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Leadership
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BEYOND THE "E"NGAGEMENT PLAN

Contents

EXECUTIVE SUMMARY

Transportation is a multifaceted industry that has seen remarkable growth and innovation over the last ten to fifteen years; the inclusion of new professionals with varied backgrounds reflects that change and is increasingly echoed in the membership of ITE. It is also conveyed through ITE's own 2021-2023 Strategic Plan, which proposes to continue to grow and broaden its membership. The student chapters that provide a pipeline to new professional members remain disproportionately comprised of civil engineering students; however, a focus on approaching and attracting students from other major areas of study could include them in ITE's activities earlier in their respective careers. Identifying these individuals at this stage of their professional career would allow them to engage earlier with ITE as thought leaders, receive technical training provided by ITE on issues in which they have been less engaged, and build greater camaraderie and familiarity with ITE membership.

The Beyond the "E"ngagement Plan is meant to be a quick reference for ITE Student Chapters, faculty advisors, and chapter leaders to aid them in the journey to increased diversity of thought through the recruitment and retention of planners, data scientists, and other majors that can contribute to the transportation industry. Readers of this document can use the table of contents to find a particular section which will provide guidance for an area of interest, or leaders of a chapter can refer to the entire document to help set a course for their chapter's activities to grow its membership.

STUDENT CHAPTER DATA

To provide proper context for recommendations and opportunities presented later in this document, this first section provides a number of resources to convey the current status of ITE student chapters. Resources from ITE, data provided by ITE, and results from a survey presented to faculty advisors of ITE student chapters are provided in this section to express the needed elements for a mature chapter, opportunities for growth, and potential actions to pursue a cohort with a broader academic interest.

ITE Student Membership Structure

The resources currently available to ITE Student Chapters have been assessed as part of the development of this plan. Four reference documents are available at the ITE website (https://www.ite.org/membership/current-members/students/):

- Establishing an ITE Student Chapter
- Canons of Ethics
- Student Chapter Manual
- Student Chapter Advisor Manual

These documents address different potential aspects of the development of a successful student chapter at various stages. Based on this observation, an "ITE Student Chapter Maturity Model" is proposed as shown in **Figure 1** on the following page. This suggested framework is useful to illustrate the purpose of this plan – it targets chapters that already have an established structure and want to go "above and beyond" by increasing the spectrum of perspectives among its membership.

Student Chapter Level of Maturity	Tasks	ITE Resources				
		Establishing an ITE Student Chapter	Canon of Ethics	Student Chapter Manual	Student Chapter Advisor Manual	Beyond the "E" Toolkit
Minimal	**Establishing a Chapter**	X		X	X	
	Initial Paperwork	X		X	X	
	Bylaws	X		X	X	
	Ethics		X			
	Establish Core Values		X			
Basic	**Student Chapter Operations**			X	X	
	Governance (Elections, Bylaws, etc.)			X	X	
	Activities (Chapter Meetings, Field Trips, Annual Report, Public Service, Socials, etc.)			X	X	
	Officer Roles			X	X	
	Faculty Advisor Roles			X	X	
Desired	Awards and Opportunities (Dan Fambro, Best Chapter, Traffic Bowl, etc.)			X	X	
	Promotion and Recruitment			X	X	
	Career Fairs			X	X	
	Outreach to Undergraduate and Graduate Students			X	X	
Optimal	Academic Diversity of Membership					X
	Outreach to More Areas of Study					X

Figure 1 – ITE Student Chapter Maturity Model

ITE Student Chapter Membership Data

Student membership data, provided by ITE staff, indicates that ITE has 2,229 student members, of which 867 are graduate-level (39 percent) and 1,362 are undergraduate-level (61 percent).

Figure 2 – ITE Student Membership Distribution – Undergraduate vs Graduate**Figure 2** shows the detailed distribution of undergraduate vs graduate students by District. With the exception of the Southern and Great Lakes Districts, undergraduate students are the majority in all Districts across ITE.
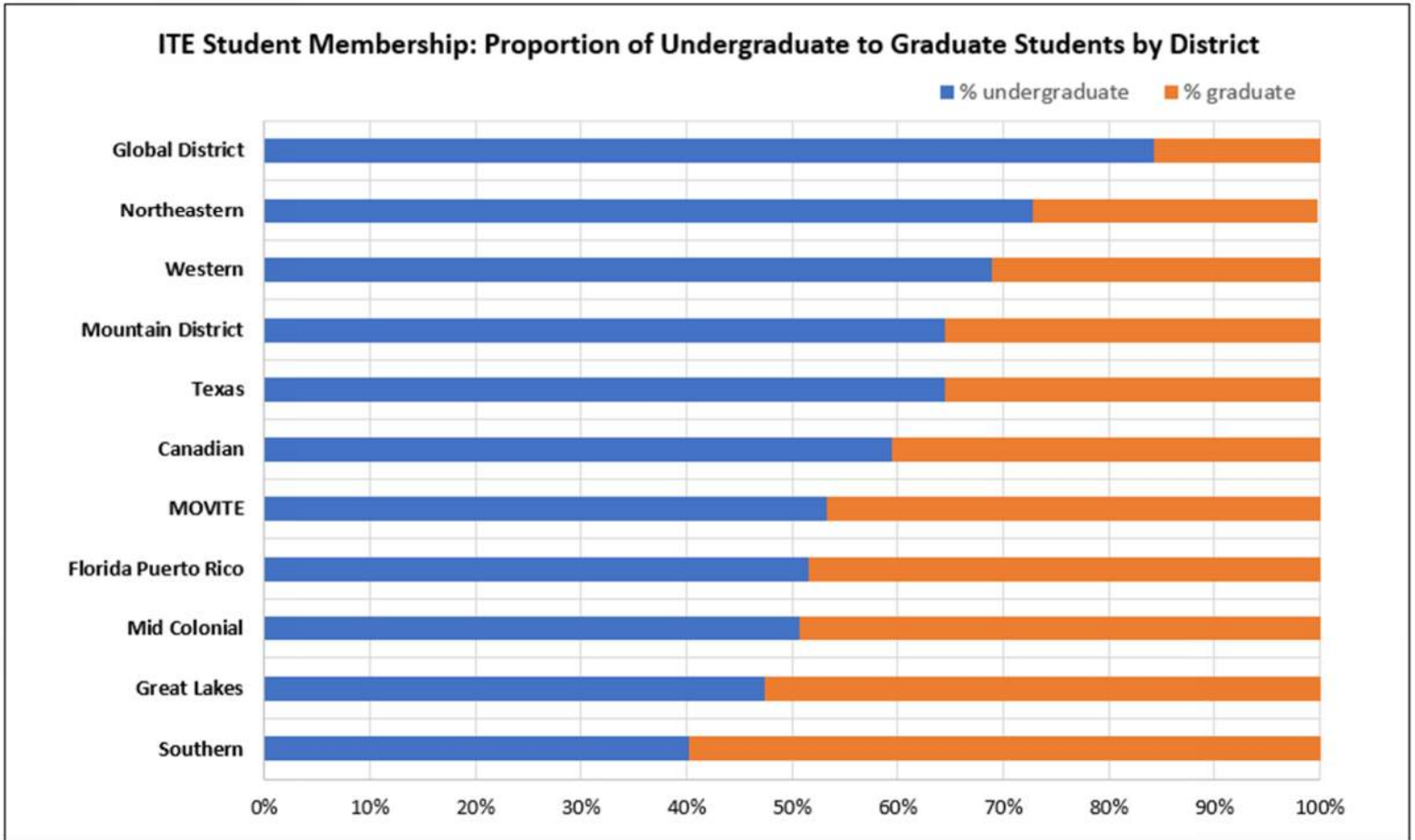

