



WEBER STATE UNIVERSITY

3848 Harrison Blvd Ogden, Utah 84408

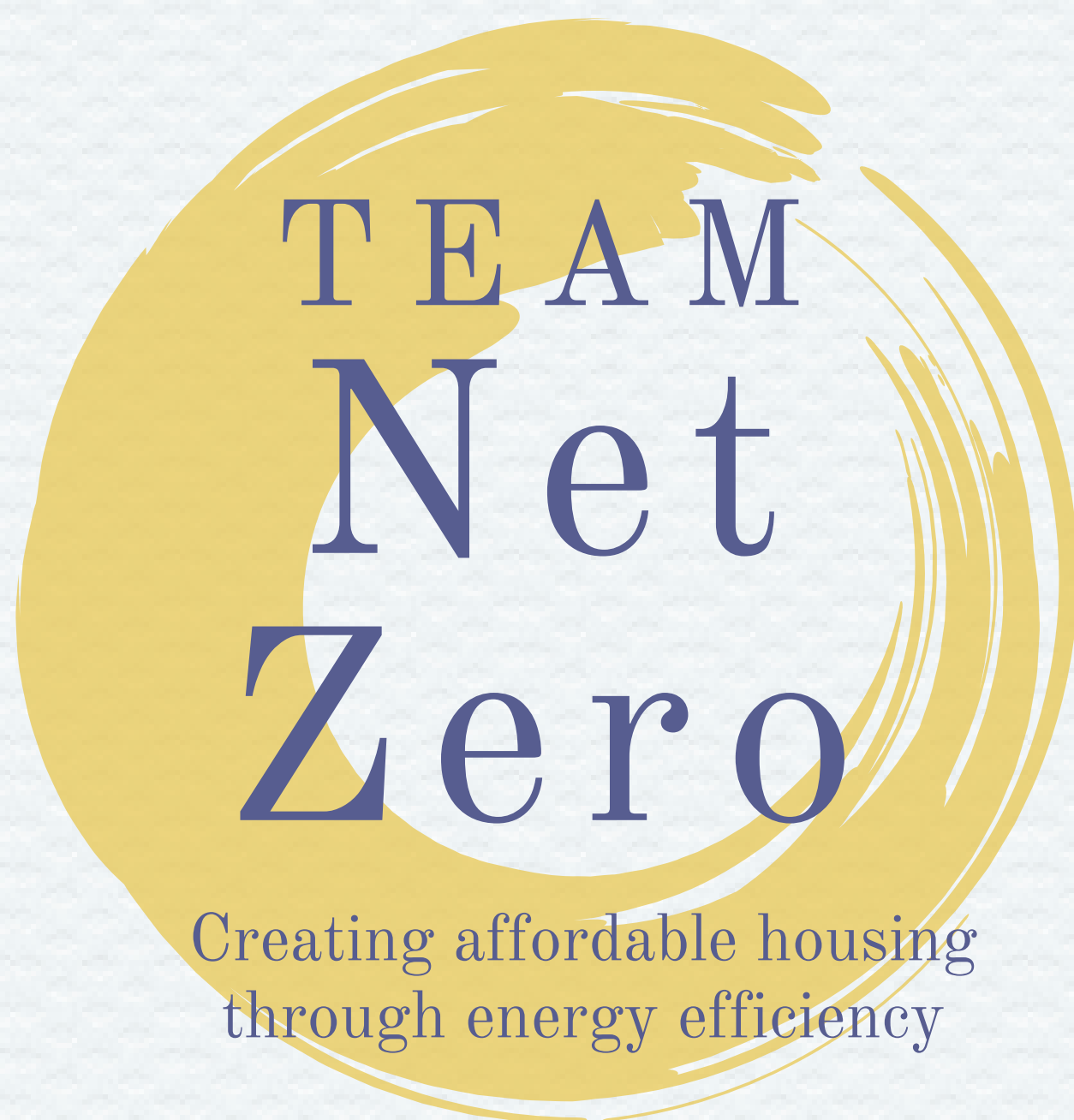
Faculty Contact:

