globally to compete against the top teams of North America. These competitions present a unique opportunity to represent Manitoba on a global scale.

In summer 2023, the Formula Team was able to attend FSAE Michigan and passed the technical inspection with one of the lightest cars at competition. This year the team is planning to iterate on last year's design, improving on lessons learned and keeping things that worked well. The team is planning to continue to have one of the lightest cars again this year.



ELECTRIC



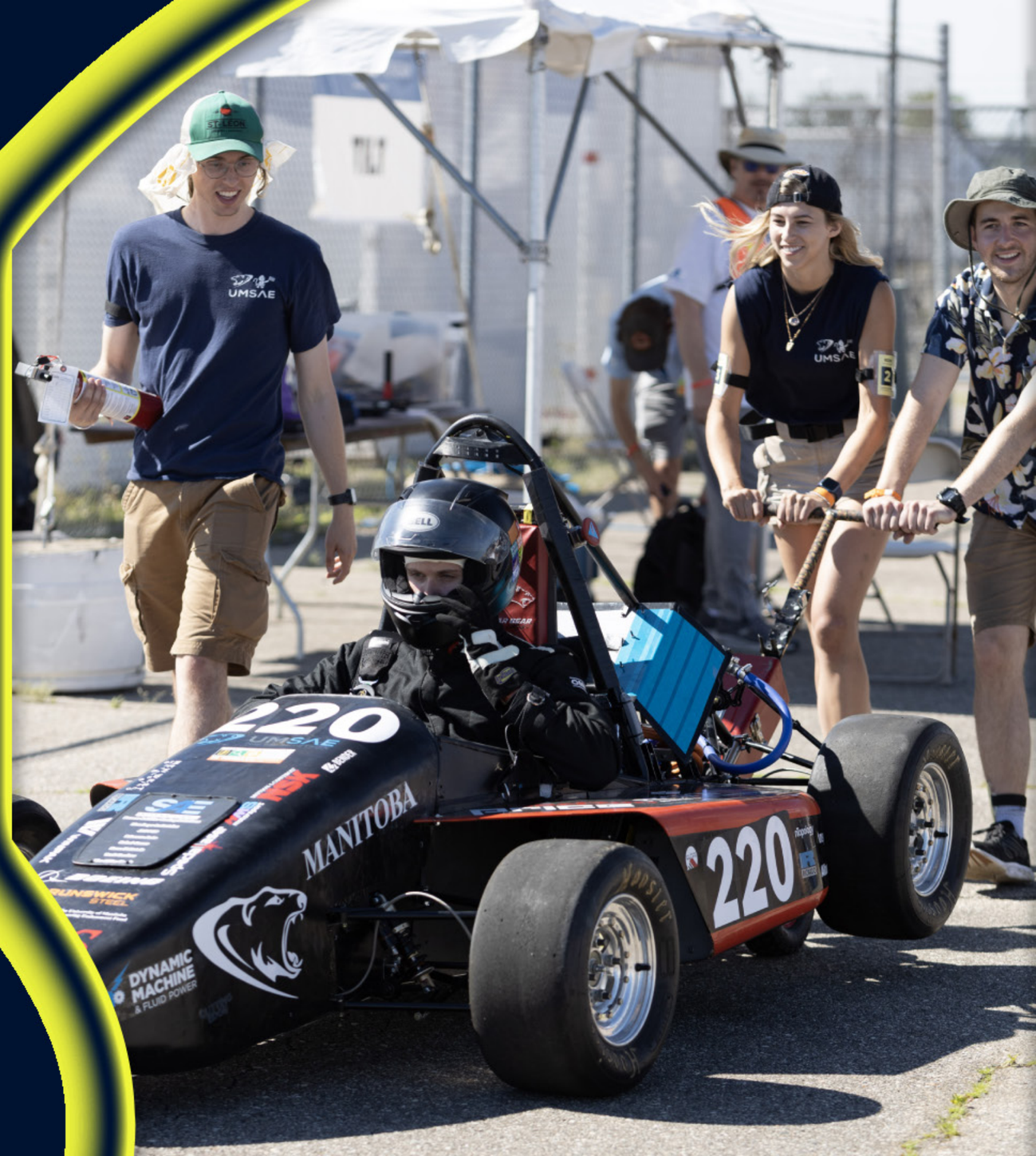
The Formula Electric Team was formed in 2011 with the introduction of the electric class to the existing Formula SAE competitions. Just like the UMSAE Formula team, Formula Electric annually designs, and manufacturers an open-wheeled race car, but with an all-electric drive train. After a scrupulous technical inspection, the electric vehicle is run through events in acceleration, suspension, handling, and endurance.

