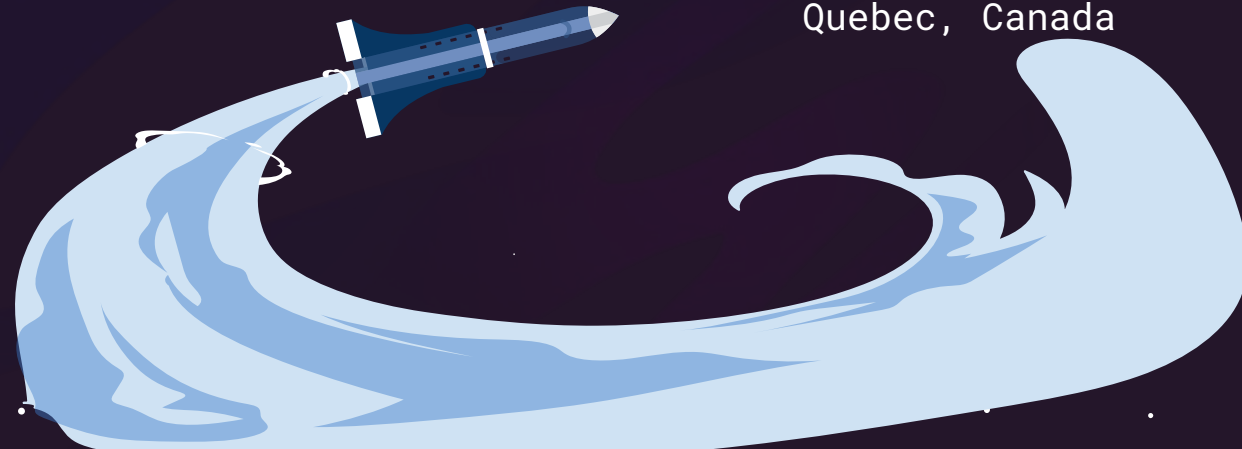


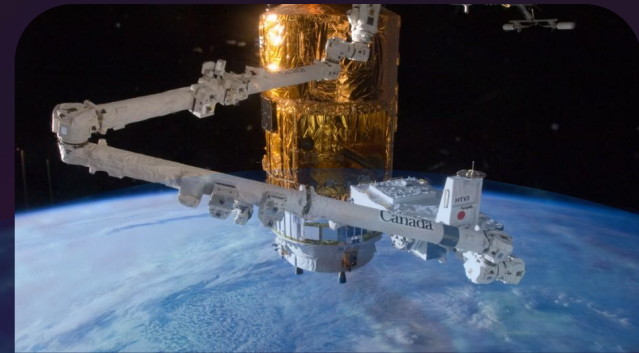
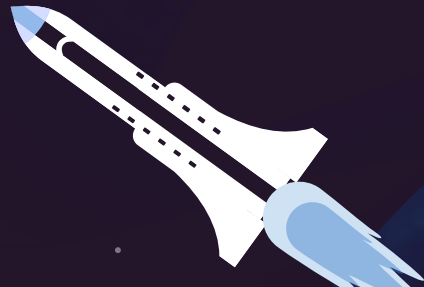
Career Readiness Challenge

Naré -Marina-
Galya-Sabrina-
Jennifer-Xuanchen
20315C
Quebec, Canada



MDA: Pioneering Innovations

We chose to explore MDA Ltd., a Canadian company that has been at the forefront of space technology since its establishment in 1969 by John S. MacDonald and Werner Dettwiler in MacDonald's Vancouver basement. MDA has been significant in advancing the field of space technology and is renowned for its contributions in geo-intelligence, robotics, space operations, and satellite systems.



MDA has consistently set new standards in these areas, making it one of the leading providers of space technology in the world. One of the notable contributions of MDA to the field of space technology is the development of the Canadarm, a robotic arm that has been used on the International Space Station (ISS). The Canadarm has contributed significantly to space technology, making it a symbol of Canadian innovation in space.

