



WORKFORCE DEVELOPMENT PLAYBOOK: **Recommendations for ACEC MOs and Member Companies**

The IARM Subcommittee, part of the ACEC New and Future Workforce Subcommittee, recommend the following:

Recommendation 1

ACEC develops branded templates of outreach materials to distribute to Member Organizations to use for their local workforce initiatives.

ACEC's support in pulling together templates and materials to be used in promoting the engineering profession will help get all MOs to a strong starting place for their local efforts and provide message consistency. Any new templates and materials should aim to:

- ▶ Appeal to different age groups of students (K-4, 5-middle, high school, post-secondary, adult/non-traditional) and other key audiences
- ▶ Include relevant narrative and compelling data (demand data, salary data) that helps inform and attract future engineering talent.
 - Consider leveraging ACEC Research Institute to help provide the relevant points of information for workforce development, such as college-going rates by state (or guidance on where to find it).
- ▶ Be available in electronic format, that can be printed and used as is, or customized when needed so MOs can include regional-specific data.
 - The Western region may want to speak to engineering supporting ocean-side infrastructure while Southern regions may want to focus on expanding the electric grid.
- ▶ Dispel myths about engineering ("Engineering is more than math.")
- ▶ Highlight the business side of consulting engineering (career potential from technical to business owners...how engineers can grow into project managers and eventually, firm leadership).
- ▶ Stress the contribution our industry makes to our communities and the environment, and that we do it in a fun, friendly, collaborative way.
 - Demonstrate all the various agencies, groups, companies that engineers coordinate with and provide a valuable service.
 - "Engineers are on the front lines of innovation and future growth."
 - "Save the world and enjoy doing it in collaboration with others!"
- ▶ Address related careers that do not require postsecondary education, such as trade schools, short-term credentials, vocational training for inspections, Cm/CI, surveying work.
- ▶ Be something that teachers/partners can retain and reuse with students each year.

Consider developing these materials on a separate website with a clear name that is easy to navigate and access (<https://www.engineering4u.org/>)

ACEC should drive MOs and volunteers to offer hands-on activities when possible, utilizing resources from DiscoverE, Engineering Tomorrow and others identified by the Engineering Workforce Consortium (EWC).

Recommended Materials to Develop

Review existing industry materials and consolidate the best examples to serve as models for a new and comprehensive set of materials. Materials should be provided for firms/volunteers to remove that barrier of engagement.

- ▶ Presentation deck(s) targeted a student audiences, with talking points that speak to that specific age group
- ▶ Handout(s) that provide general information or education roadmap of engineering careers, highlighting some of the ‘cool’ things that people in engineering and related careers (content by audience: middle/high school, parents, adult/non-traditional)
- ▶ Handout(s) that speaks to parents and teachers/counselors about what engineers do (and don’t do, it is not all math and science), job security, earning potential, engineering’s positive impact on society, and sustainability of our communities (climate change).
- ▶ Ensure outreach resources from our partner organizations (EWC) are easily accessible via a resource library.
 - Consider expanding ACEC-branded [National Engineers Week](#) materials in partnership with DiscoverE.

Recommendation #2

ACEC develops “multi-audience” video series on what civil engineers do, to help dispel myths about civil engineering and raise awareness about the profession.

Video content is a—if not the—primary medium for recruitment and marketing. ACEC’s support in developing video collateral for all MOs and firms to use outreach efforts will help raise awareness about the industry and speak to multiple audiences at once. These videos should not be longer than 3-5 minutes and should appeal to different age groups/audiences.

- ▶ Share real stories, projects and experience that highlight the industry and how civil engineers ‘change the world.’
 - “Civil Engineering impacts everything in modern society..”
 - “Engineering careers are steady and predictable when it comes to work and salary, and with strong job security.”
 - “If you want to save the world (create a sustainable and resilient world), become an engineer, and a civil or consulting engineer specifically, as we are working to create a better world every day.”
- ▶ Communicate the positive impact of the engineering profession through a challenging and meaningful career.
 - “Do you want a career that involves more than sitting at a desk performing calculations and crunching numbers on a computer every day? Become a Civil engineer, we have the opportunity to work in both the office and in the field on job sites. Yes, we work in the office, but we use some pretty cool software to perform our analysis and design tasks.”
 - Dispel the myth that you can make a lot more money in other industries...“Consider the work/life balance in your calculation of compensation.”
 - “Civil engineering may seem like the least glamorous of the engineering fields; we do some pretty cool stuff that you can point to every day, and it makes the world a better place.”

- ▶ Consider social media strategy that includes “sidewalk interviews” about the perception of civil engineering.
- ▶ Consider utilizing the structure of the Engineering Influence Podcast at ACEC national conventions/conferences to collect interviews from engineers.
- ▶ Consider modules or short “day in the life” videos by occupation; Bridge Inspection, Construction Inspection, Surveying, etc. (and, many already exist, so elevate these [examples](#) and make new ones to fill in the gaps.)
 - [Video: A Day in the Life of an ECS Geotechnical Consultant](#)
 - [Video: A day in the Life of an ECS Environmental Consultant](#)
- ▶ Non-traditional paths to the industry need targeted outreach; need realistic timeline and expectations for training required and a step-by-step on how to get started.
- ▶ **See Appendix 2** for a sample script.

Recommendation #3

ACEC partners with organizations at the National level to help establish partnerships with these organizations locally.