Figure 2 – ITE Student Membership Distribution – Undergraduate vs Graduate

Figure 3 shows the ITE student membership population by District.
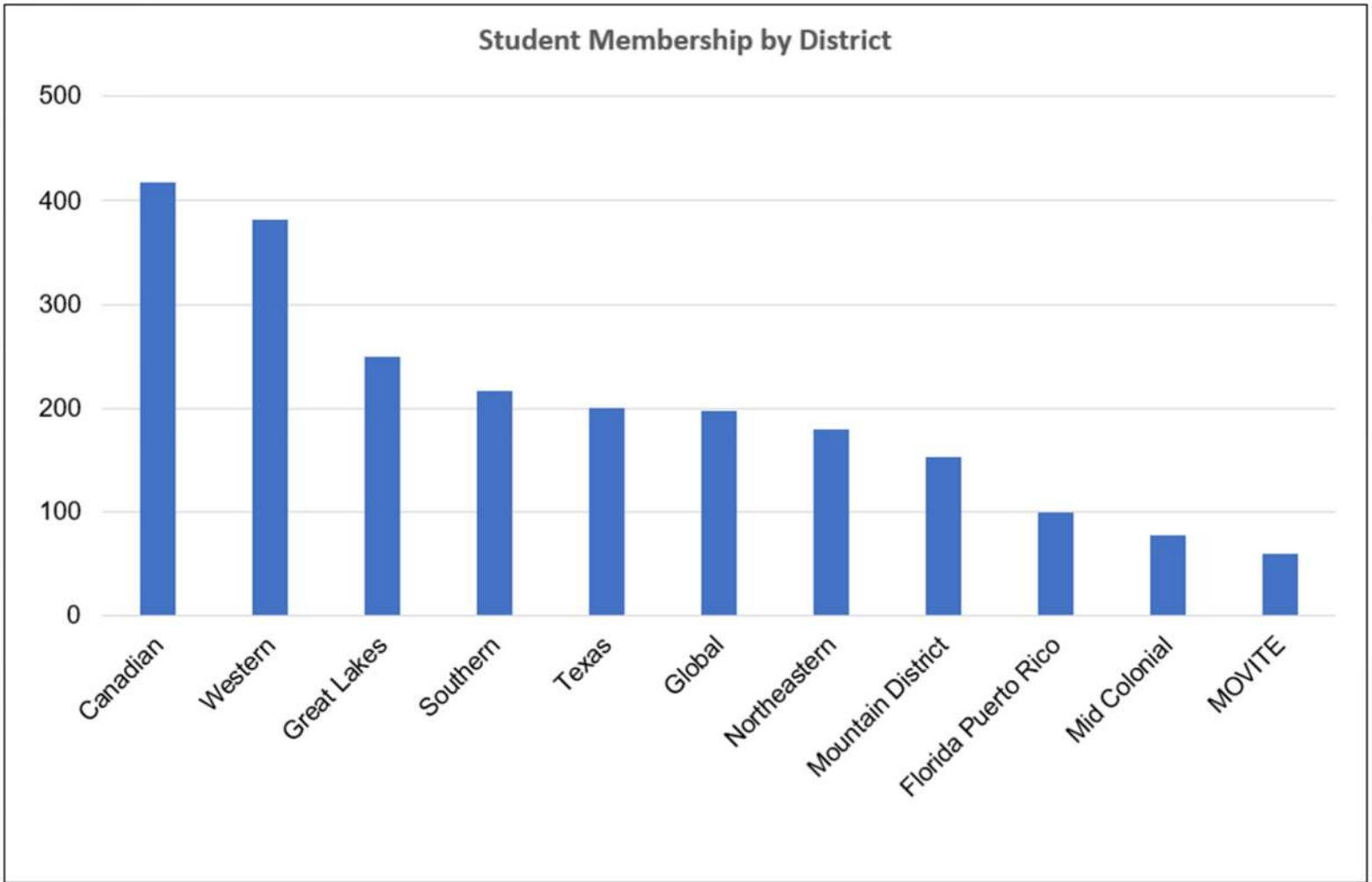

Figure 3 – ITE Student Membership – Population by District

ITE Student Chapter Survey

After reviewing data collected by ITE on student chapters, an online survey was sent to faculty advisors of the 181 active chapters. Questions in the survey were designed to assess how student chapters are performing in terms of attracting and engaging students, how interested they are in attracting students from other majors, and what kind of support they would like to have in this matter. The survey received 27 responses, which are conveyed as follows. These responses should help chapter leaders understand who they are currently engaging and who may be missing from participating in student chapters of ITE.

