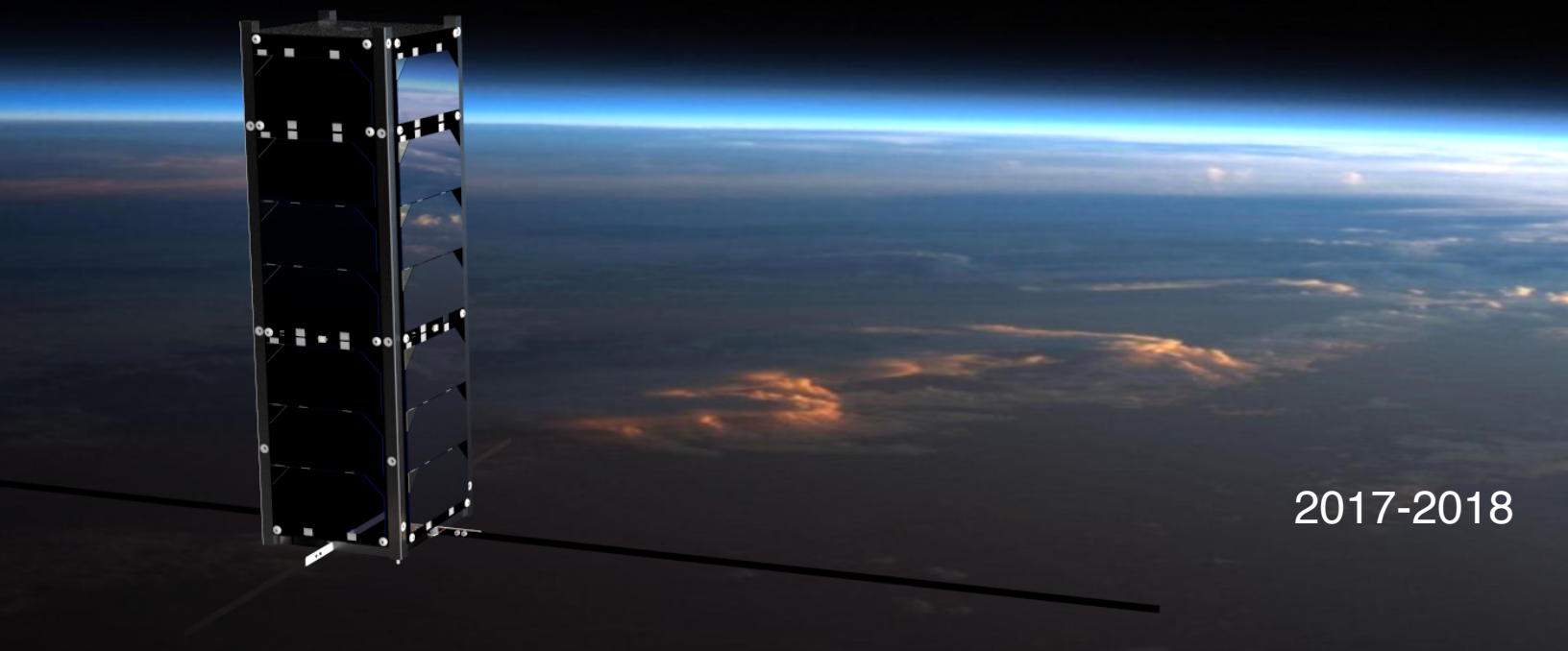
THE MCGILL SPACE GROUP

SPONSORSHIP PACKAGE



2017-2018

WHO WE ARE

The McGill Space Group (MSG) is a group of undergraduate, graduate and PhD students with a collective interest in space research and development, who are working towards promoting this industry within the McGill community. The MSG is composed of six groups, Space Policy Industry Research Group, Conferences, Research, Projects and Contracts, Educational Outreach and the CSDC Team. Each contributes, in their own way, to the overall goal and helps further establish our presence on campus.

MSG's Canadian Satellite Design Challenge (CSDC) Team is a group under the MSG and is competing in the Canadian Satellite Design Challenge and is working towards designing, building, testing, and potentially launching a 3U CubeSat into Low Earth Orbit, carrying a demonstration of a low-cost, yet reliable, Star Tracker payload.