Jeremy Farner
Faculty Lead
801-395-3421

Chad Downs
Facilities Project Manager
801-626-6642

PROJECT LOCATION

2807 Quincy Ave
Ogden Utah 84403



**U.S. Department of Energy
Solar Decathlon 2020**

FINAL REPORT

August 31, 2020





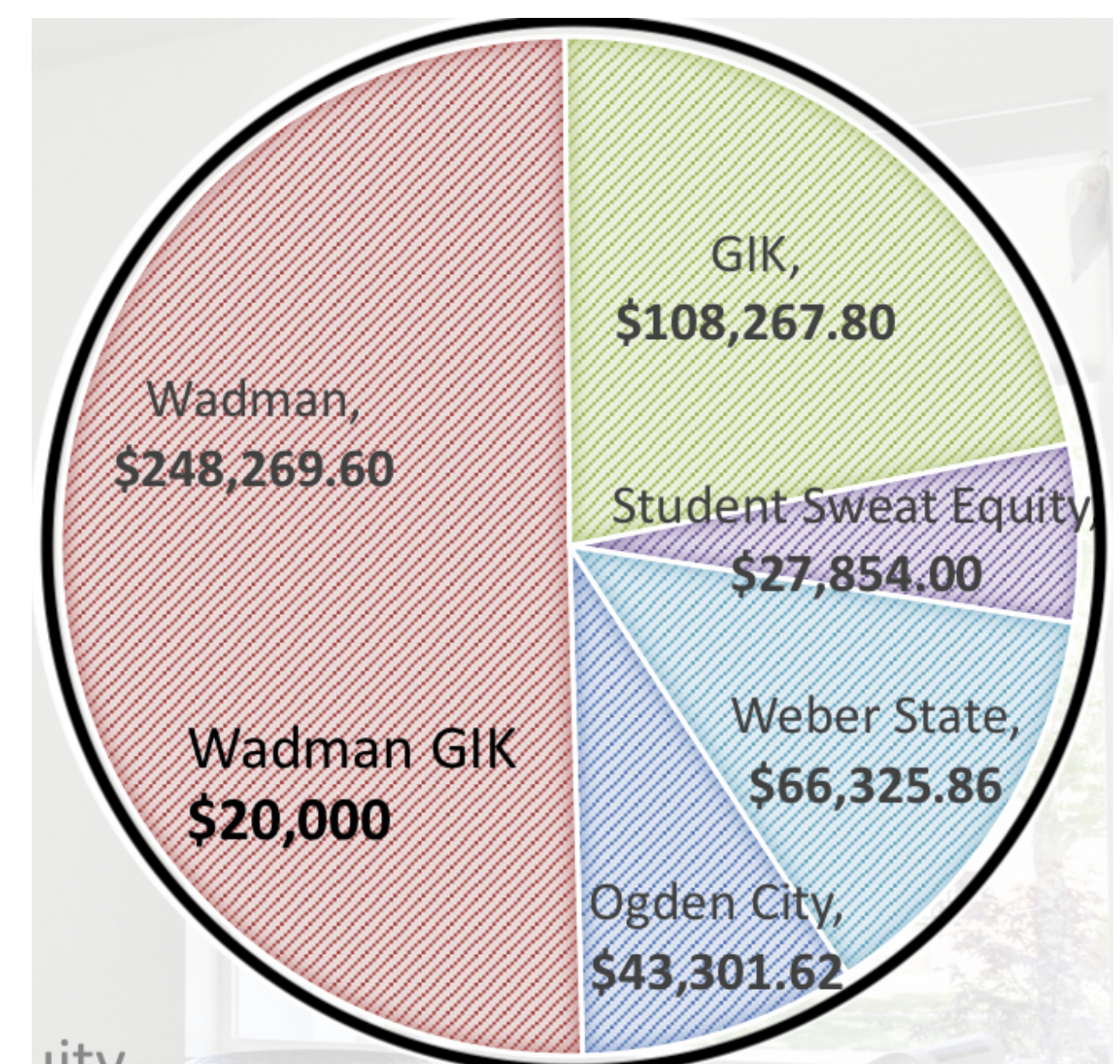
01. SUMMARY OF FUNDRAISING ACTIVITIES



As of August 31, 2020, the true value of the Net Zero house was \$514,018.88, with \$199,423.42 in donations and \$314,595.46 out of pocket expenses.

