CRETE house

COMMUNICATION

MISSION STATEMENT

CRETE house is a model for advanced building technology, resiliency, and livability. The project is designed as a demonstration of integrated innovative precast concrete panelized system used in single-family homes, as a compelling alternative to traditional wood light frame construction. High performance precast concrete structures are inherently resilient, protecting against fire, moisture and mold, insects, seismic events, extreme weather conditions and man-made phenomena such as blasts, force protection and acoustic mitigation.

Therefore, the communication mission of CRETE house is to educate and inform students, faculty, industry professionals, and the public about the extraordinary benefits of using precast concrete to create highly sustainable, performative, and resilient buildings.

CRETE house's communication strategy involves targeting a variety of scales (local, regional and national media) and tools (Social media, traditional media, presentations, conferences, tours, and educational events).

STRATEGY

KEY MESSAGES

To communicate the breadth and scope of this project to local, national and international audiences, Team WashU – St. Louis will clearly convey the following key messages:

1. CRETE house is designed to show that precast concrete homes are a compelling alternative to traditional wood frame construction.

2. The advantages of using precast concrete as a building material include: a long life cycle, durabilty, resilience to natural and man-made forces, resistance to fire, mold, moisture and insect damage, and extreme weather conditions such as strong winds and tornadoes, and the ability to use thermal mass and thermal storage for comfort and energy savings.

3. CRETE house's exterior design is focused on being a productive landscape. Between the vertical hydroponic system on the gutters and the horizontal planting beds, our hydroponic system can produce enough food to supply the users with all the vegetables they would need year-round. The system's flexibility allows for interchangeable planting. For example, types of herbs can be changed based on the quantity needed, the season, or the type of plant desired.

4. Working with professional industry partners has provided a more robust, collaborative learning environment for Washington University students. This collaboration trains the students as future leaders within the evolving field of concrete technologies.

5. The design for CRETE house was developed through a series of studio design classes over four consecutive semesters. A total number of twenty-nine graduate and nineteen undergraduate architecture students were involved, as well as three graduate and three undergraduate engineering students. The first semester was a combination of undergraduate and graduate students, the second consisted only of graduate students, and the third and fourth were both undergraduate and graduate students.

6. When the Solar Decathlon concludes, CRETE house will live on at the Tyson Research Center - further promoting Washington University's commitment to the "classroom as a laboratory" mentality for studying issues relating to the environment and sustainability.

7. Hongxi Yin (Project Investigator and Research Leader), Pablo Moyano (Project Designer Faculty), Ryan Abendroth (Project Manager Faculty) and Tim Michels (Faculty Project Engineer) are the faculty leading Team WashU.

8. The light gauge steel framed core is the central element of the project and acts as the hub of our house. This core contains all plumbing, fire supression system, major electrical connections, and houses all the interior mechanical systems in one central core area.

9. The mechanical system of the home is designed around the abilities and constraints of the concrete shell and is integrated fully into the building's central core. The system is designed to use a ground source heat pump to provide radiant heating and cooling through the concrete surfaces of CRETE house.

Principal Audience:

To raise awareness about Team WashU's involvement with the Solar Decathlon and our discovery process in building the CRETE house, our key messages will be targeted to the following audiences:

1. Students, faculty, staff and alumni of Washington University

2. Local and National industry professionals and tradespeople

3. St. Louis Media

4. National industry publications

5. St. Louis City and St. Louis County government officials

6. St. Louis City and County residents

7. National stakeholders and those interested in Solar Decathlon

Media Outreach:

Delivering these messages to our principal audiences includes a mix of traditional and social media outreach, beginning eight months prior to the actual competition in October.

This eight-month strategy was divided into a five-phase outreach roll-out:

Phase 1 – Early Outreach and Development of Social Media Channels

In April, an article and press release about the 2017 Solar Decathlon and WashU's involvement was sent to a short list of local reporters to build awareness for the project and the competition:

1. St. Louis Post-Dispatch: (Ashley Jost, Higher Education; Bryce Gray, Energy and Environment)

2. St. Louis Business Journal: (Diana Barr, Assoc. Editor)

3. KWMU/NPR affiliate: (Willis Arnold, Arts and Culture Reporter for St. Louis Public Radio)

4. KETC-TV/PBS affiliate: (Jim Kirchherr, host of locally produced show SciTech Now)

The press release was also sent to local news channels (KMOX, KTRS, KMOV, KSDK and KTVI/KPLR), as well as the major local community newspapers (West End Word, Ladue News, Town and Style).

