Engineering for Change

Fellowship Program

2024 Overview
Founded in 2009 by ASME and other leading engineering organizations, Engineering for Change (E4C) is a knowledge organization specialized in Engineering for Sustainable Development with a global community of over 1 million that believe engineering can change the world. E4C’s mission is to prepare, educate and activate the international engineering workforce to improve the quality of life of people and the planet. We do this by providing resources and platforms that accelerate the development of impactful solutions and ensure public health and safety around the globe.

The E4C Fellowship Program is a unique workforce development program at the intersection of engineering and sustainable development, serving to empower early-career engineers and technical professionals worldwide to solve local and global challenges. Since 2014, we have provided Fellows the opportunity to address these challenges through our growing and evolving Fellowship Program.

The Fellowship consists of three core elements: 1) our Learning Program, 2) Impact Projects, and 3) Networking. Fellows engage remotely, part-time for 5 months from May to September, building and strengthening their professional and technical skills, network and experience.

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The E4C Learning Program is designed to give Fellows the knowledge and skills necessary to become leaders in Engineering for Sustainable Development. The program includes weekly Learning Modules (see 2023 schedule below), technology assessment training, and optional workshops.

**Learning Modules (Wednesdays 10-11:30am ET)**
Fellows are trained to respond to current global challenges through a series of expert-curated Learning Modules (LMs) that expand Fellows’ knowledge of the Engineering for Sustainable Development and provide them with a set of skills to engage appropriately within the sector.

**Technology Assessment Training**
Fellows will receive training and practice in how to conduct technical assessment of products and solutions for sustainable development, in alignment with the E4C Solutions Library.

**Workshops**
Fellows can attend optional workshops throughout the Fellowship to further refine their skills on topics ranging from how to develop an interview protocol to defining design specifications.

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**Learning Modules in 2023**

- **Week 1:** Role of engineers
  - What does an engineer do? A deep dive into the role of an engineer. Explore your purpose, vision, and mission as a technical professional.

- **Week 2:** History and introduction of ESD
  - Introduction to engineering for sustainable development

- **Week 3:** Principles and standards
  - Building principles for sustainable innovation, how standards are used and which types of influence engineers can have on them.

- **Week 4:** Social, environmental & economic dimensions of projects
  - Understanding the economic in different dimensions

- **Week 5:** Tech Assessment
  - Frameworks and direct applications in the Solutions Library

- **Week 6:** HCD in academia
  - Human-centered design, innovation, and cross-cultural perspective

- **Week 7:** Science-policy-society interface: Engineers in GPI
  - Explore perspectives on engineering policy and how to access and influence

- **Week 8:** Engineering and human rights
  - Explore ethical concerns as an engineer

- **Week 9:** Active listening and Storytelling
  - Learn about active listening and storytelling, practice in the group

- **Week 10:** Climate Action
  - Experiencing the global, national, and local perspectives on climate change

- **Week 11:** Alumni Panel
  - Exploring different career pathways in ESD, networking opportunities with alumni and post-fellows

- **Week 12:** Failures in ESD and reflection on the HCD process
  - Presentation of different examples of failures and assessment based on learnings from the HCD
We identify exceptional talent to assist organizations with product design, development, or implementation.

Types of projects may include early-stage needs assessments, market research, concept generation, user testing, verification and validation, and implementation strategy development.

We match skilled researchers to investigate critical sustainability questions combining engineering and global development insights.

Types of projects may include landscape analyses, interview-based studies, and large dataset analysis.

We secure technical talent to improve organizations’ workflows so that organizations can achieve impact goals more efficiently.

Types of projects may include template development, software integration, and process strategy development.

Fellows will contribute to research or design with organizations worldwide to advance their sustainability objectives based on the project scope. Fellows check-in with their Impact Project partner bi-weekly at a minimum. To date we have completed 120 projects with organizations from academia, non-profits, private sector, and government agencies.

