

Developing Marketing Recommendations for the LEAP at WPI/QCC

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The full report was received by all project advisors for evaluation. The contents of the report are not published.

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Abstract

The objective of this MQP was to increase the user base of the Worcester Polytechnic Institute and Quinsigamond Community College LEAP (Lab of Education and Application Prototypes). The rationale for this project is that the creation of the lab was a large investment for WPI and there are opportunities for growing the internal and external user base. The methods used included an axiomatic design breakdown of the problem, a sales funnel analysis, conducting interviews with stakeholders, and a generic porter strategy. Once we conducted our research and analyses, we developed a cash flow diagram to show the year-to-year financial breakdown and return on investment of the lab. The results show that various marketing strategies can be implemented to improve the utilization of the lab and increase return on investment. This will allow for connections with incubators and companies within the technology industry. These steps give WPI a better understanding of the potential user base that will make the lab most profitable. In conclusion, the recommendations presented to the LEAP @ WPI/QCC could attract new users from both academia and various technology industries if implemented.

Acknowledgments

Thank you to Jim Eakin, the operations manager of the LEAP @ WPI/QCC, for giving us the opportunity to work on this project and for his continuous support and professional guidance throughout the entirety of the project. He has dedicated an immense amount of time and energy to be a resource to us and educate us about the current state of the LEAP, the goals for the lab, and the photonics industry in Massachusetts. He also connected us with people in his network to have conversations with and collect data.

Thank you to all our interviewees who took the time out of their busy schedules to meet with us and for offering valuable insight about their experiences with photonics and/or technology and/or marketing in technology industries. This project would not have been possible without them (listed in alphabetical order by last name).

- Jacob Bouchard, graduate Physics student at Worcester Polytechnic Institute
- Randal Chinnock, Founder and Director of the Southbridge Technology Incubator
- Professor Rana Gupta, the Managing Director of the Business Innovation Center at the Boston University Photonics Center
- Anya Losik, Chief of Staff at FORGE Impact
- Joan Popolo, Executive Director at ACTION Innovation Network
- Rebecca Ramthun, undergraduate Chemistry student at Worcester Polytechnic Institute
- Professor Bogdan Vernescu, Vice Provost of Research at Worcester Polytechnic Institute
- Rick Wang, undergraduate Mechanical Engineering and Robotics student at Worcester Polytechnic Institute

Lastly, we would like to thank our project advisor, Professor Walter Towner for his constant advice, support, and encouragement in all steps of the project and for sharing his insight and expertise in advising similar projects.

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What We Learned

Coming into this project as a group of two, we understood that there would be different challenges that would arise than that of a group of four. We knew we wanted to work on a team together after we had been at the same project site for IQP. Through this experience, we learned how each other worked and did not have any doubts that our skills would complement each other. Our biggest concern about the project was how we would address challenging issues with advisors or interviewees if they were to come up and how we would handle those tough conversations. We also knew that each of us would have to contribute equal work for our project to be successful.

Through this project we were able to learn a lot from each other, our advisor, our sponsor, peers, faculty on campus, and external resources to name a few. One thing we did successfully was being able to leverage each other's skill sets by initially being honest about our strengths and weaknesses. Through this process, we both understood that writing was neither of our strongest assets from the beginning. After A and B term, where most of our interviews took place, we discovered we both had a skill for talking to people through phone or zoom but come C term we had a lot of struggles communicating the information and data we were so excited to share. We learned that by being a partner team and having similar backgrounds, our weaknesses were a lot more apparent than we once realized. However, this made us both grow in areas we were less comfortable with prior to the project.

After starting our project, we both became overwhelmed by the idea of doing a project on something we knew very little about. With photonics being a foreign concept, it took us time to wrap our heads around it and what exactly the capabilities of the lab are. We learned that we could look at a system, study it for a couple of weeks, and communicate with experts to further our understanding about the industry and talk to people, both internal and external to WPI, to promote the LEAP and its capabilities. Learning about the equipment and facility of photonics gave us a foundation to speak to different types of potential users within this field.

One of our main goals through the project was to define the target market for the lab moving forward. We discovered that there is not always a defined target market for every organization. Through this process we realized even the most qualified people take time to learn and understand who the target market of their facility is.

By using Axiomatic Design, we learned that the process is a learned skill that requires deep thought about how to address and define a specific technical problem. While the problem our project addressed was not a technical one, axiomatic design can be helpful to break down and determine how to solve it.

One of our biggest takeaways was that sometimes we get so caught up in details that we lose sight of the solution that is right in front of us. At the beginning of this project and throughout a lot of our research, we spent a lot of time investigating potential external revenue streams for the lab when there are a lot of potential clients that exist right on campus.

Overall, we have been extremely appreciative of all the lessons and skills we have learned throughout this experience and are confident that they will be beneficial in our future.