Donations break down into 4 categories

- \$108,267.80 ... Gift in Kind (GIK)
- \$27,854.00 ... Student/Faculty sweat equity
- \$43,301.62 ... Ogden City
- \$20,000 ... Wadman Corporation



Cost per square foot

2450 finished square feet:

\$147.51 ... cost per SF includes permit & lot fees paid by Ogden City

Average new build construction costs for Ogden Utah: \$175 per SF.

True value per square foot: \$201.64, including all donations and sweat equity.



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01.

ORIGINAL ESTIMATE VS. ACTUAL BUDGET

\$	250,000.00	Original Estimate
\$	17,848.00	Utilities across 28th Street
\$	30,000.00	Finish Basement
\$	7,036.16	Unforeseen Site Conditions (Curb & Gutter/ Asphalt Patch)
+	\$ 11,100.00	Power Connection Costs (Extortion + Underground Boring)
\$	315,984.16	Original Estimate Plus Unanticipated Expenses as compared to:
\$	314,595.46	Actual Out of Pocket Expenses

Unforeseen expenses totaled \$65,984.16. Added to our original estimate of \$250,000, our actual expenses ended up \$1,388.70 LESS than our original estimate with \$314,595.46 in out of pocket expenses.

Our team came in under budget despite a 20+% increase to estimated costs with unforeseeable expenses.



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01.

STUDENT/FACULTY SWEAT EQUITY

Category	GIK	
Plans by WSU	\$ 2,610.00	Sweat Equity by Jeremy's Senior Project Group
Superintendent	\$ 10,000.00	Sweat Equity by Jeremy's class \$500/week for 20 weeks
Final Cleaning	\$ 500.00	Sweat Equity by Jeremy's Senior Project Group
Excavation, Sewer & Water Lines, remove sidewalk, approaches, curb & gutter	\$ 1,500.00	Sweat Equity by Jeremy's Senior Project Group
Sod	\$ 1,000.00	Sweat Equity by FM
ICF Labor & Water Proofing for Home	\$ 4,750.00	Donated by Jeremy's Senior Project Group
Gravel Conveying & Concrete Prep	\$ 1,700.00	Donated by Jeremy's Senior Project Group
Framing Labor & Nails/Staples	\$ 1,644.00	Sweat Equity by Jeremy's Senior Project Group
Interior Trim Labor	\$ 500.00	Donated by Jeremy
Attic Insulation	\$ 500.00	Rim Joist insulation and air sealing donated by Jeremy's Senior Project Group
Windows Install	\$ 500.00	\$500 Install Donated by Jeremy's Senior Project Group
Electrical Labor & Materials	\$ 250.00	Labor donated by D Tech electrical program
Plumbing Labor	\$ 2,400.00	Davis Technical College to donate the rough labor, but we had to hire the instructor to finish because of Covid
Estimated Total Worth	\$ 27,854.00	



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01.

LESSONS LEARNED: BUDGET



In 2019, we wore the most elaborate rose colored glasses.

True grit and tenacity carried this build through completion. We endured muddy winter conditions, tight building site, unknown utility challenges, a global pandemic and a 90% reduction of workforce. Of all the factors that effected the budget, these unforeseeable obstacles challenged us from day one and compounded our ability to stay solvent. We had no comprehension of how different December 2019 could be to May 2020.

In the end we learned how to leverage resources, and the value of good relationships. We learned the benefits of due diligence, contracts, waivers and safety standards. We learned what to outsource and what was reasonable for students to be engaged in and how to accomplish tasks on digital platforms vs. concrete slabs.



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02. RESULTS OF MEDIA OUTREACH

WSU SUPPORTED 9 DIFFERENT MEDIA OUTREACH EFFORTS:

- Instagram account; 145 followers, 36 posts
- Utah Construction & Design Article
- Website: www.weber.edu/solardecathlon
- WSU Press Release
- KUTV Channel 2 News
- Deseret News Article; valued at \$6773.76 in marketing
- KSL News Article
- Opening Doors Podcast; 3,600 people reached, 100+ downloads
- Standard Examiner Article; valued at \$1967.62 in marketing



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03.