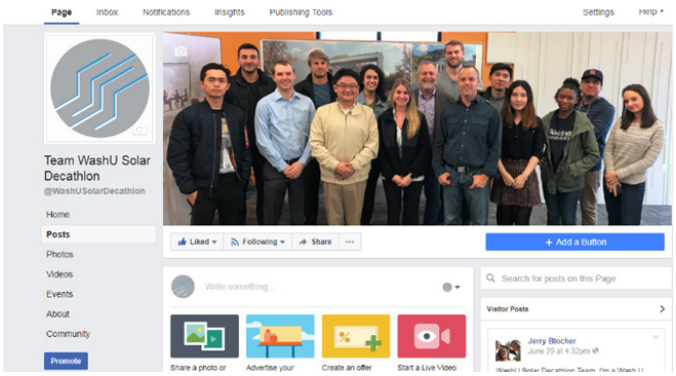
The article that was produced by the Washington University Public Affairs office to go along with the release (https://source.wustl.edu/2017/04/concrete-house/) gave a "first look" at CRETE house. It also explained the Solar Decathlon competition, the advantages and resiliency of concrete, and showed the progress made thus far by Team WashU. The article was posted on The Source (a daily publication that is emailed to 40,000 current WashU faculty, staff and students) and shared on the University's official Twitter feed (Twitter feed (23.1K) and Facebook page (59.6k). Team WashU invited communications personnel at various schools, offices and centers to share the article in their communication and social media channels.

Additionally, Team WashU has worked with the Office of Public Affairs to ensure that news about the Solar Decathlon is shared with communications personnel at specific schools, offices and centers across the university:

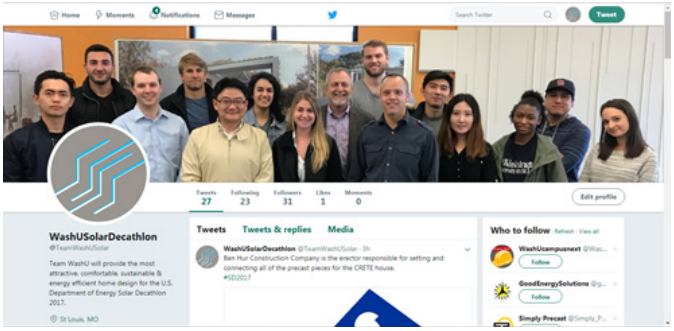
1. Sam Fox School of Design & Visual Arts (Liz Kramer & Katherine Welsch)
2. School of Engineering and Applied Sciences (Kristen Otto)
3. Olin Business School (Melody Walker)
4. Brown School of Social Work – Center for Social Development (Jill Miller)
5. School of Law (Ann Nicholson)
6. Office of Sustainability (Cheryl Waites)
7. International Center for Energy, Environment and Sustainability (InCEES) (Courtney Chazen)

In conjunction with the outreach to communications personnel, Team WashU launched their social media accounts on:

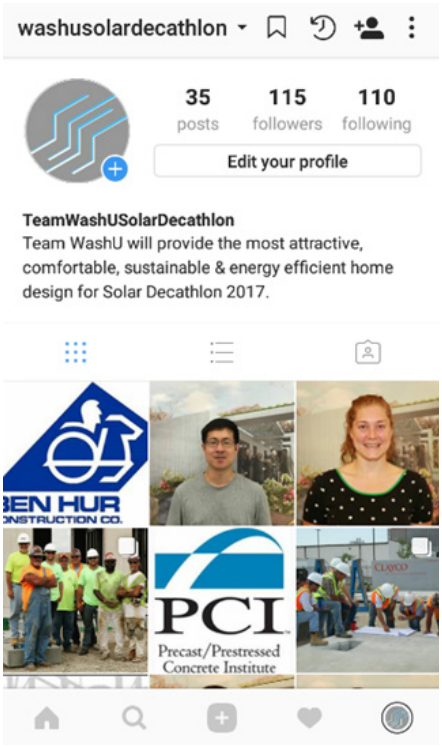
1. **Facebook:** @WashUSolarDecathlon; https://www.facebook.com/WashUSolarDecathlon/



