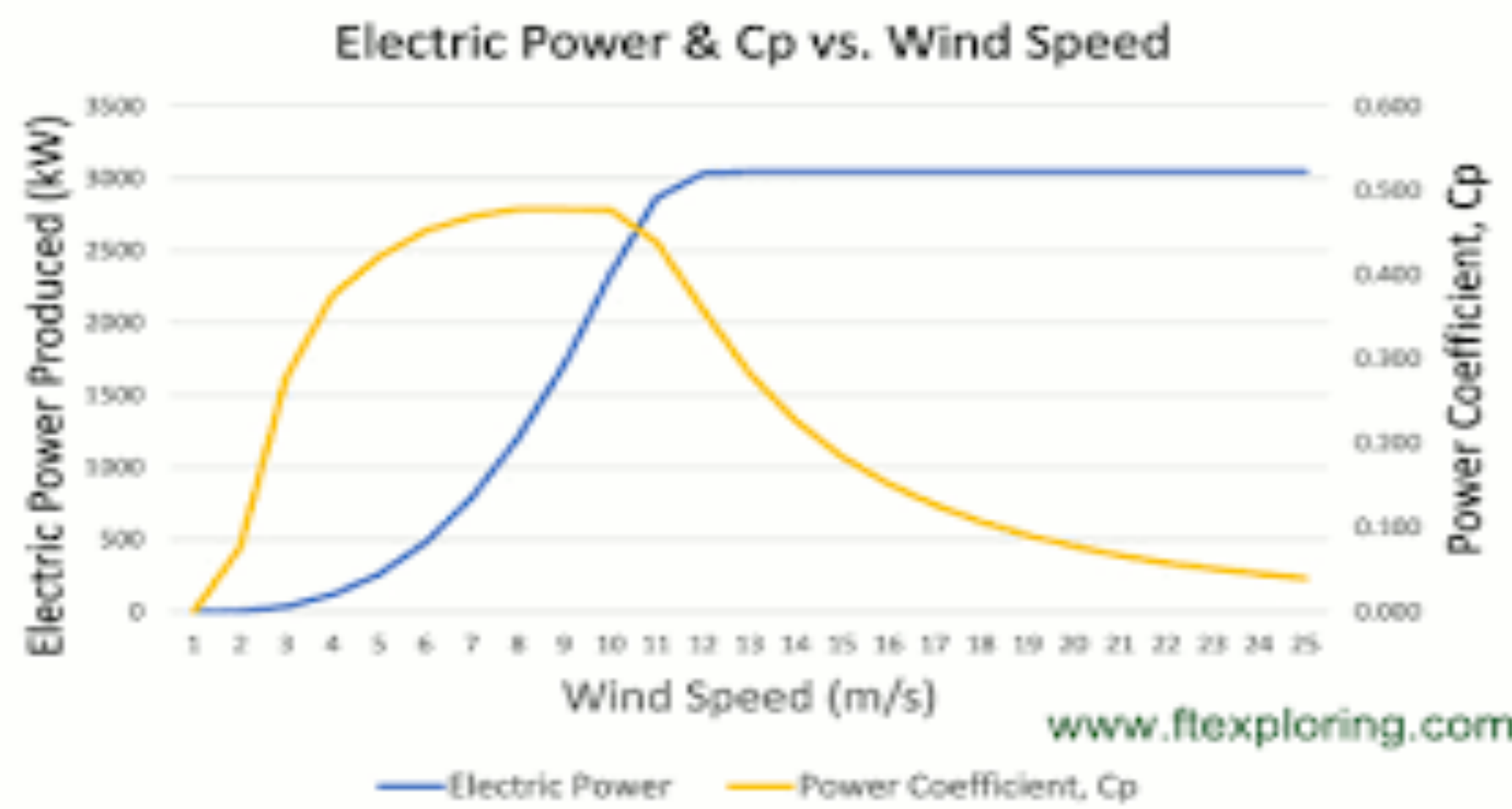


I1.04 – Pirate Wind Turbines

Team: Christian Arenas Sandoval, Izak Salinas, Kendrick Leggins
 Sponsor: Dan Marsh



Problem Statement



This is one of many reviews from a competitor's customer, who installed their product on a 36,000 ft communications site. "Despite following the installation directions, the turbine generated very little power, regardless of the wind speed. As a result, the customer felt that spending \$900 on this product was not a good investment."