Question 1: Does your chapter have students from majors other than civil engineering?

Roughly half of the student chapters responding to the survey expressed a stated interest in having students from majors other than civil engineering, but they were unsure how to achieve and or pursue that goal. Only one chapter reported having active strategies to attract non-civil engineering students, and 38 percent reported having students from more areas of study but did not report having any particular strategy to attract those students. Follow-up discussions with these chapters indicated that the breadth of their membership is typically due to the structure of their academic curricula. For example, student chapters who have a strong presence of planning students reflect a larger urban planning program compared to civil engineering. These numbers in **Figure 4** show that there is a latent desire for additional resources from ITE to help student chapters to increase their membership.
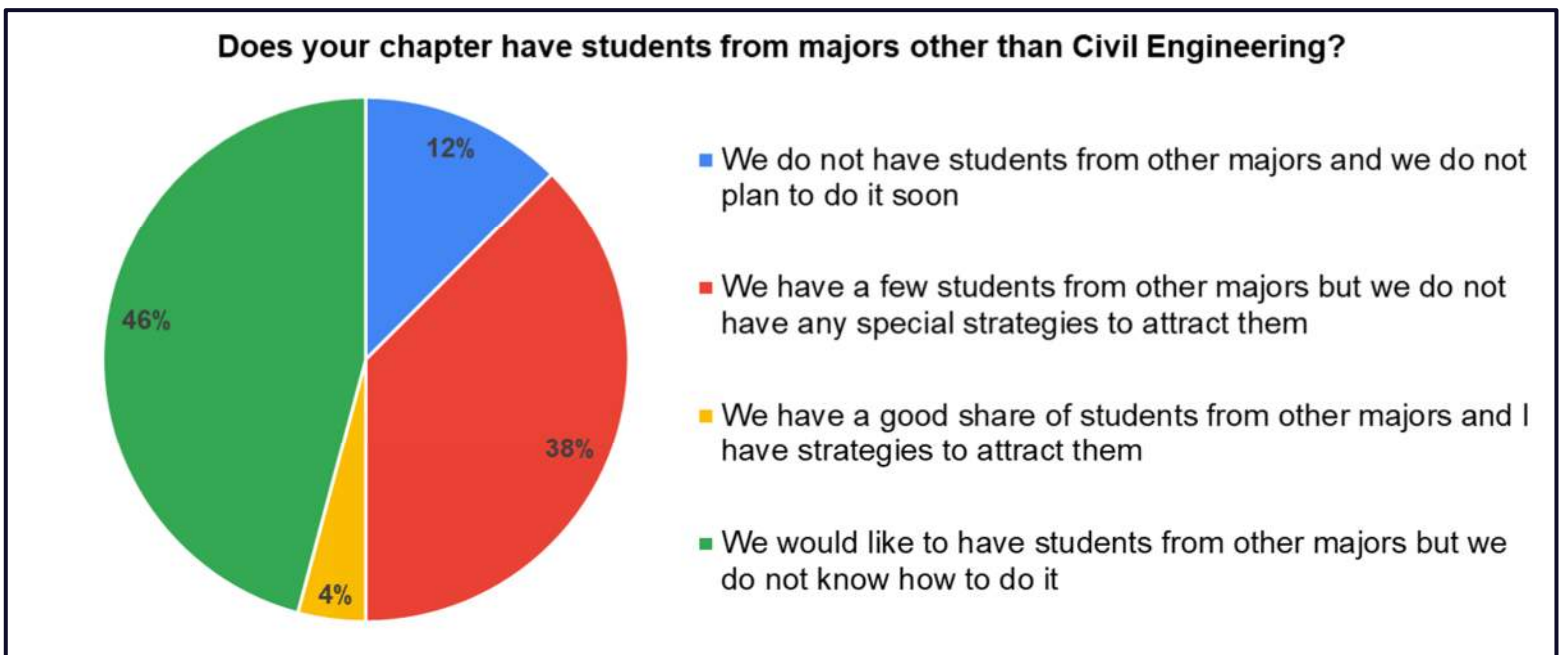

Does your chapter have students from majors other than Civil Engineering?

- 12% — We do not have students from other majors and we do not plan to do it soon
- 38% — We have a few students from other majors but we do not have any special strategies to attract them
- 4% — We have a good share of students from other majors and I have strategies to attract them
- 46% — We would like to have students from other majors but we do not know how to do it

Figure 4 – Question 1 Results

Question 2: What is the proportion of students from majors other than civil engineering in your student chapter?