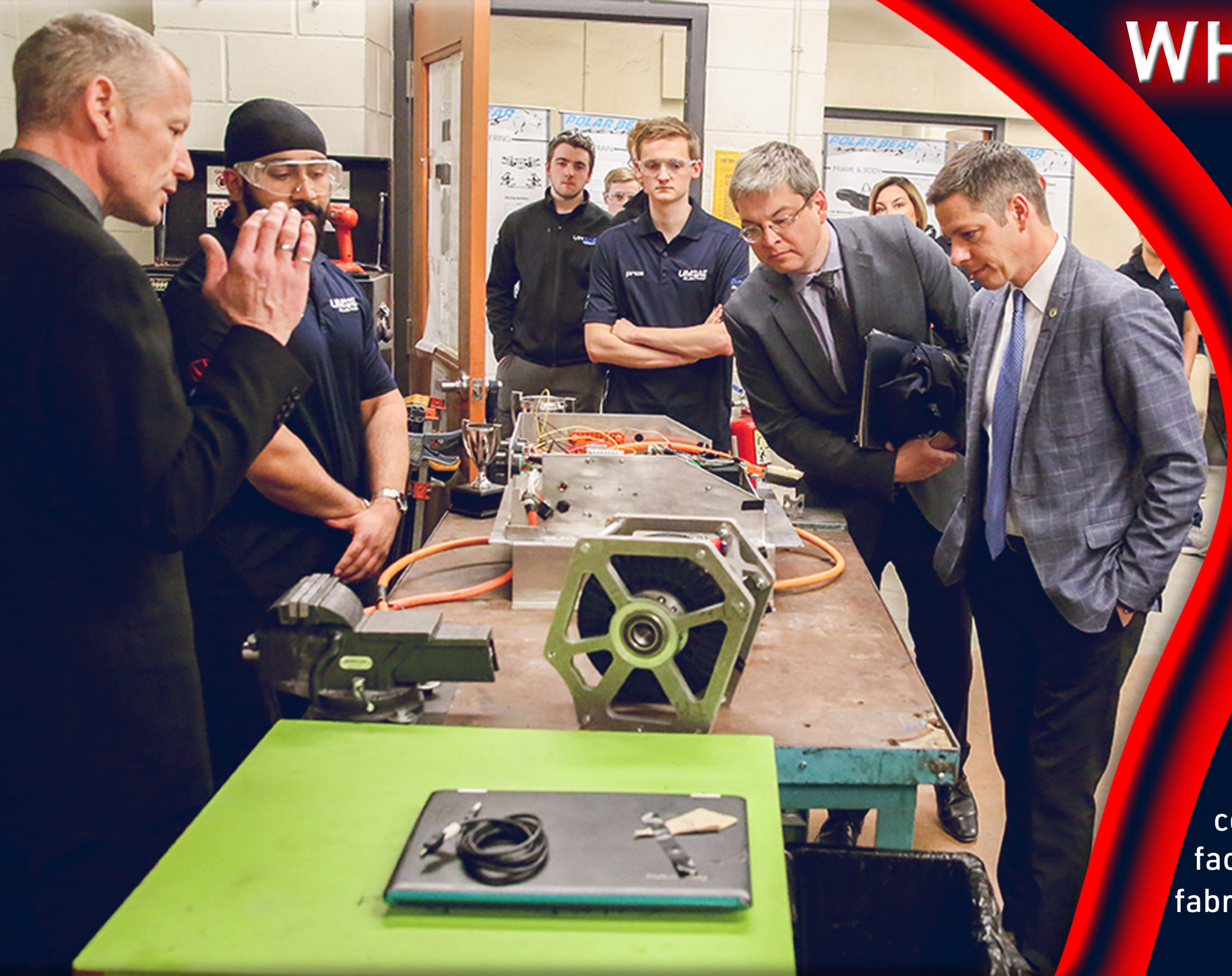
The opportunity to be part of an innovative electric vehicle project has caught the attention of a large number of engineering students from all disciplines. The team has grown to over 70 students and is the most diverse UMSAE team in terms of involvement of different engineering disciplines.

As a part of Formula Electric, students have the unique opportunity to develop real life experience with electric motors, power management, app development, mechanical, and electromechanical design. Each year, the team strives to improve designs, either iteratively, or with brand new concepts, including improvements in manufacturing processes, better reliability, an updated driver interface, and improved datalogging and monitoring.

In June 2022, even after 2 gap years of pandemic restrictions impeding SAE competitions and experience, Formula Electric competed to place 14th out of 55 electric vehicles at SAE Michigan. Furthermore, during the competition, the team was 1 of 6 vehicles to complete the famously difficult endurance event, which had the team race the vehicle for over 22km without failure. This was the first time in the team's history, in which the team has fully completed the endurance event.

The team's primary strategy for this year will be having the car ready months in advance of competition and carrying out extensive testing beforehand in order to excel at competition. The team is also aiming to apply for the Tesla cell sponsorship, which would allow them to receive new cells for free and make the switch to cylindrical style cells rather than pouch.