Project Purpose

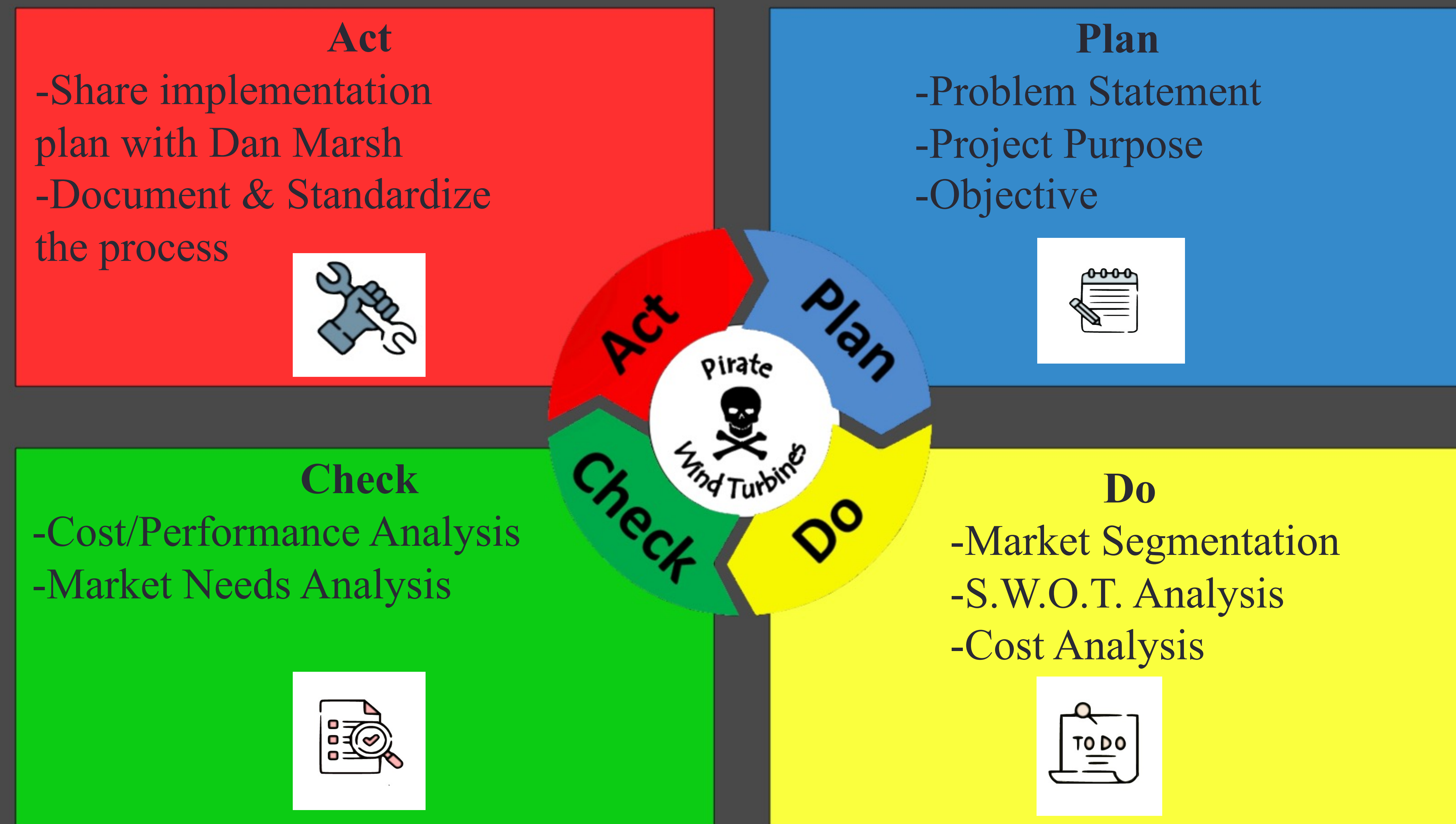
As a team, our aim is to prove that Pirate Wind Turbines has developed and implemented the necessary technology to not only perform to its rated capacity but also to operate at a magnitude far past that of turbines currently on the market.