This question was provided in a multiple-choice format, with four possible answers to avoid overwhelming survey participants:

- A) Less than 10 percent
- B) Between 10 percent and 30 percent
- C) Between 30 percent and 50 percent
- D) More than 50 percent

As shown in **Figure 5**, the majority (86 percent) of participants reported having less than 10 percent students from other majors, while only two respondents reported having more than 50 percent. These findings corroborate the perception that ITE student chapters are heavily dominated by civil engineering students.
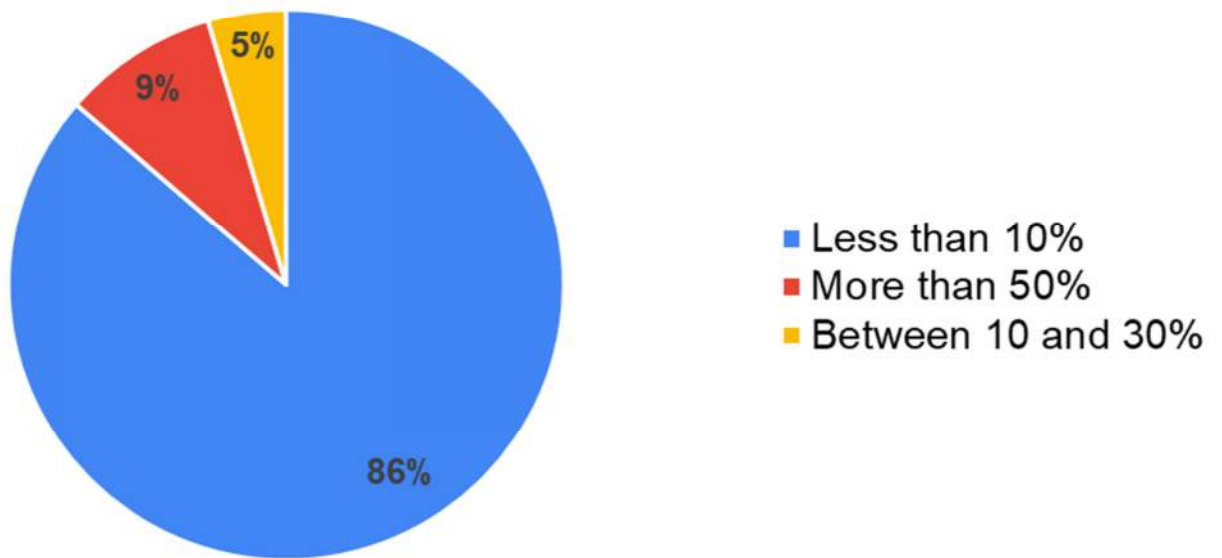

Figure 5 – Question 2 Results

Question 3: What is the proportion of undergraduate students in your student chapter?

The intent of this multiple-choice question was to determine the involvement of students at different stages of their educational careers. The available responses to this question were the same as the previous question. As shown in **Figure 6**, most chapters reported that undergraduate students make up a majority of its membership, which is consistent with the student membership data presented in the previous section.
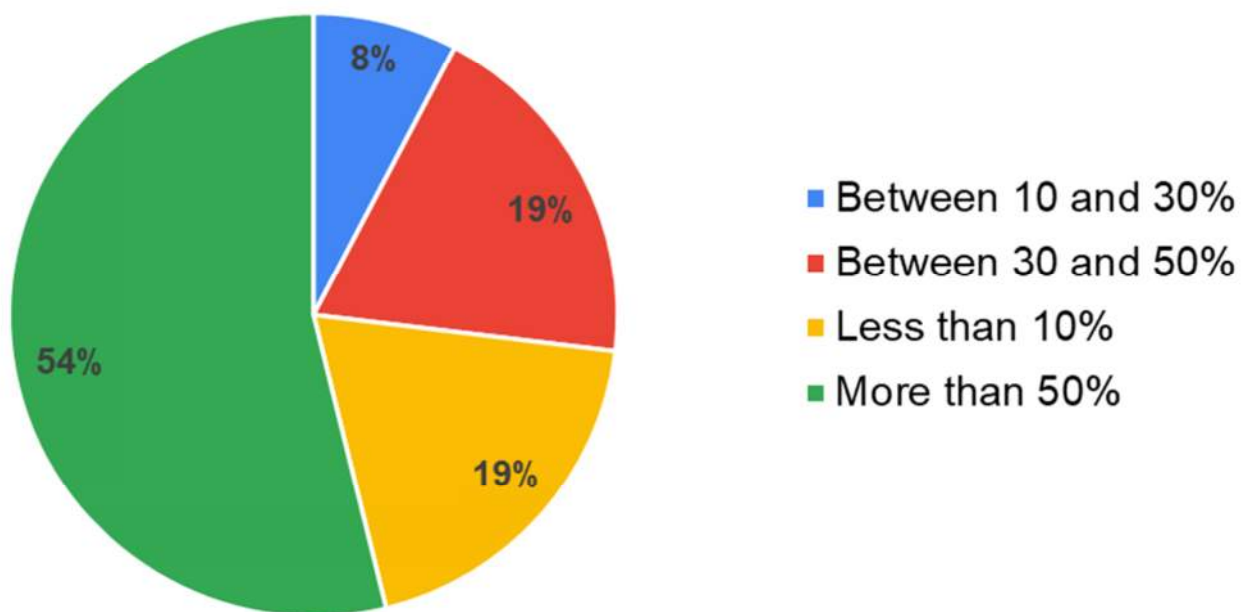

Figure 6 – Question 3 Results

Question 4: How do you recruit students for your student chapter?

This question was designed to assess common strategies used by student chapters for recruitment. Participants were able to select all strategies that applied to their organization. As shown in **Figure 7**, the most common strategy among chapters was delivering presentations about ITE in classes; a more detailed analysis of the responses also showed that this strategy is strongly correlated to a supporting faculty advisor who frequently provides students opportunities to advertise ITE events in their classes.