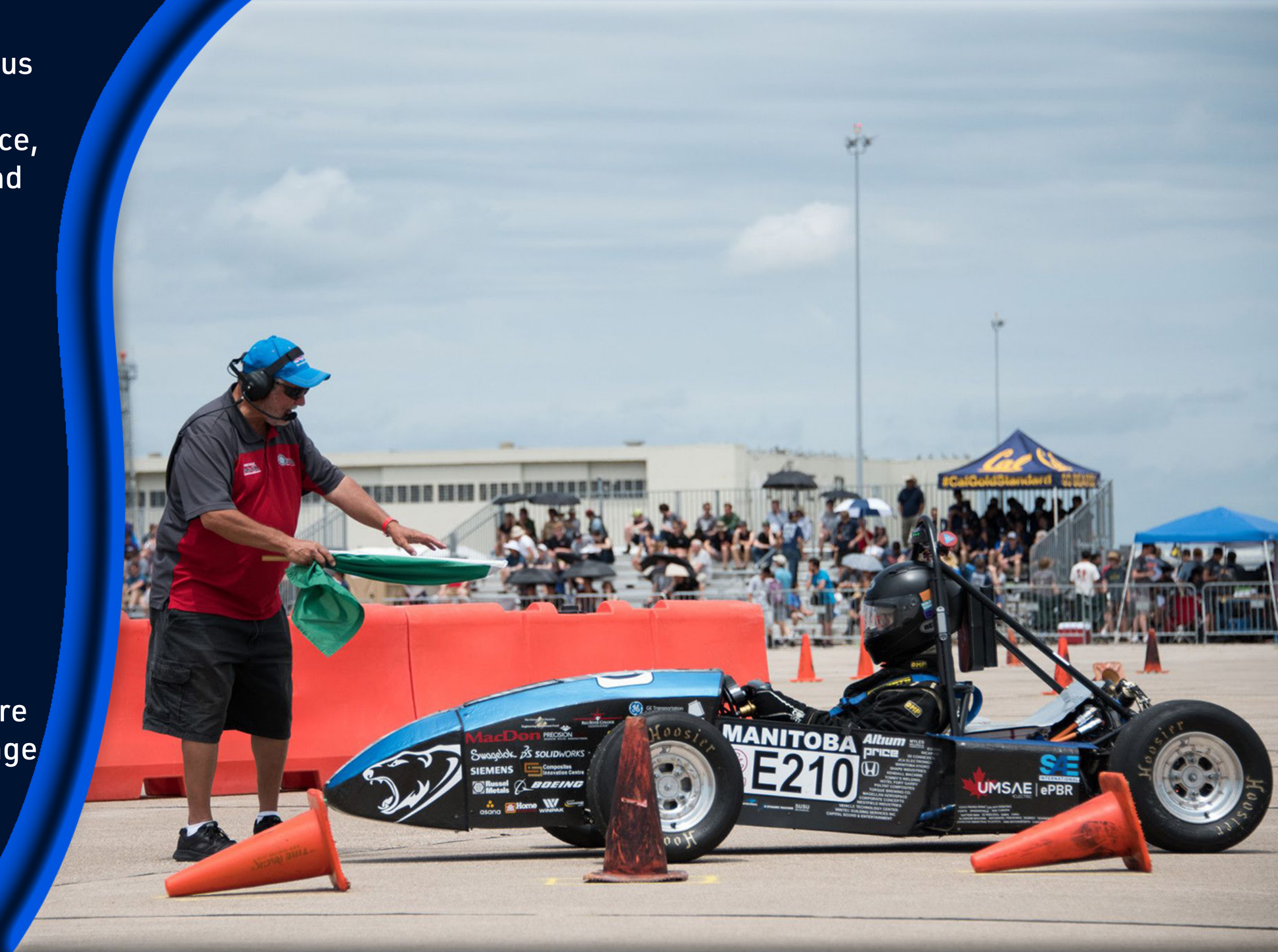
WHY SPONSOR UMSAE

Sponsorship is essential for the success of UMSAE and its various design teams.

Both monetary and material contributions are vital to the operation of this non-profit student organization. UMSAE strives to assure our sponsors promotional needs are met and showcase the results of their contributions. There are plenty of excellent reasons to sponsor UMSAE; As a non-profit organization, all of the funds contribute towards improving our facilities, purchasing materials, and fabricating parts used in our designs.

Funding our projects helps us build upon our practical engineering work experience, developing students beyond what is capable in the classroom alone. You are investing in the future of engineering!

Sponsors help develop a network of highly capable engineering students interacting with industry contacts, giving their companies excellent future hiring potential. Brands promoted on our vehicles are represented on a global stage when our teams travel to SAE's international competitions.



	DIAMOND $20000+	TITANIUM $15000	PLATINUM $10000	GOLD $5000	SILVER $2000	BRONZE $500	SOFTWARE
Website Recognition	Special	Large Color	Large No Color	Medium	Small	Sponsor Page	Medium + Link
Social Media Post Recognition	Individual	Individual	Individual	Group	Group	Group	Group
T-Shirt Recognition	Front	Large	Medium	Small	Name	Name	Medium
On-Vehicle Decal	Special	Large	Medium	Small	Small	Name	Small
Polo Shirt Recognition	Front	Sleeve	Top Back	Mid Back	-	-	Lower Back
Sponsorship Tour	Available for Top Sponsors			-	-	-	-
Company Event Presence	Yes, upon request			-	-	-	-

Sponsorship of less than $500 will only provide the perk of Website Recognition

HOW TO SPONSOR UMSAE

For more information on our sponsorship program, visit

www.umsae.com/contact

You can also reach out to our Sponsorship Executive at

sponsorship@umsae.com