RESULTS OF ONSITE EXHIBITIONS

RIBBON CUTTING

In the midst of COVID-19, Weber State University has taken a very cautious stance with group gatherings, prioritizing public safety. Our ribbon cutting is tentatively set for the end of September, restricted to a limited group, and will be recorded and uploaded to our website to share with our community.

Prior to ribbon cutting, we plan on giving a private tours to Mayor Caldwell, of Ogden Utah, and other dignitaries, showcasing the collaborative efforts between WSU and Ogden City.

design
[di' zain] v.t.
to invent and bring into being; to prepare plans or a sketch or model; etc. for something to be made; to plan in the mind | to intend for a particular purpose



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LESSONS LEARNED: **ONLINE PRESENCE**

Every detail shared.

Our online presence was focused on offering the public as little or as much information regarding our Net Zero build. An organized website was key as we shared house plans, project manuals, sub-contractor and supplier information. Build out of the wire frame, communication with our WSU website specialist and update coordination was all completed by a dedicated student who had no prior experience with website design and grew exponentially from the opportunity.

Instagram was the preferred platform for content sharing due to our followers demographic's age and ability to quickly load content. Efforts could have been expanded to Linked In, Facebook and Twitter but would have required more manpower to manage those social media sites. Interestingly, because of Instagram, our sub-contractors with limited English skills were able to understand our project through Instagram translation, increasing understanding of why this build was different than other residential job sites.

Between the website and Instagram account, our student group could have increased followers through a more proactive recruitment effort. Because we starting our online platforms back in December of 2019, we stayed ahead of the project build, giving our small group of followers real time, relevant content.



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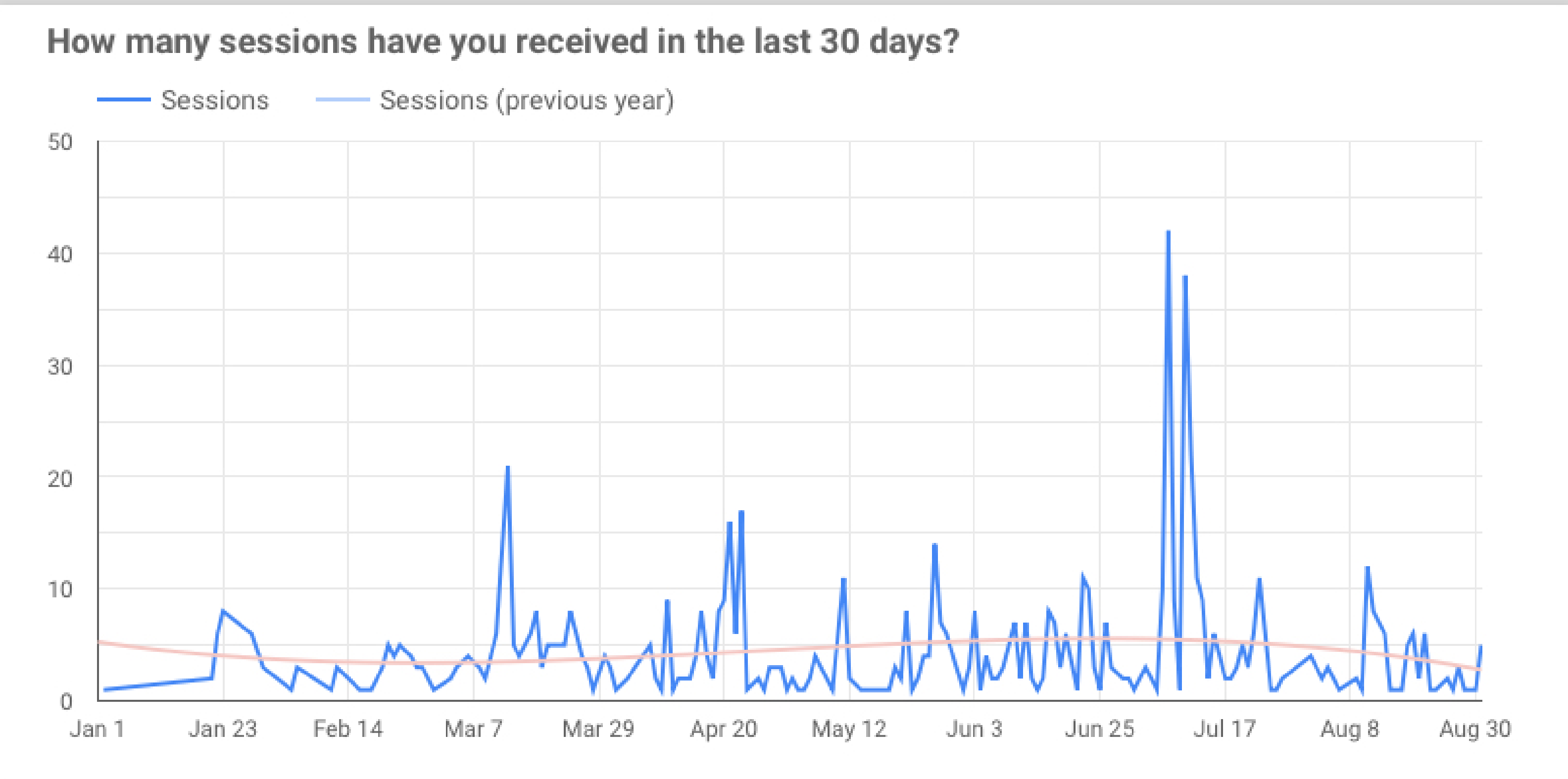
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04. LESSONS LEARNED: **ONLINE PRESENCE**