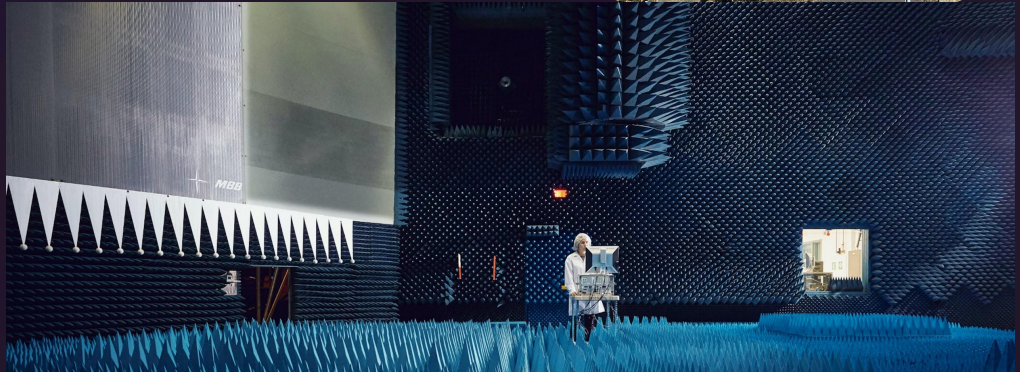


20315C's Experience at MDA

To understand how professionals at MDA utilize the engineering design process, my team's visited MDA's headquarters in Montreal. We had the opportunity to see the company's cutting-edge robotics projects. We were impressed by the company's engineering prowess and its commitment to innovation. One of the highlights of our visit was the anechoic chamber, a facility that provides a controlled environment for testing satellite communication systems.

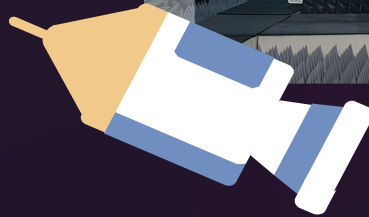
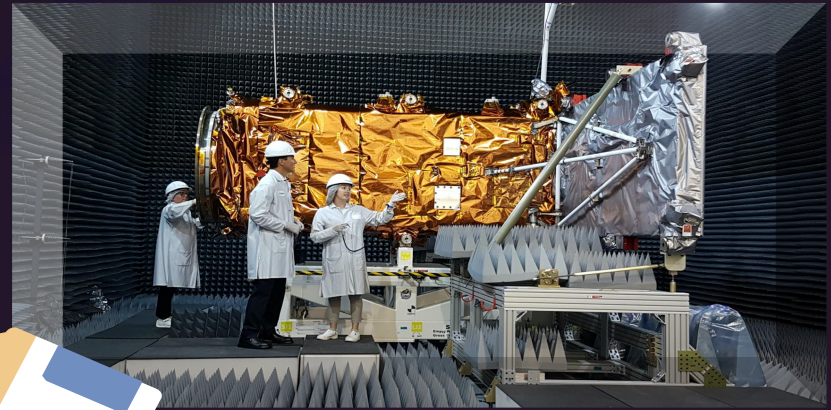


The anechoic chamber is designed to minimize reflections of electromagnetic waves, allowing for accurate testing of satellite communication systems. We also conducted an interview with Richard Perey, one of MDA's design engineers, who shared their experience and expertise in the field of space technology.



Application of Engineering at MDA

MDA follows a meticulous engineering design process to ensure the development of reliable, high-quality solutions. This approach distinguishes MDA from others, making it a preferred choice for clients seeking reliable and high-quality space technology solutions.



Design Process at MDA

1

MDA's engineering design process begins with client consultation to understand project goals.

2

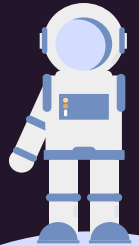
Concept generation follows, with engineers evaluating feasibility, viability, and desirability.

3

Solution development includes creating blueprints and prototypes, with continuous client communication.

4

Finally, results are presented to customers for launch or integration.



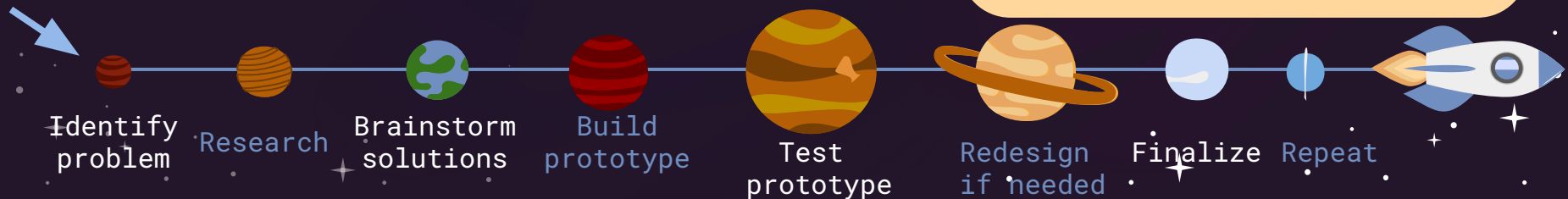
Contrasting Approaches



While both MDA and our team adhere to a systematic engineering design process, distinctions in their approaches are evident. MDA emphasizes a robust client-centric methodology, focusing on comprehensive client consultation and meticulous adherence to stringent testing protocols.