ACEC should take initial steps with key organizations and serve as a bridge to build those relationships locally; ACEC making that commitment nationally will help build national buy-in from these organizations, and make it clear ACEC and our firms serve as an industry resource everywhere.

- ▶ [American School Counselors Association](#) - ACEC can lead conversations with ASCA about what we (industry) can provide to teachers and counselors to help guide more students to civil engineering.
- ▶ [Project Lead The Way](#) - ACEC should become the ‘first stop’ for civil engineering for all PLTW teachers and schools.
 - This will help us understand what we need to provide teachers to help them convey the most up-to-date information about civil and consulting engineering to their students.
- ▶ [Boys and Girls Club](#) - After-school programming often focused on STEM
- ▶ ASCE Chapters, AIA, GBA, SEA, etc.
- ▶ ITE, WTS, Water and Environment (NACWA), SkillBridge
- ▶ Scouts, Girl Scouts
- ▶ YMCA
- ▶ Children’s Museum

MOs should search locally for any additional non-profit groups (as well as Youth Groups and Churches) that are specifically geared to working with schools to provide information on engineering careers to the students and counselors.

- ▶ These organizations may not have a national presence, but will often organize large groups of students to have presentations by industry professionals, and they have a much better path to the schools.
- ▶ They also may have summer camps!
- ▶ Consider state agencies or other organizations that provide workforce development support to employers, those that pair job seekers with employers, etc.

Engineering Workforce Consortium

- ▶ Guidance from ACEC on how MOs and firms should plan to utilize resources from the [Engineering Workforce Consortium](#) would help! How will ACEC communicate best practices and organizations uncovered through EWC with MOs and firms?

Recommendation #4

ACEC develops a “Workforce Playbook” for MOs, containing strategic guidance, best practices and tools for launching workforce development efforts locally.

Workforce development is a national issue, but the solution cannot be addressed at a national level; it must be a priority at the local level. **Member Organizations of ACEC must lead workforce development efforts, but need ACEC national support to do it.** Engineering firms are willing and able to get involved and speak at schools and youth organizations, however, they do not always have the time to create materials with an industry consistent message and build statewide relationships. ACEC MOs must take the lead and understand their regional workforce landscape, and provide materials needed to their members, and when possible, be the coordinator and organizer of such engagement opportunities.

Workforce Playbook Contents

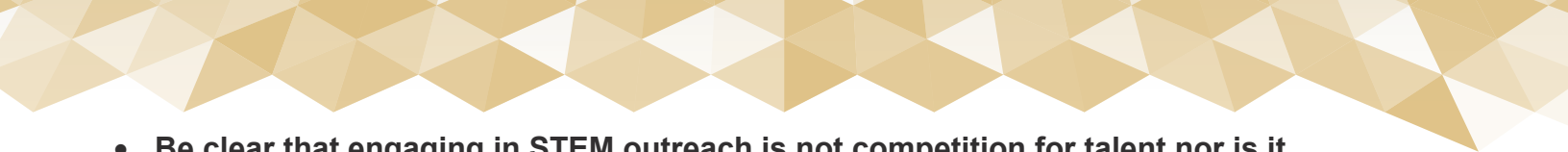
The “playbook” should serve as a guide for MOs to prioritize workforce development as a key focus and strategic pillar of their organization and therefore a priority in their member firms. MOs also may need guidance on how to conduct their own workforce development outreach programming and build relationships with key partners. The “playbook” should also include talking points on the importance of volunteerism, targeted at firm leadership. **See Appendix 1.**

- “Playbook” should specify how MOs can conduct their own outreach and marketing, highlighting suggested best practices to look for in their own regions/states.
- ACEC could identify leading MOs in workforce development to serve as a mentor to MOs that are trying to advance.
- Consider resources for firms to provide better mentoring experiences or internships, how to build and maintain a campus presence, etc.

Volunteerism

“Playbook” should address how we message the importance of volunteerism with firm leadership and how we foster volunteerism among our member firms.

- **Be clear that engaging in STEM outreach is not competition for talent nor is it guaranteed recruitment—that is not the point!**
- STEM outreach requires volunteers; the great question is always how do we foster volunteerism, which can be difficult despite knowing how important workforce development is for the future of our industry.
- Student engagement is not burdensome (even dedicating 2-4 hours per month can make a meaningful difference).
 - Consider guidance on how to build “VTO” hours into your structure or incorporate volunteering as part of annual review/ expectations or evaluation. Some firms expect their staff to be involved in an organization and volunteer 20-40 hours per year.
- Encourage firms to spotlight young people to be an ambassador for outreach efforts.

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- **Be clear that engaging in STEM outreach is not competition for talent nor is it guaranteed recruitment—that is not the point!**
 - National can provide 'high level' encouragement but MOs need to get the buy-in locally
 - Show the annual 'cost' to the owners of how the smaller workforce is impacting their bottom line. Consider research/stats that show volunteering is good for morale.
 - ACEC Indiana's [Why You Should Volunteer](#) handout is an example.

Recommendation #5

ACEC includes workforce development as priority/pillar in the next strategic plan, and encourages MOs to do so.

It is clear that workforce development requires engagement and support from all levels, and must be part of the strategic vision to have member support. The recommendations described here are only possible through active committee involvement and strategic guidance on the activities.

“The bottom line is that the states have to make workforce development a part of their strategic plan and they have to have members willing to engage. If we can’t get members willing to engage, it doesn't matter what materials we provide them, they’ll just sit on the shelf.” - Subcommittee member