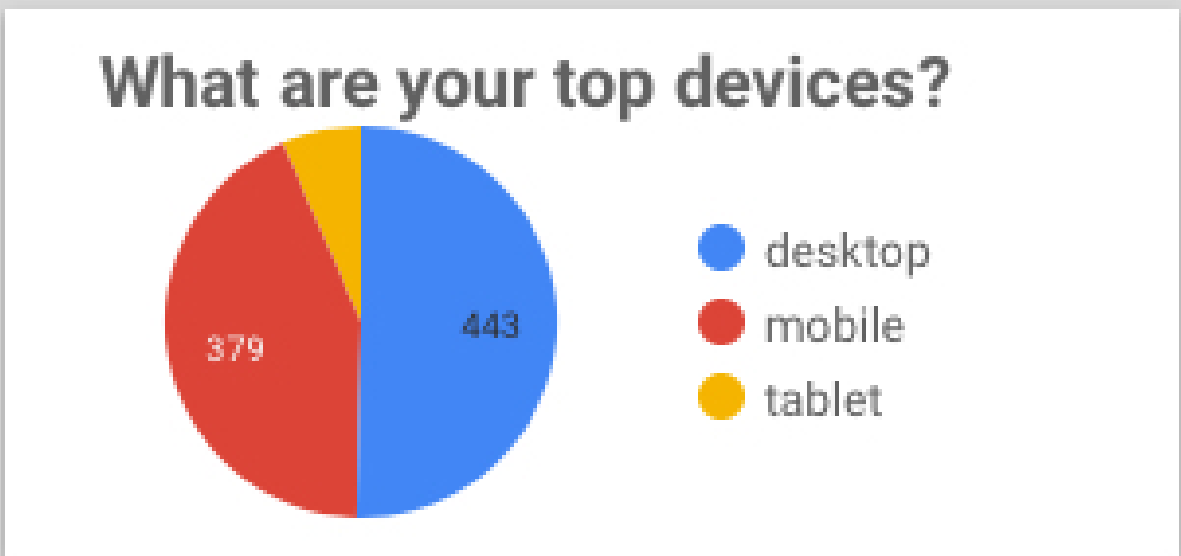
Users	New Users	Sessions	Pageviews	Avg. Session Duration	Bounce Rate
569	323	773	2,342	00:02:59	50.5%
0	0	0	0		0



How do you acquire users?