Objectives

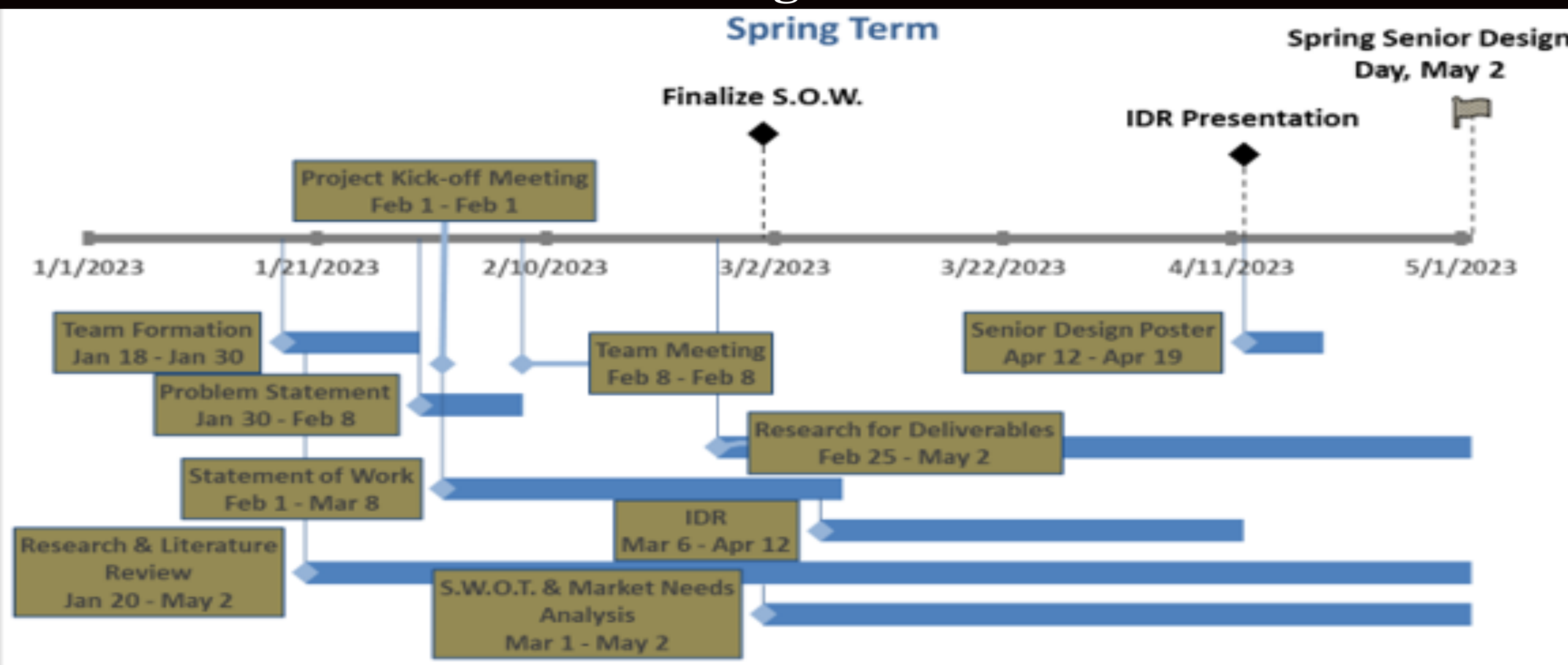
Market Needs Analysis will help the company to understand the market demand for Small Wind Turbines and tailor its products and marketing strategies accordingly, which is crucial to remain competitive in the market. *S.W.O.T Analysis* will help the company to identify its strengths, weaknesses, opportunities, and threats, which will allow it to differentiate itself from the competition, capitalize on opportunities and minimize the impact of threats. *Cost Analysis* will enable the company to set competitive pricing, optimize its operations and reduce costs, which is crucial to provide cost-effective solutions to customers and maintain profitability in the market.

Stretch Goal is to get a Pirate Wind Turbine installed on roof of Ingram School of Engineering Building

Design Approach



Progress



- | Strengths | Weaknesses |
|---|--|
| <ul style="list-style-type: none"> Proprietary Overspeed Protection Capacity Rating Switch Growing Market Adaptable | <ul style="list-style-type: none"> Higher Initial Cost Manufacturing Process Has Not Reached Economies Scales Outsource Wind Blades Lack of Brand Recognition |

- | Opportunities | Threats |
|---|--|
| <ul style="list-style-type: none"> Cost/Efficiency Calculation to prove the total cost is lower than other products Partnership With Texas State University Emerging Markets | <ul style="list-style-type: none"> Competitors Resources Time Regulatory Challenges |



		Minimum	Maximum
Market 1	Efficiency (KWh)		
	Noise (dB)		
	Price (\$)		
	Height (ft)		

Background Information

Founder Dan Marsh of Pirate Wind Turbines embarked on a mission to bring honesty to the Small Wind Turbine (SWT) market. He was motivated by the realization that the SWT market was insincere, and that advertised power yields were not being delivered. To address this issue, Marsh set out to create and created a SWT that would deliver and perform to its advertised specifications.

IE Team



Christian Arenas Sandoval - Project Manager
 Izak Salinas - Data Analyst
 Kendrick Leggins - Project Coordinator

Future Plans

Carry-out the last 3 steps of the P-D-C-A by collecting performance data on PWT and competitors. Perform Market Segmentation strategies along with S.W.O.T. analyses to pinpoint our entrance into the market. Present to Dan our findings and our best recommendation for action.

Acknowledgements

A special thank you to our sponsor Dan Marsh, his wife, Becky, and our Instructor, Dr. Michelle Londa.