University of Wisconsin - Madison

SpaceX Hyperloop Pod Design Competition

BADGERLOOP

Corporate Sponsorship Packet

2015-2016

Dear Future Sponsor,

The success of the Badgerloop relies on the strong support of companies like yours. This support offers innovative and driven students the opportunity to collaborate on this challenging project, while gaining valuable experience not only in design and fabrication, but also in business, operations, and management. As we are nearing the second decade of the 21st century, the transportation industry has not kept up to speed. At Badgerloop, we aim to bring about revolutionary change in this industry by make efficient, cost effective, intelligent, and lightning fast ground transportation a reality. Taking this concept from paper to product is no small feat, and we hope that you will consider sponsoring Badgerloop to help us in this endeavor. We welcome the following contributions: consultation services, monetary gifts, equipment/materials, or anything you feel would be beneficial to our endeavor.

On June 15, 2015, SpaceX announced their intention to host a competition and build a one mile test tube. Within two months of the announcement, over 1,200 teams had registered to participate. As of January 31, 2016, the University of Wisconsin-Madison was awarded the 3rd best overall design by judges at Design Weekend in Texas. Thirty other international teams will join us in Hawthorne, CA for the final round of the competition, in late January 2017. Competing in this unprecedented arena will be a challenge, but we are confident in our ability to win with the help from our sponsors.

To gain a competitive edge, we are going above and beyond the competition requirements by incorporating innovative designs, such as: active stability control, redundant brakes, industry-grade control systems, magnetic propulsion, virtual reality, and much more.

As a sponsor, your company will receive many benefits depending on your sponsorship tier. For more information about these benefits, please see our sponsorship tiers on page five.

This packet includes a team overview, competition weekend description, projected budget, and information on how to make a donation. We would be more than happy to answer any questions or concerns you may have. Our team is extremely passionate about this project and we cannot wait to help build the future of high-speed transportation. We hope you will consider sponsoring our team to promote innovation, engineering, and education. More information about our team and the competition can be found on our website: https://www.badgerloop.com/.

Sincerely,

David Van Veen
Team President

Kali Kinziger
Industry Relations Lead

Team Overview

Within days of the competition announcement, motivated students formed what is now Badgerloop: the official UW-Madison Hyperloop team. The innovative nature of this contest made it easy to recruit not only members but also faculty advisors. The talented professors of the College of Engineering have been extremely supportive, helping the team create productive timelines and providing expert knowledge. Today the Badgerloop team has over 180 general members (majority are undergraduate students) and two dedicated faculty advisors. This number continues to grow. The collective team background boasts various engineering research pursuits including the CanSat Competition, the Wisconsin Space Grant Rocket Competition, creation of a small-scale object-avoiding rover, and intuitive drone control through the UW Internet of Things Lab.

For the 2015-2016 year, our team entered the competition with the intent to design and build a full, competition-scale pod to be tested at the test track this summer. During the fall ’15 semester we successfully raised $10,000 in private and corporate donations in addition to 2,000 square feet of carbon fiber prepreg. Thanks to the Physics Department at UW and Professor Duncan Carlsmith of Garage Physics and Venturewell, we have been provided 400 square feet of manufacturing lab space. This space includes lathes, mills, a crane, a TIG welder, sheet metal bending and cutting equipment, a band saw, and shop tools. In addition, it is around the corner from the Physics workshop and one wall of our lab space opens up to the building’s loading dock.

On January 29-30 we presented our design and booth to sponsors, SpaceX and Tesla engineers, and renowned professors from around the world at the Design Weekend event. Joining us were 121 other teams representing 20+ countries. Our design receiving 3rd best overall design and a Technical Excellence award, trailing only MIT and Delft University of Technology (Netherlands). We are beyond proud of what our incredibly talented team has been able to accomplish, and strive to be the first successful Hyperloop pod ever launched.

In addition to presenting our design and creating “one of the coolest booth setups” (Texas A&M Engineering,) our team submitted a 252 slide-deck Final Design Package. Pending legal consultation, this document will be made available to the public and will be sent to interested sponsors.

Competition Weekend – January 2017

The Competition Weekend will take place at the SpaceX Hyperloop test track in Hawthorne, CA, on January 27-29. The competition weekend will consist of a Pod Loading Procedure, Pod Launch Procedure, and Pod Unloading Procedure – all with very specific line-item requirements. More information about the competition can be found in the Rules and Requirements document, including the judging criteria rubric.

The Badgerloop Pod

Figure 1: Diagram of the pod as submitted in our Pre-Build Design Package.

Our pod can easily be scaled: extend the front and back sections, insert copies of the inner two ribs, and increase the length of the magnetic levitation modules. Once this is done, the pod seen in Figure 2 is able to transport 24 passengers.

Figure 2: Diagram of our pod and systems scaled up to full size.

Budget

Item	Amount
Electrical	$27,944.64
Levitation/Stability	$35,264.76
Braking	$5,106.76
Safety	$579.64
Structures	$10,799.07
Software/Controls	$439.63
Tools and Workshop	$3,320.73
Total Pod Budget	*$83,455.23*
Cost Overrun	$13,000.00
Anticipated Pod Cost	*$96,455.23*
Damage Control and Maintenance	$20,000.00
Pod Shipping	$5,000.00
Team Member Airfare and Lodging	$15,000.00
Workshop Space Rental	$600.00
GRAND TOTAL	*$137,055.23*

Sponsorship Tiers

Category	Platinum	Gold	Silver	Bronze
Gift (monetary/material)	$20,000	$10,000	$5,000	$1,000
Logo on pod and trailer				
Logo on competition apparel	Most Prominent	Very Prominent	Prominent	N/A
Logo on website/newsletter	Section I	Section II	Section III	Section IV
Handbook of member resumes	✓	✓	✓	✓
Invitations to campus events	✓	✓	✓	✓
Speak at Reveal Event (opt.)	✓			
Social Media Shout-outs	✓	✓	✓	
Monthly newsletter	✓	✓	✓	✓

As of October 14th, 2016 we cannot accept anymore logos to the pod because the logo layout design has been finalized and printed. For more information and to maximize your sponsorship value, please contact Kali Kinziger at kkinziger@wisc.edu

Donations

Badgerloop has partnered with the UW Foundation in order to help manage our incoming finances and to allow donations to be tax-exempt. All donations made to BadgerLoop via the methods below will be tax exempt.

Check

Checks should be payable to “UW Foundation,” with “Badgerloop Fund” in the memo line. Please include a letter stating gift amount, intended purpose, and contact information.

UW Foundation C/o Brad Green
1848 University Ave
Madison, WI 53726

Online

Make a private donation online to Badgerloop by visiting the link below. Also tax-exempt.

http://supportuw.org/giveto/badgerloop

Materials

Please contact Kali Kinziger (kkinziger@wisc.edu) regarding material donations.

BADGER LOOP

Thank you to those who have joined us in the quest to revolutionize transportation!

hyperloop one

accenture

CIRRUS AIRCRAFT

Rockwell Automation

BOXX

X-ES

ALLIANT ENERGY

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DEPARTMENT OF Mechanical Engineering UNIVERSITY OF WISCONSIN-MADISON

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CDN design. engineer. prototype.

HUCK

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GARAGE PHYSICS