Another common strategy among chapters is to take advantage of events organized by their universities; the most common events included student organization fairs and orientation meetings that typically occur at the beginning of each academic year or semester.
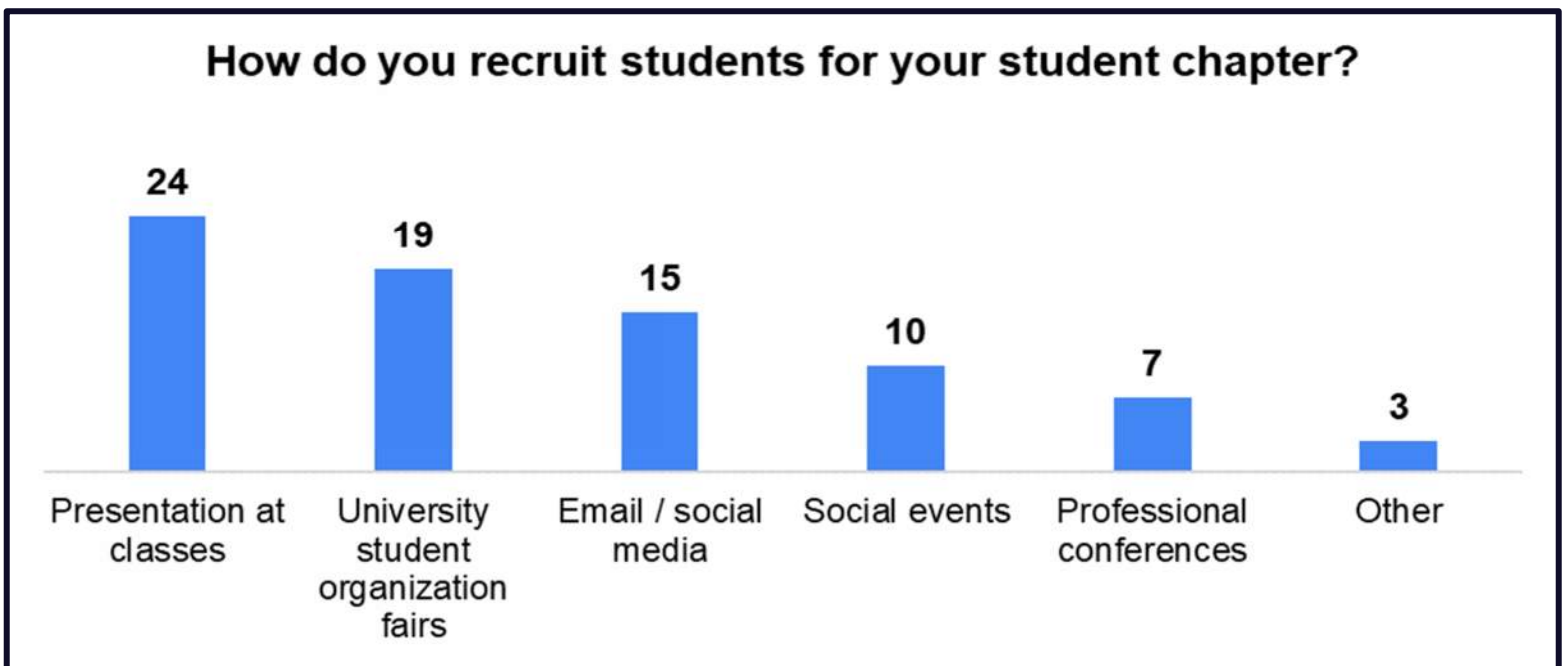

Figure 7 – Question 4 Results

Question 5: From what other areas of study apart from civil engineering does your membership come?

Again, respondents were permitted to select as many of the presented options as were applicable to their chapter. As shown in **Figure 8**, planning students are the most common major outside civil engineering, though computer and data sciences, as well as logistics students, were also represented across multiple areas of study.
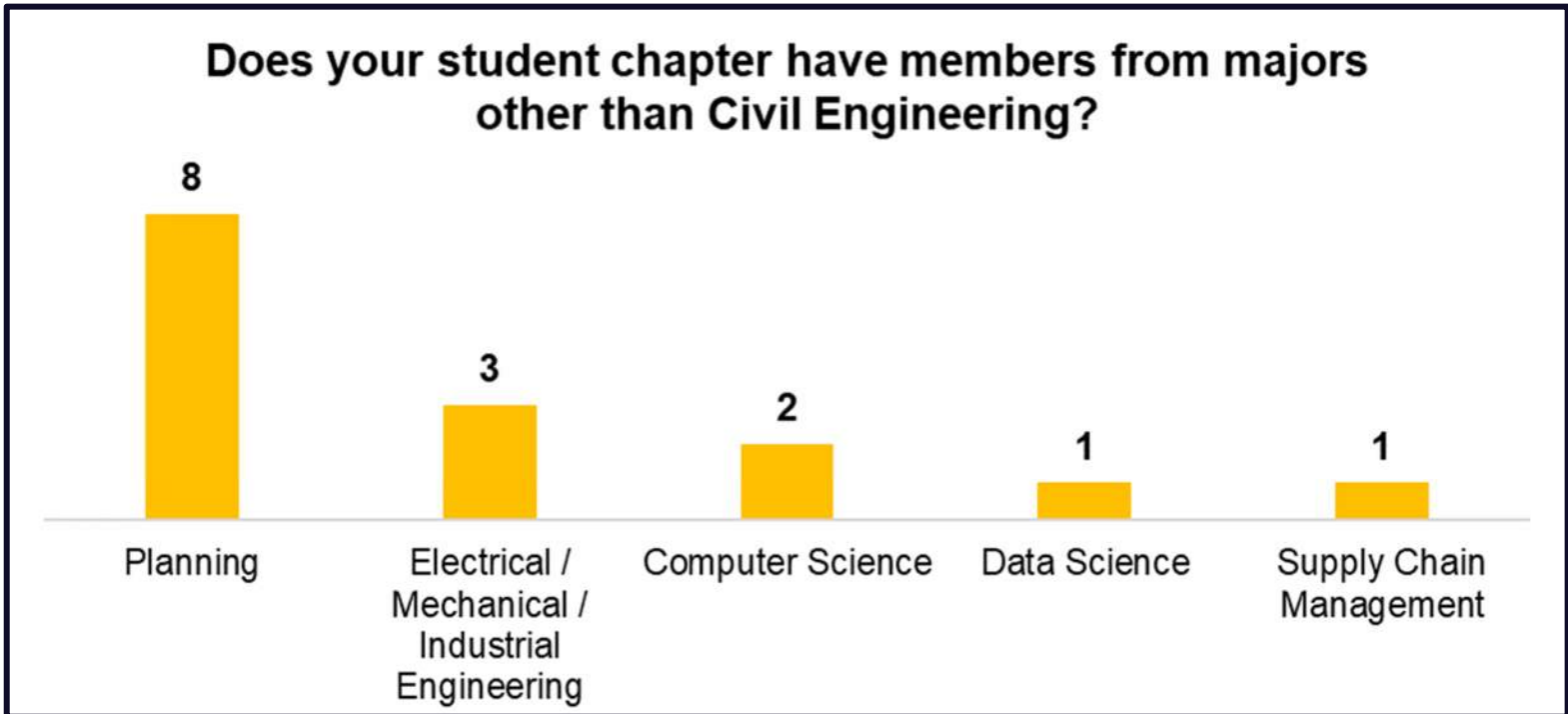

