Nearly 15 years ago, ESW was founded as a network of collegiate chapters dedicated to preparing the next generation of engineers for the challenges of building a more sustainable world. 5 years ago, we relaunched ESW as a newly independent nonprofit that recognized the desire of both students and professionals to implement hands-on sustainability projects in their communities and around the globe. In that short time, our growing membership, chapters, completed projects, corporate and nonprofit partners, and national programs reflect the partial fulfillment of this need.

But we’re not done yet.

As we plan out the next 5 years of designing, educating and uniting for a more sustainable world, our programs will be bigger, our network larger and more connected, but our commitment to our members and the world will remain the same. We will bring all of the passion, knowledge and love that engineers have for their communities and our environment face to face with some of the toughest sustainability challenges humanity is experiencing.

Whether you are an engineer or simply value how technical problem solving can help us build a society that is more resilient, just and beautiful, I invite you to join us.

Our Vision
A sustainable world supported by a network of passionate engineers.

Our Mission
To empower engineers to tackle sustainability challenges.

Our Goals
Design and implement hands-on sustainability projects across the globe. Educate students and practicing engineers on sustainability best practices. Unite people who are passionate about sustainability to create a global network.

Thank you so much for being a part of Engineers for a Sustainable World’s global community. Together, we have made huge advancements in our mission to build a more sustainable world. With our biggest Leadership Team yet at ESW-Headquarters combined with the highest ESW membership at 1,750+ members, we witnessed some impressive achievements this past year. I want to share a few of my favorites:

- Continued innovation from our members, as exemplified through our Resilient CommUnity Design Challenge winners.
- Impacted 500+ people in two communities through our newest program, Build Day.
- Raised the most funding for the Annual Conference in its 14-year history.
- Received our first grants, opening up doors to grow our programs to new heights

If you are as excited as I am about the upcoming year, I hope you will join us at our Annual Conference in El Paso, TX. As we look to expand our conference globally, our conference will focus on “Borderless Sustainability.” I look forward to meeting you in El Paso in April 2019. In the meantime, we will continue to build more sustainable communities across the world.

Brittany Bennett, Executive Director

Kyle Gracey, Board Chair

Biofuels Lab Event, CSULB

ESWcon18 at Georgia Tech (4)
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Each year, the annual conference brings together students, industry professionals, and faculty from across the country to focus on solving the world’s sustainability problems. ESWcon is hosted by a different university every year in an effort to learn more about local government, regional sustainability, and the university chapter.

This year, we hosted our 14th ESW Annual Conference at the Georgia Institute of Technology in Atlanta, GA.

For three days, 220 people engaged in conversation about the hot topic of the food-water-energy nexus. The conference theme was Building Blocks with content focused on transportation, agriculture, and more. Session tracks included food, water, energy, leadership, and professional development.

We had 21 different speakers join us from major companies such as Coca Cola and Autodesk to small, local companies like Agritecture and Environmental Entrepreneurs. We also had an increase in government related representatives with attendance from the EPA and the Resiliency Office of Atlanta. Student and professional attendees presented at 9 design reviews and showcased 17 posters. The increase in projects allowed for more discussion among chapters, leading to further inter-chapter communication.

The conference had 11 generous companies and independent donors. The increase in funding allowed us to offer exclusive events for professional and student members, speakers, and more collaborative opportunities. Our 4th annual career fair boasted 18 representatives including Berkel and Company, UPS, Covestro, Niagara Bottling and more.

Our student Design Challenge dived into the current public policy debate. Students were split into randomized teams, assigned a country, and asked to draft policy based on a given main objective and the available resources within the country. To achieve these objectives, countries had to address current issues in their country while maintaining good relations with other countries. Finally, an in-depth discussion between all countries took place, similar to a model UN, and a panel of judges from ESW’s Board of Directors, conference speakers and professional members facilitated discussion and helped select a winner.

We will be hosting our 14th annual conference this year at the University of Texas in El Paso (UTEP) and we’re expecting record numbers. Our conference theme at UTEP is “Borderless Sustainability”. Join us on April 4-9, 2019 as we discuss social and economic sustainability, international projects, and more!

for more information: eswcon.com
The team realized that dried pond algae has material properties similar to cardboard. They made two small boxes with minimal processing as a proof-of-concept for the material.

Sarah East, University of Guelph

Sarah is an engineering student at the University of Guelph, and is one of our Outstanding Members this year. Despite her extremely busy schedule, she put her heart into starting up an ESW chapter at her school, and has spent the last year and a half getting ESW’s name out, connecting with faculty, and applying for funding. She also took the initiative to begin their first project, an aquaponics project for their campus food bank. Her actions are truly exemplary of ESW’s values and goals, to bring sustainable technology to the community while giving engineering students the opportunity to apply their knowledge on impactful projects.

ESW-RIT’s Green Cardboard Project

Collecting Algae...
The team gathered algae with pitchforks from collection ponds between the hockey rink and the tennis courts. They boiled and filtered the algae to pasteurize and remove debris.

They experimented with a variety of fiber lengths and geometries. After leaving the algae out to dry for two weeks, their experiments met with mixed success, which, even so, the results matched their predictions.

...to Making Cardboard
They flattened the sheets, and using an ordinary cardboard box for reference, they laser-cut the shape of a box into two sheets, choosing the least-warped ones. The algae-cardboard was easy to engrave. After wetting the creases, they folded the sheets to make boxes.

Some of the algae samples were kept for later use, and the rest were left outside to decompose.