2. **Twitter:** @TeamWashUSolar https://twitter.com/TeamWashUSolar



3. **Instagram:** @washusolardecathlon https://www.instagram.com/washusolardecathlon/



These outlets provide a means for Team WashU to raise awareness about the Solar Decathlon, engage with the St. Louis community, and Washington University faculty, alumni, and students. Our strategy was to post information on a weekly basis during the spring, and as the competition draws closer, we have enhanced that to daily updates through the summer. With each social media post, we included one or more of the following hashtags: #SD2017 #solardecathlon; and may include: #cretehouse #CRETE #precasthouse.

Additionally, we continue to host our website through Washington University at:

https://solardecathlon.wustl.edu/

WASHINGTON UNIVERSITY, SOLAR DECATHLON WEBSITE

A logo was created in tandem with the development of the social media outlets and the website. The logo highlights the gutters extending from the house, which bring water to the plants, and also shade them. This design highlights the sustainable and resilient initiatives involved in the CRETE house.

CRETE house LOGO

Phase 2 – Outreach

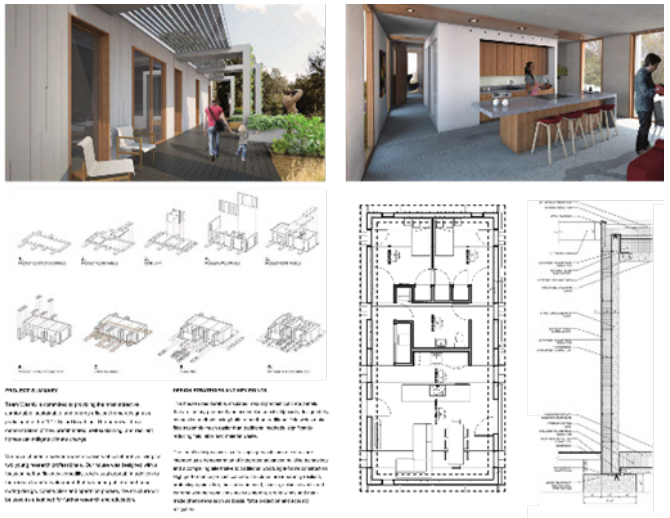
Team WashU was involved with two major university events taking place in conjunction with Earth Day and Alumni Weekend: EnviroSLAM and I-CARES (now InCEES) 10th Anniversary celebration.

On April 19, at the St. Louis Art Museum, Team WashU showcased their work at EnviroSLAM, an environment, energy, and sustainability showcase sponsored by Washington University. In front of an audience of hundreds, representatives from Team WashU – St. Louis displayed a poster about CRETE House and discussed their project with attendees.

Following EnviroSLAM, on April 22 Team WashU once again displayed and discussed their CRETE House poster at the tenth anniversary celebration of the International Center for Advanced Renewable Energy and Sustainability (I-CARES) (now InCEES) at Washington University. This event hosted up to 200 Washington University students, faculty, staff and alumni during the height of Alumni Weekend 2017.

Team WashU also prepared posters and gave presentations for two separate national conferences/meetings that are held by the Precast/Prestress Concrete Institute (PCI), one of their major sponsors in this endeavor.

The first was the Cleveland Precast Show sponsored by PCI and PCA March 2nd-4th. Students and faculty who attended visited the trade floor, educational events, and tours. They also displayed brochures and posters of their own work (see below) and answered questions regarding the project.



CRETE house BROCHURE

The second was the PCI Professors seminar at Denver May 16th-18th. This seminar was open to all professors who are developing curriculum surrounding precast concrete. Several key members of the WashU faculty team attended this seminar.