Figure 8 – Question 5 Results

Question 6: What resources can ITE provide to help you recruit students from majors other than civil engineering?

Respondents were asked to make suggestions without any prompt; those suggestions included:

- Information on activities from other chapters
- Flyers or other relevant material targeted to other majors
- Shared calendar/system for ITE student chapters to communicate with one another
- Summary on the current job prospects for people that enter transportation engineering
- Outlining benefits/value for students in joining ITE (especially non-civil engineering majors)
- Success stories of professionals who are part of ITE and not from a civil engineering background
- Guidance on how to bridge the gap with other student organizations on the same campus

- How to attract more civil engineering students first to get to "maturity"
- Multidisciplinary capstone project ideas
- Suggestions on topics that are most interesting to students
- Local ITE chapter meetings with interviews and presentations

Specifically, respondents identified that competition for membership with student chapters of the American Society of Civil Engineers (ASCE) has been difficult to overcome.

Ideas from Others

The research effort for this project also included interviewing student chapters that have demonstrated success in attracting students from multiple majors. Some identified opportunities for broadening the scope of ITE student chapter membership include:

- Faculty incentives in class to join a student chapter, such as:
    - Announcing student organization events in class
    - Collaboration with faculty in other departments
    - Request students to attend and document professional practice meetings as a class assignment
    - Bonus points for students who attend events
- The ASETTS (Advancing STEM Education Through Transportation Studies) program uses a stackable-unit framework through which students can earn digital badges (micro-credentials), which incentivizes students in participating in transportation career development activities. This badge program has been implemented at North Carolina AT&T State University, who presented their findings in an ITE webinar on March 24, 2022 ([Digital Badge Program - ASETTS](#)).
- Joint transportation student group encompassing multiple organizations – a successful case study was recently presented by the University of Massachusetts (Amherst) in an ITE webinar on April 14, 2022 ([Creating and Managing Multi-Organization Student Chapters](#)).
- Chapters that provide financial support for students to attend conferences (ITE District/Section meetings, TRB, etc.) reported a very positive increase in student engagement.
- Seminars and field trips on a wide range of transportation-related topics. Successful student chapters reported that presentations on introductory topics spark greater student interest than heavily technical presentations on a very specific transportation topic. Presentations from external companies are also found to be very successful as students have great interest in talking to potential employers.
- The University of Southern California calls themselves "Institute of Transportation Enthusiasts" and reported great success in attracting students from multiple areas of study.

KEY LEADERSHIP ROLES

This plan is intended to allow student chapters to engage students and faculty beyond traditional civil engineering and transportation engineering focuses. Previous sections have conveyed the opportunities available after a review of existing student chapters and products, as well as and ideas available to support the pursuit of a broader audience and membership for ITE chapters at universities. However, the use of those materials will require effort by leaders engaged with individual student chapters; this section provides suggestions for supportive action for people in these key roles. As is the case with other sections of this report, the list is not exhaustive, and the respective roles may be better served by another individual or organization. Efforts should be made as necessary and appropriate to make more interested or enthusiastic transportation faculty and students aware of student chapter efforts on campus.

Faculty Advisor

The faculty advisor may have the most important role with respect to coordinating efforts across academic departments and student organizations. Because student leaders, especially undergraduates, may serve for no more than one or two years and are often focused on their department and area of study, faculty advisors both are best positioned to carry forward relationships scattered across a university and to understand the opportunities available to support students across departments.

Noted in the review of existing student chapters, faculty advisors often reside within the civil engineering departments that also represent the majority of student members. The faculty advisor should be coordinating with other faculty members based on overlap in curricula between academic focuses, identifying possibilities for growth based on student interests, and providing information to the student chapter officers for engagement. Likewise, the faculty advisor should look for overlap with other student groups (or should encourage students to engage other student organization leaders) to determine if joint events can be held to both better utilize event time and create some natural cross-pollination. This would include encouraging civil engineering majors to attend and engage in events organized by other student groups. The academic departments with the most potential for overlapping interests include city and regional planning, urban planning, urban design, architecture, landscape architecture, public affairs, and environmental policy.