View past projects Fellows have supported on our Fellowship page!

Types of Impact Projects

**DESIGN FOR GOOD**

We identify exceptional talent to assist organizations with product design, development, or implementation.

Types of projects may include early-stage needs assessments, market research, concept generation, user testing, verification and validation, and implementation strategy development.

Case Study: Aerial release of seeds to support ecosystem restoration. Fellow Julian Krüger (Germany) developed a mechanical release system for seeds, which fed into a high-level plan to implement drones to restore different mangrove species.

**IMPACT RESEARCH**

We match skilled researchers to investigate critical sustainability questions combining engineering and global development insights.

Types of projects may include landscape analyses, interview-based studies, and large dataset analysis.

Case Study: Water-energy-food innovations in the Middle East. Fellow Khaoula Trigui (Tunisia) completed a landscape analysis and interview-based study resulting in a comprehensive report of opportunities and challenges in the region.

**ADVANCING WORKFLOWS**

We secure technical talent to improve organizations’ workflows so that organizations can achieve impact goals more efficiently.

Types of projects may include template development, software integration, and process strategy development.

Case Study: Improved automation of BIM workflows for retrofitting project. Fellow Valentina Ospina (Colombia) integrated building information modeling (BIM) capabilities into the organization’s workflow for retrofitting projects to improve earthquake resilience in Colombia.
During the Fellowship, Fellows have the opportunity to **network** with other passionate Fellows from around the globe as well as fellowship alumni, thought-leaders, and experts through the E4C community.

**1:1 Touch base with Managing Fellow (MF)**
Fellows meet bi-weekly with Managing Fellows for 1:1 sessions. The MFs are past Fellows who are there to help manage, train, and mentor Fellows throughout their Fellowship experience including providing project support and guidance.

**Small Group Calls**
Fellows join weekly 1-hour small group calls with their Managing Fellow and 3-4 other Fellows forming a small community of practice, supporting and equipping one another in addressing challenges and enhancing professional growth and development.

**Other Engagements**
Fellows have additional opportunities to meet with E4C’s Innovation Steering Committee, E4C Fellowship Alumni, Learning Module guest speakers, and more!

TO DATE

**270+ FELLOWSHIPS FROM 40+ COUNTRIES**

Highly Interdisciplinary

~50% Women

140+ Projects
FELLOWSHIP AT-A-GLANCE

Fellowship Structure

The Fellowship is a remote, part-time (20-25 hours/week) engagement that runs from May to September each year. This structure allows for a flexible work schedule outside of mandatory calls. Below is an example of what a typical week as a Fellow may look like while engaging in the core program elements: Learning Program, Impact Projects, and Networking.

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<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Weekend</th>
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<tbody>
<tr>
<td>Impact Project Work (4 hrs)</td>
<td></td>
<td>Learning Module (1.5 hrs) Impact Project Work (3 hrs)</td>
<td>Small Group Call (1 hr)</td>
<td>Tech Asst. (3 hrs) Impact Project Work (4 hrs)</td>
<td>Impact Project Work (8 hrs)</td>
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Program Benefits

E4C Fellows enjoy numerous benefits through the Fellowship Program including but not limited to:

- Gain practical insights and experiences to become a changemaker and leader
- Connect to a global network of experts and like-minded technical professionals
- Advance sector knowledge through weekly synchronous learning modules (30+ hours of professional development)
- Gain real world experience working on a project aligned with the UN Sustainable Development Goals (SDGs)
- Receive a stipend adjusted based on experience, qualification and cost-of-living
- Earn a digital badge certifying Fellowship achievement/completion
To Apply you will need:
- To be/become an E4C member [for free]
- Resume/CV
- Cover Letter
- Email addresses for 2 references

You will be notified by email of your application status at each stage

Apply Today!

Learn more
www.engineeringforchange.org/fellowship

Contact
fellows@engineeringforchange.org