THE PRECAST SHOW, CLEVELAND, MARCH 2017

The Spring also included a ramping up of the social and alternative media campaign. This involved continuous updates of the team's website blog, news, and technical project pages. During this time Team WashU's social media strategy was to utilize content involved in the process of creating CRETE House and to leverage the existing social media accounts of the University and Solar Decathlon to bolster traffic to our Facebook, Twitter, and Instagram accounts.

THE PRECAST SHOW, CLEVELAND, MARCH 2017

Phase 3 – Daily Summer Social Media Push

While the summer months are considered down time for most students, Team WashU has been hard at work on CRETE House. We used this busy time as an opportunity to push our media presence by updating our followers on the day-to-day changes to the project. Time lapse photos, video blogs by students and instructors, and construction photos supplied much of the content needed to engage the community in the weeks leading up to the competition.

Phase 4 – House Walk Through and The Competition

On August 18th, Team WashU will hold a "sneak peak" of CRETE house for various shareholders in this process.

Team WashU will begin dismantling CRETE House in mid-September and prepare for the journey to Denver, CO. The team will continue to keep video diaries documenting their trip to Denver, and capture footage of the set-up of CRETE House, as well as the outcome of the competition.

Phase 5 – Analysis and Stats

The purpose of this communications plan is to show how successful Team WashU was in raising awareness about the Solar Decathlon. Success will be measured in the following ways:

1. Media Placements: tracking the number of media placements garnered by Team WashU about the Solar Decathlon and CRETE house
2. Consumption Metrics: monitoring how many of those media placements are viewed and downloaded
3. Shared Metrics: tracking how many of the media placements are shared, along with how many of Team WashU's social media posts are shared
4. Web Stats: monitoring how many unique visitors came to the website – solardecathlon.wustl.edu – from March to October 2017, and pinpointing which web pages received the most atraction

Post-Competition, Team WashU will gather to go over best practices, lessons learned, and what communication strategies were successful and unsuccessful.

Web Presence

In addition to our five-stage outreach strategy, Team WashU has established a website, solardecathlon.wustl.edu, which has been updated on a consistent basis. Its purpose is to provide site-visitors information pertinent to the Solar Decathlon competition.

The website will promote the competition as an effort to raise consciousness regarding energy efficiency, and educate the public on the environmental benefits of green design and innovation in energy products.

Social Media Presence

As previously mentioned, Team WashU created a Facebook, Twitter and Instagram account in the spring.

These social media outlets gave various audiences a unique insight into the creation of CRETE house, along with getting a sense of the personalities that make-up Team WashU.
The social media sites have been an avenue to share articles written about the Solar Decathlon and CRETE House, as well as any content generated by the Department of Energy. Additionally, the social media sites will be an outlet to show the progress of the project, introduce the team, and thank sponsors.

The Solar Decathlon project has created many opportunities for educational and multidisciplinary collaborations:

1. Team WashU – St. Louis has integrated the Solar Decathlon project into the course curriculum throughout all stages of the project – promoting the Solar Decathlon Competition as student-run, multifaceted project promoting the conglomeration between architecture, engineering, marketing, furniture design, and science.

2. The Sam Fox School has continuously offered sequenced design studios and seminars on clearly defined topics related to the project, such as: conceptual design, the building envelope, furniture design and landscaping.