Chapter Professional Liaison

To more successfully integrate into the local professional community, student ITE chapters should have a professional liaison who lives and works near the university and is an alumnus of the school (or holds some other close connection to the university). Working as a link between the faculty advisor and the student officers, the professional liaison should again help identify opportunities for students to

engage. Hopefully, the professional has enough experience working and coordinating with colleagues across disciplines to understand those linkages and provide synergetic suggestions.

Additionally, the liaison provides a connection to the Section/District level and highlights technical events in the area that would be opportunities for students to further engage with the professional community they strive to join. Brown bag lunches, webinars, social outings, and professional development seminars are a few of the occasions that the liaison may be able to provide to students. The main ability for the liaison is availability, to be able to understand what the goals of the chapter are and the discussions that are on-going between the student officers and the faculty advisor, and to fill in gaps as available based on their connections and experience.

Alumni Volunteers

Alumni volunteers form a support group of sorts for the faculty advisor, student officers, and the designated chapter professional liaison. These volunteers would be officially identified through the chapter with contact information, company affiliation, and perhaps a one sentence description of the individual's role in the profession, with their company, and/or technical interests.

This group of individuals does not have any official responsibilities with the chapter but should be invited to social outings for alumni/professionals organized by the student chapter, should be consulted to generate ideas for technical speakers, and should be available to the faculty advisor and/or student officers to help connect students with specific interests or those that need help with technical questions or projects. They would fit a similar profile as the chapter professional liaison and could be adjunct faculty or instructors/lecturers filling niche gaps in the academic curriculum.

Board Members/Student Officers

The student officers will need a lot of support to provide avenues to connections and opportunities for growth. However, almost all of the work is oriented toward helping students, and the ***students will need to be the drivers of their own development.***

Student chapters typically have four to eight officers, and those officers can have very specific, minor roles. Officer responsibilities can comprise secondary tasks, including some of the communication with professionals, reminders to the faculty advisor to coordinate with other academic departments and/or research centers, and open dialogues with other student groups (such as those mentioned in the Faculty Advisor section) that could have some overlapping interests among students. These students should be focused on both a) representing the students already in the chapter and providing them with a broad range of technical programs and professional connections and b) spreading the word about their chapter of ITE and encouraging a broader membership with respect to other academic departments. With that engagement across the university, there will also be the opportunity to have liaisons from those departments within the student chapter of ITE, and for ITE student officers to participate as volunteers in other student organizations.

IMPLEMENTATION

To attract a broader range of academic backgrounds, research interests, and technical knowledge, outreach to potential students should include:

- Member Recruitment
- Member Involvement
- Member Recognition

Member Recruitment

ITE student membership is **_FREE_**. The only barriers to participation that exist are awareness of the chapter and the ability of the chapter to indicate that it would add value to an individual's long-term goals. Faculty advisors, student chapter leaders, and alumni volunteers should focus on recruiting non-traditional members throughout the year to promote member engagement and outreach to potential members in their cohorts. The following resources and strategies are available to support those efforts.

- *Short videos (Beyond the "E" video series)*
  - ITE has a library of short videos of planners and data scientists discussing their involvement in the transportation industry and ITE
  - These videos could be played during chapter meetings/events, planning/data science classes, and other related organization events (like the American Planning Association [APA])
  - These videos can also be shared via social media or through the chapter's newsletter
  - These videos can be accessed here:
- *Announcements of events/activities*
  - Request an opportunity to announce upcoming events/activities in classes with a broad set of academic areas of study
  - Collaborate with other student organizations like APA, ASCE, and American Statistical Association (ASA) to announce upcoming ITE events and provide opportunity to share their events with ITE members

Member Involvement

The new ITE members should be added to the e-mail engagement lists to inform them about ITE activities/resources and inviting them to upcoming events.

- *Technical events*
  - Smart City and/or Vision Zero events/webinars
  - Webinars/presentations from data companies (e.g., Miovision, INRIX, StreetLight Data)
  - Local planning alumni guest speakers involved with ITE
  - Local data science alumni guest speakers involved in the transportation industry
  - Co-hosting events with APA, ASA
- *Social events*
  - Holiday parties
  - Graduation parties
  - Monthly happy hours
  - Invitations to regularly scheduled ITE events
- *Professional development events*
  - ITE has free live and on-demand webinars, which could be chapter events
  - Speed networking event among students, alumni, and/or faculty across areas of study

Member Recognition

New planners and data scientist members should be encouraged to participate in events. Some ways to promote and recognize the range of backgrounds are:

- *Provide membership details at every meeting*
  - Announcing new members
  - Recognizing those members outside of civil engineering for extraordinary effort
- *Encourage new members*
  - Ask active non-civil engineering members to lead volunteer efforts
  - Request feedback/ideas from non-civil engineering members regarding activities/ events they would like to see in the future
- *Newsletters/Survey*
  - Discuss growth and range of membership in newsletters
  - Highlight active planners, data scientists, and members from other areas of study
  - Conduct annual survey of membership satisfaction (see sample survey in next section)

"E"NGAGEMENT RESOURCES

Resources developed and compiled to support efforts increases to thought diversity in ITE student chapters are included in this section. These resources include a series of brief video interviews, a standard slide deck template, and suggested presentation topics to use throughout the year. As mentioned earlier, faculty advisors, professional liaisons and alumni volunteers, and student chapter leaders can use these materials in their various efforts to attract members from a broader set of academic interests.

Beyond the "E" Video Series

The purpose of the video series is multifaceted. The primary purpose of these videos is to provide real-world stories of professionals who have found their career path aided in some way by ITE. The stories shared in these videos could resonate with students across a variety of academic interests and have the potential to increase membership for student ITE chapters. These impassioned, experienced voices will add unique perspectives to chapter discussions, providing context for those studying transportation planning, data science or other transportation adjacent majors as to why ITE might be the professional organization best suited to help them achieve long-term goals. These videos could be played before or during chapter meetings, as well as during recruiting events. They could also be attached as part of an informative email and/or shared on Instagram or other social media that each university chapter utilizes.