Source	Sessions
1. google	366
2. (direct)	296
3. standard.net	51
4. facebook.com	19
5. mail.google.com	13

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Total of 2,343 page views since website launched January 21, 2020. Those viewers spent close to 3 minutes on the website, 50% came back for a second look. Many stayed on our main page, with 1/3 viewing student profiles. Our heaviest traffic occurred shortly after the Standard Examiner article with 42 sessions on July 7, 2020.



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The goal has always been to create a sustainable **revolving fund**, supporting WSU community builds, fostering student education and advancing green building concepts from academia research into common industry practices. This home has been a teaching tool for high school, college and University students along side sub-contractors and craftsmen, all being exposed to new methods and materials changing the future of residential construction. Data will be gathered, recorded and then the home will be sold at appraised value, starting the next collaborative Net Zero build.



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06. TEAMS FUTURE PLANS



Janae Thomas

Changing the face of Construction, Janae plans on continuing to foster High School students interested in AEC careers as a job-site Superintendent.



Dallin Barton

Currently working for Hughes General Contractors as an Assistant Project Manager on a \$125 Million dollar project. Plans to continue employment with Hughes upon graduation summer 2020.



Tyler Bone

With a degree in Construction Management and Entrepreneurship, Tyler has plans to revolutionize the construction industry as a leader, enhancing productivity innovations.



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06. TEAMS FUTURE PLANS



Heidi Ouzts

Currently working for Bott Pantone Architects in Ogden, Utah, Heidi's next step is a Master degree in Architecture followed by an Architect License.



Ryan Williams

Starting final semester with hopes to graduate this year. Ryan plans to venture out on his own this next year.



Tyler Allen

Working for MAC Builders, a residential custom home builder as an estimator. Tyler plans on attending Architecture school within the next couple of years after graduating from WSU with a degree in Building Design & Construction. Currently focused on having a side business designing house plans.



Mika Mason

Employed with Jones and DeMille Engineering, Building Systems Department., Mika is planning on continuing educational pursuits with a masters of Architecture.



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CONTACT LIST

2019 Solar Decathlon Build Challenge Team Roster



Collegiate Institution Name (s): Weber State University

Team Name *:

Division *: Local Build

*Use one roster template for each team if your collegiate institution has multiple teams.
**Use the email address you will use to sign-up for the Building Science Training (if applicable).

Faculty Lead						By electronically signing, the faculty lead attests that the information regarding the training for each participant is correct.
First Name	Last Name	Email address** (school or personal)	Email address** (school or personal)	Attending NREL April 2021	Phone number	
Jeremy	Farner	jfarner@weber.edu		x	(801)389-4437	
						Jeremy Farner <small>Faculty lead's signature (typed name)</small>

Faculty Advisors					
First Name	Last Name	Email address** (school or personal)	Email address** (school or personal)	Attending NREL April 2021	Phone number

Student Team Lead						
First Name	Last Name	Email address ** (school or personal)	Email address ** (school or personal)	Attending NREL April 2021	Phone number	Building Science Training
Tiffany	Bohn	tiffanybohn@mail.weber.edu			(801)624-8033	
Janae	Thomas	janaethomas1@mail.weber.edu	janaethomas@msn.com	x	(801)544-4679	

Student Team Members						
First Name	Last Name	Email address ** (school or personal)	Email address ** (school or personal)	Attending NREL April 2021	Phone number	Building Science Training
Heidi	Ouzts	heidouzts@gmail.com	heidouzts@gmail.com		(801)425-8912	
Mark	Millerberg	markmillerberg@mail.weber.edu	mjmillberg@msn.com	x	(801)589-9534	
Tyler	Allen	tylerallen6@mail.weber.edu	tyler.sessions.allen@gmail.com	x	(801)425-1250	
Ryan	Williams	ryanwilliams8@mail.weber.edu	ryanhaiwilliams@gmail.com		(208)515-1507	
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Chris	Blackham	cblackham@mail.weber.edu			(801)859-5193	
Nick	Coons	nickolascoons@mail.weber.edu	Coonsnickolas@gmail.com		(801)616-1246	
Lydia	Austin	lydiaaustin@mail.weber.edu			(801)857-5025	
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Esther	Hall		esthernhalls@gmail.com	X		
Wadman:						
Casey	Nielsen	cnielsen@wadman.coom				



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