OUR TIMELINE

Nov 2016

CSDC was formed. A team of 30 undergraduate and graduate students begin working on the design of the CubeSat

Feb 2017

Designs of each subsystem were completed, and were reviewed by a panel of professionals at the Preliminary Design Review in Toronto

March 2017

CSDC team chose a Star Tracker Payload

The Critical Design Review will be completed to finalize the validation of our designs, kicking off our prototyping phase

Sept 2017

April 2018

The expected delivery date of our first satellite is April, 2018

FUTURE OF MSG

Within 5 years, we aim to have completed two satellites, to have launched McGill's first satellite into space, and to become proficient at building space-ready subsystems that are in compliance with industry standards

ABOUT THE COMPETITION

The Canadian Satellite Design Challenge (CSDC) is a competition targeted towards university students with the aim to design and build a 3U CubeSat. Each satellite undergoes rigorous design reviews and testing in order to ensure that the space industry's exhaustive standards are met. Every team, through this challenge, hopes to eventually be able to launch their satellite into orbit to conduct scientific research. The McGill Space Group's (MSG) satellite will feature a star-tracker payload; and as the university's first ever satellite, we hope that it will be the beginning of a revitalized development of McGill's space community.

We hope that this initiative will help McGill University establish its place in Montreal's satellite industry. Achieving a launch will be the first step to establishing MSG's vision of inspiring students from diverse backgrounds to pursue careers in the space industry.

MEET THE SUB-TEAMS

Payload

The payload is a star tracking device, which is used on telecommunications satellites and large telescopes like Hubble to find the exact orientation of the satellite. As the extravagant cost of a star tracker is often the limiting factor to many satellite missions, the goal of the payload team is to design a star tracker at the lowest cost possible, which would enable McGill and many other groups to launch exciting new missions.

Controls

The controls team is responsible for determining and controlling the satellite's orientation. The system utilizes on-board sensors to determine the satellite's orientation and utilizes actuators to maneuver the satellite. Precise control is crucial in allowing the payload to maintain a desired view of constellations while testing.

Communications

The communications team is responsible for designing a robust and efficient system using low-power electronics. The system is built to handle commands from the ground station, beacon telemetry (health status) and also transmit data from the star tracker.

Power

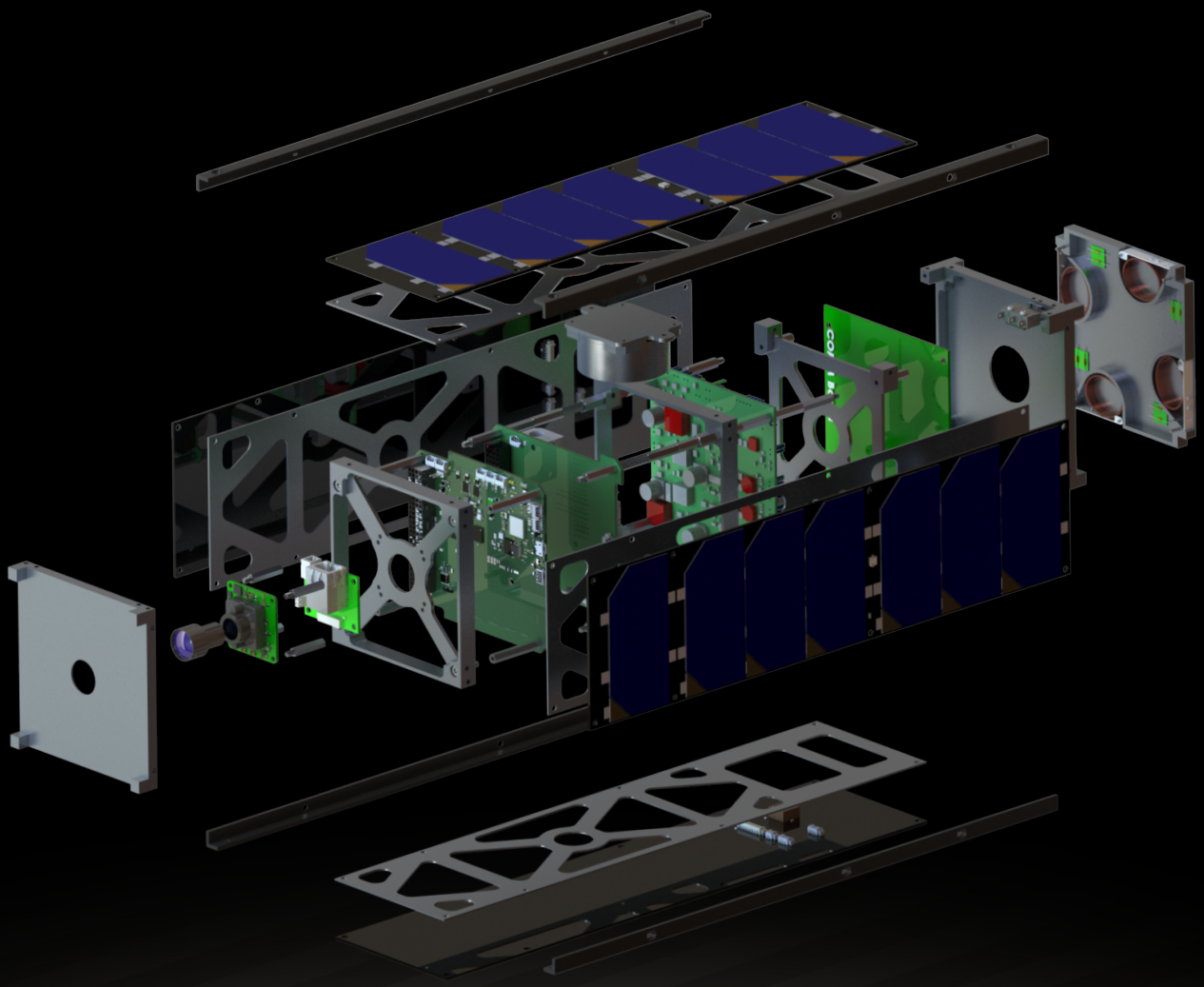
The power team serves to develop an Electric Power System (EPS) that powers the satellite. The EPS utilizes power drawn from its solar panels and batteries to not only provide power to every subsystem, but to also ensure that any contingencies will be dealt with efficiently.