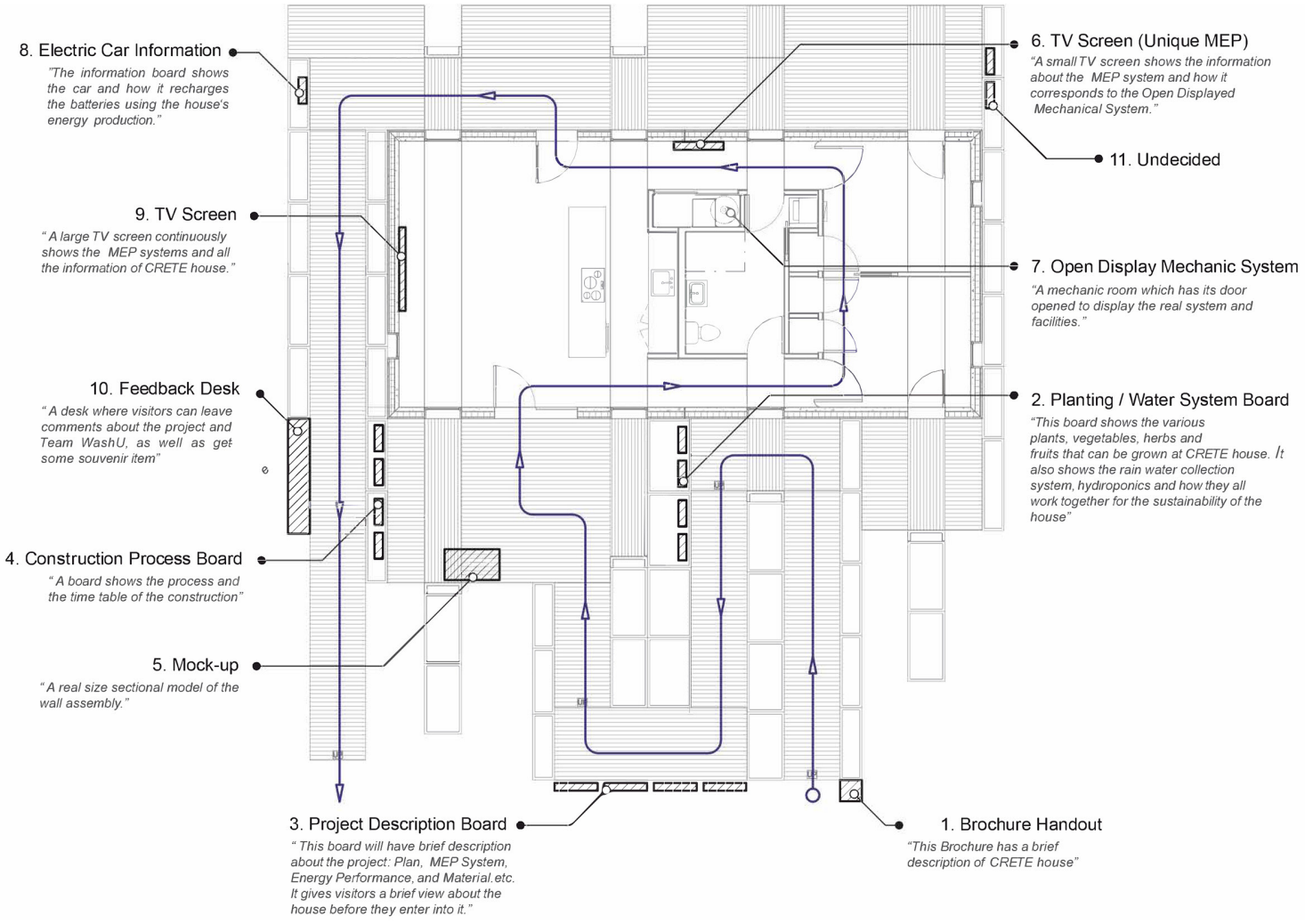
On-Site Communications

1. Team WashU will design t-shirts to wear during the build days and polo shirts for the competition days. These t-shirts provide the double benefit of a consistent look for the team, as well as providing a way to thank our many industry partners with their logos on the back of the t-shirts.

2. Comprehensive tour: The pathway integrated into the deck layout promotes the experiential outdoor elements of the house. The meandering pathway favors an individual's experience walking the winding path, rather than the efficiency of reaching the destination. The tour will contain both guided stops and signage to explain various aspects of the building. Most signage will be located outdoors and most guided stops (4 of 6) will be indoors.

3. Team WashU's strategy for accommodating big crowds and long lines: Meandering deck, shading systems, and an expansive outdoor space outside through garden area (see electronic media below).

4. On-site communications materials used to educate the public: With the creation of an app and signage, Team WashU will focus efforts on electronic media and communication, as smart phones are common with visitors to the competition site. Potential of using our project website with a /visit link to give information to visitors during any waits in line as well as using website URL's and QR codes to allow visitors to find out information about specific components are both being planned.



COMPREHENSIVE TOUR PLAN