This ensures the reliability and performance of aerospace solutions in real-world applications, aligning with the intricacies of the aerospace industry.

Our process



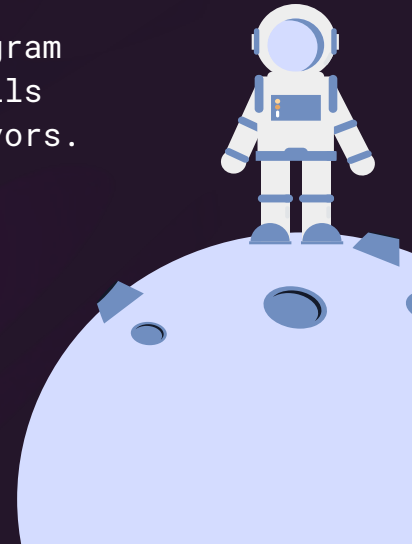
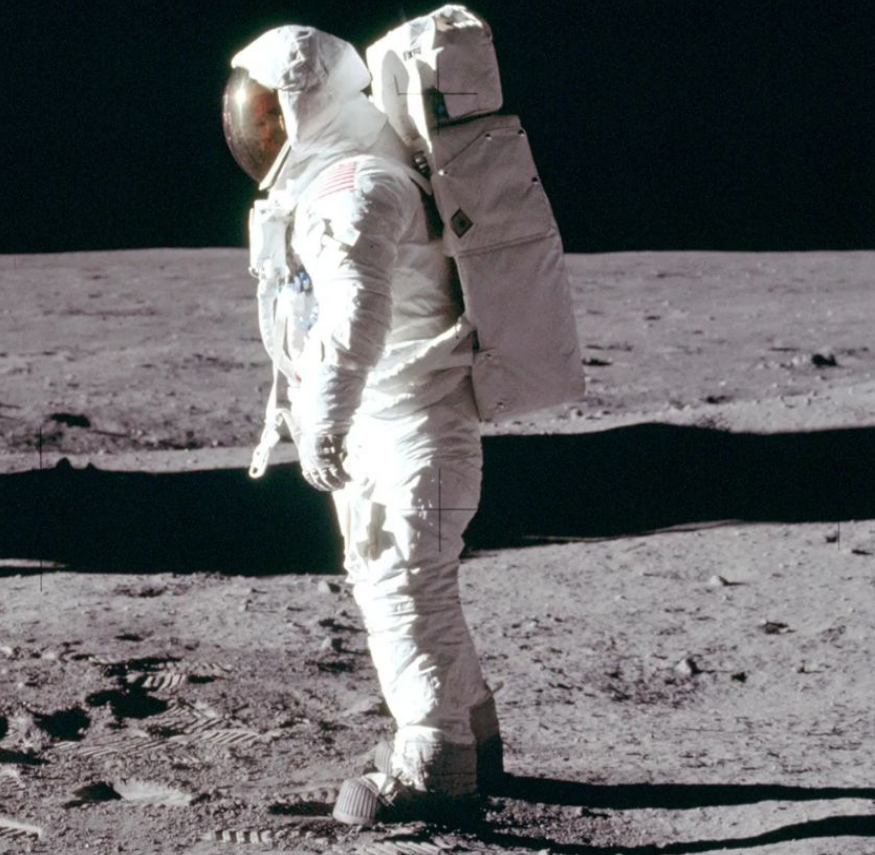


In contrast, our team's design cycle is characterized by a unique continuous improvement focus, reflecting our commitment to adaptability and refinement in the dynamic context of educational robotics projects. While MDA navigates real-world aerospace complexities, our team tailors its design process to the distinctive needs of educational settings. This variance underscores the nuanced nature of engineering design processes, highlighting the adaptability required across diverse industries. MDA's fine-tuned approach addresses specific demands in the aerospace sector, while our team's emphasis on continuous improvement aligns with the iterative nature of educational robotics projects, showcasing the necessity for flexibility in engineering methodologies.



VEX Preparing for Future Career

Participation in VEX Robotics offers students a transformative journey that challenges and inspires them to consider fulfilling careers in STEM. Beyond acquiring technical skills, the program instills crucial soft skills essential in future endeavors.



The Traits Accumulated due to VEX

1

Emphasizing data collection and results analysis fosters a data-driven approach to problem-solving.

2

Teamwork, integral to VEX Robotics, teaches collaboration and effective communication.

3

The continuous improvement focus mirrors the dynamic challenges students are likely to encounter in STEM careers.

4

VEX Robotics not only equips students with technical competence but also cultivates adaptability and resilience, preparing them for the complexities of the ever-evolving STEM landscape.

Citation

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