Structural

The structural team is responsible for designing the external frame of the CubeSat. This role involves not only designing the structure, but also to simulate the thermal and environmental conditions of the satellite's mission, including launch vibrations, large temperature variations, and radiation. The goal is to ensure the survival of the structure during mission life, as well as protection of the subsystems.

Mission Operations

The Mission Operations sub-team is responsible for detailing the tasks that the satellite must perform throughout its mission. It is a systems implementation defining the stages the system must perform in order to complete a particular task efficiently. This includes identifying all the possible modes of failure and applying redundancies in an efficient yet effective manner.



COMMUNITY

OUTREACH

The Education team within the MSG is composed of students from a variety of backgrounds, ranging from Education to Engineering. This allows our team to provide both breadth and depth of knowledge in our outreach programs. Our devoted members hold the future of space education very dearly, and the programs we conduct reflect our passion and interest.

The purpose of the educational team is to hold informative programs for younger students, with subjects varying from the concept of gravity to the importance of sociological structures in space colonization. We have presented topics related to the space industry to over 300 students in the past 4 months.

Our team intends to further extend our reach through symposiums, conferences, and public events that help unveil the mysteries of space. We hope that through our work, the next generation will be inspired to take part in the space industry, ensuring the continued development of one of the most promising fields in our time.

WHY SPONSOR US?

The CSDC is a multi-disciplinary team challenge that incorporates students from various disciplines. The challenge is an academically intensive initiative that offers a chance for students, researchers, and professors to form a cohesive workforce, which introduces novel ideas that can advance the university's space initiatives.

Your participation in this initiative will be invested in the education and development of students who are interested in contributing to the space industry. The rigorous and intensive design process students undergo will further enhance their understanding and capabilities.

Through this partnership, our sponsors gain a mutually beneficial and sustainable partnership that will play a vital role in the development of the next generation.

SPONSORSHIP
TIERS

	PLATINUM [10k+]	GOLD [6k+]	SILVER [4k+]	BRONZE [<2k]
Company logo on the final satellite				
Personalized Recruitment Event				
Presentation at Recruitment Event				
Full access to McGill Competitor Resume Bank				
Watermarked Event Photo				
Company promotional material distributed to McGill participants				
Social Media Recognition				
Personalized Thank-you Note				
Logo on team t-shirts, MSG Website and other branding material				
Logo on Sponsorship Banner				
Logo in Sponsor Thank-you Message				

CONTACT

Thank-you for reviewing our sponsorship proposal. If you are interested or would like to learn more, please feel free to contact us or visit our website!

http://www.mcgillspace.com/

msg.csdc@mcgilleus.ca

+1 438-993-8828 [Walid Chabchoub, Technical Director]
+1 514-378-6373 [Paul Albert Lebrun, Director of MSG]
+1 613-697-6375 [Angus McLean, Operations Director]
+1 514-962-0927 [Abby Li, Director of Business Operations]

https://www.facebook.com/mcgillspace/