Kelly McGarland, CalPoly

Chapter President, Kelly and her VP, Tyler Dery, started a chapter at CalPoly at San Luis Obispo this year. Thanks to her constant commitment and positive attitude, the chapter started strong, gathering an active member base in the first two months and quickly gaining funding and support. Kelly really embodies the spirit of ESW, and we are lucky to have her as a part of our organization. That is why she was one of our outstanding member recipients at the ESW National Conference this year.

Raul Correa, UC San Diego

Raul had a busy year working to make his ESW chapter at the UC San Diego the best it can be. This year he helped implement a Research and Development program focused on organizing project ideas. The program helped add five new projects to their chapter this year, allowing more of their members to gain hands on experience in a technical setting. Additionally, the program gave members valuable leadership tools and experiences to become effective project leaders. Raul’s work has improved how his chapter approaches projects. He was awarded an Outstanding Member award for his extraordinary work.

Kelly McGarland (L), Nick Phillips (M), Raul Correa (R)

Chapter Project and Member Spotlights

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Kelly McGarland (L), Nick Phillips (M), Raul Correa (R)

UT Austin and Texas A&M’s Camping Trip

During the Fall 2017 semester, UT Austin and Texas A&M had a joint camping trip in Bastrop State Park. A total of 25 people from both chapters attended the trip. Throughout the trip, members from both chapters met each other, discussed projects and events, and shared best practices. Activities included cooking fajitas, sitting around the campfire, and hiking.

Sarah East (L), Nick Phillips (R)
Buffalo, New York

During the 2017-2018 pilot stage of the Build Day program, we completed two projects in Buffalo, New York and Oakland, California. The University of Buffalo (UB) and University of California at Berkeley (UCB) ESW chapters worked with community organizations to design and build a sustainable solution to a local problem. Both projects were able to become a reality with the support from the Awesome Foundation and Langan Engineering.

On the east coast, a team from UB partnered with the Buffalo Center. Led by project leader Austin Izzo, the team devised plans for a solar-powered garden tabletop for the center’s outdoor space. The goal was to revitalize the outdoor area while showing off the power of renewable energy. After months of design and ordering, the team was able to make their tabletop come to life, thanks to a grant through the Awesome Foundation. On a rainy day in late April, the team brought all of their supplies out to the center and constructed the solar-powered tabletop garden with a rainwater capture system and wheelchair accessible benches in a single day. This project allowed the team to become a reality with the support from the Awesome Foundation and Langan Engineering.

On the west coast, a team from UC Berkeley partnered with Hoover Elementary School, where 80% of students are on the free/reduced lunch program. Without a cost-effective solution to providing fresh food, students lacked a diet of healthy veggies and fruits. The team focused on improving the elementary school’s garden for the first Build Day project. As a part of this effort, the students made trips to the garden prior to the Build Day event to interact with the children and promote healthy eating. The Berkeley team built a large chicken coop made from wood, recycled bottles, and mud. The team also made a strawberry patch and mulch garden. The day featured an outdoor lunch in the school’s garden, as well as music and bike-powered smoothie carts. More than 300 students have been impacted since April 2018.

Build Day will not only provide underserved communities with much needed sustainable solutions, the program will also train the next generation of engineers who can tackle the toughest global sustainability challenges they will face. Moving into our second year, we plan to build more community projects that, by doing so, we will design and build more solutions, educate our communities, and unite sustainable and resilient communities worldwide.

Oakland, California

Students Stephanie Koenig, Emi Webb, Adele Therias, Halina Rachelson and Leah Karlberg are participating in ESW’s Resilient CommUnity Design Challenge (CommUnity) – an international program that unites college students to collaborate with local organizations on solutions to build local resilience.

The all-women team created the Neighbour Hub to empower community members to prepare for a major earthquake with their neighbors. The structure will not only disseminate resources, first aid, and information, but serve as a social meeting point for community members. The Neighbour Hub is designed to engage local residents in community water monitoring and in developing emergency preparedness plans.

The design features solar-powered LEDs for nighttime visibility, filtered water stations from collected rooftop rainfall, and bike generated power for users to charge their cell phones. Local artists will be invited to codeign the Neighbour Hub to reflect the ideas and cultural diversity of the community.

Neighbour Hub Concept Image

The Neighbour Lab is a multidisciplinary design and urban planning studio that aims to develop neighborhood-level resilience through civic engagement and co-creation. The studio bridges the gap between City of Vancouver initiatives and community members by developing inclusive, innovative and inspiring solutions with real world implications.

CommUnity has been run for two years and has seen the development of 15 innovative solutions to build community resilience. Through the program, Adele says that she has met “inspiring community leaders and experts who have shown me the passion, energy and collaboration needed to build resilience.”

find out more: resilience.eswglobal.org
A Year in Review

50+ Chapters
1,750+ Members
250+ Projects
13 Countries Served

Welcome, New Chapters!
University of Texas at El Paso
University of Bridgeport
CalPoly at San Luis Obispo
University of Akron

United and grew our network of students & professionals

50+ Chapters
1,750+ Members
250+ Projects
13 Countries Served

Designed solutions and educated communities through our exceptional programs

Build Day
100+ Participants
570+ Volunteer Hours

Resilient Community Design Challenge
3 Teams from 3 Countries
All Women Winning Team

Thank you for your support

Keep up with us: Facebook, Instagram, LinkedIn, Twitter

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Silver

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Silver

Equifax
Silver

Langan
Silver

Awesome Foundation
Silver

Dayaway
Bronze

Spencer Bristol Engineering
Bronze
Leadership Team

Engineers for a Sustainable World is run by a group of dedicated volunteers distributed across the United States. The Leadership Team provides support for our global chapter network and programs.
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MBA candidate, Simon Business School

Advisory Board

2017

2018