Slide Deck Template

The slide deck template is intended to be a jumping off point for each ITE Student Chapter. The board member who is preparing the slide deck can add individual components that personalize the standard informational slide deck provided here. This should be utilized as a dynamic resource that may be updated year to year and shared with the chapter, as well as within the Annual Report created each year for ITE International.

Suggested Presentation Topics

The following list of suggested presentation and engagement topics is not meant to be exhaustive or limiting, but instead, a clear and simple guide to those chapters who need help engaging with majors beyond civil engineering. Please note that these presentation topics may be suggested by any of the ITE student chapter leaders or faculty advisors.

- Innovations in the Transportation Industry
    - Curbside Management
    - Big Data
    - Connected and Autonomous Vehicles

- o Smart Cities
- o Activating Data for Increased Bikeability and Walkability
- Collaborative Urban Transportation Planning
    - o Planning with Intention of Equity and Inclusion
    - o Modernization of Transit
    - o Vision Zero
    - o Complete Streets
    - o Accessible Design
    - o Transportation Advocacy
    - o Access Management
    - o Curb Space Management
    - o Appropriate Measures for Sustainability, including Vehicle-Miles Traveled

Metrics Survey

Student chapter leaders should provide an annual membership survey to check on the health of the chapter and reflect on its goals for membership growth and variety. The goal of the survey should be to determine if the members are being served in a meaningful way by the activities of the chapter. If not, corrective action can be identified; if so, plans to appeal to a broader set of students can be developed. Some potential questions to consider in the survey are:

- Current academic standing
    - o Freshman/Sophomore
    - o Junior
    - o Senior
    - o Graduate student
    - o Other
- Current area of study
- Initial membership year
- Role within chapter
- Post-graduation goals
- Which events did you enjoy the most?
- Have you asked peers to join ITE?
- Suggestions for future events/collaborations
- What could ITE provide that you are missing?

Other Resources/Opportunities

"*Exploring Career Paths in Transportation: Engaging with the Grand Challenges of our Era*" is a project led by the Center of University Transportation Centers (CUTC) and may also be of value for student chapters seeking to expand thought diversity. This project work led to a one-credit course to encourage students to consider transportation as a career.

The course is designed primarily for freshmen and sophomore students from all discipline areas, at any university, both within and outside of engineering. Each week, professionals from around the country will share with the class their own experiences in the transportation industry. A wide range of topics will be covered including autonomous vehicle technology, electrification, public engagement, policy making, wildlife corridors, data analytics, and climate change. Registration to the course is open to students at any university. More information can be found at https://stride.ce.ufl.edu/stride-careers/

Figure 9 illustrates how ITE provides access to a world of ideas, people, and resources. All these resources on the ITE platform can be utilized to engage members effectively.
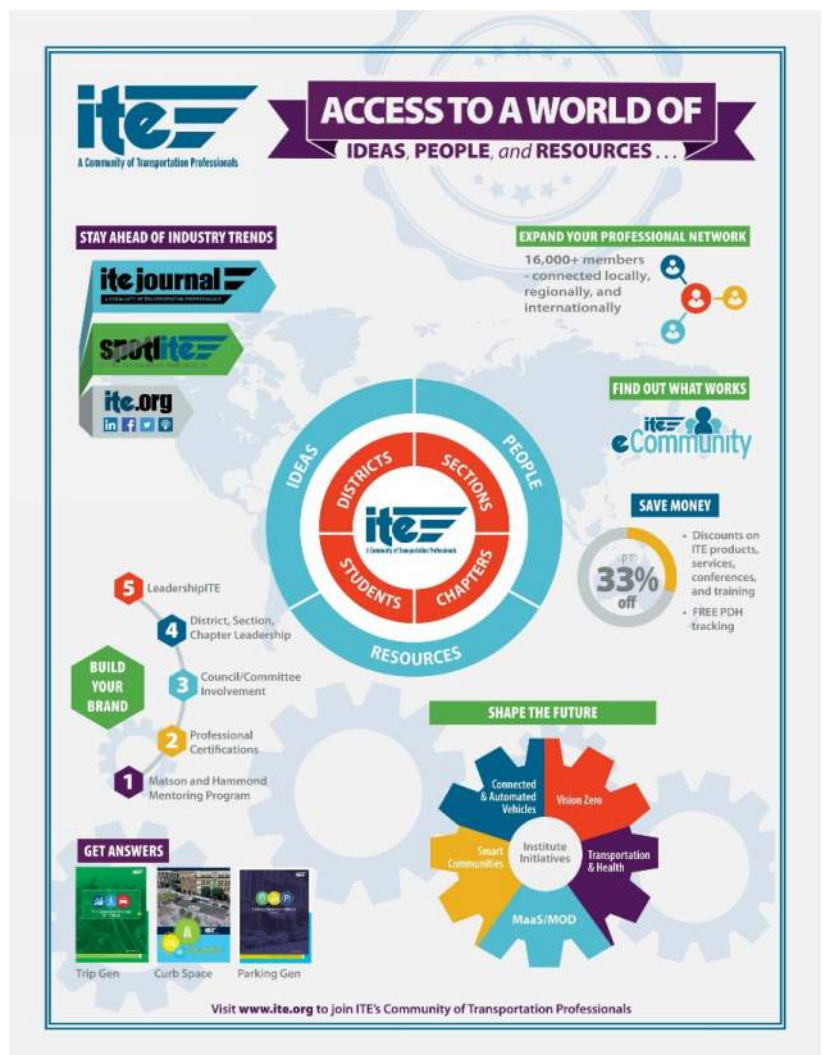

Figure 9 – ITE Resources