

Summary and report from the Transportation Electrification Council Strategy Planning Committee held June 18th, 2024

Bruno Lequesne, Chair, TEC Strategic Planning Committee
August 10, 2024

The TEC ExCom met on June 18th to discuss long range, strategy planning for the Council. The purpose was to review the Strategic Plan 2022-2025 developed in 2021, with report dated Nov. 2021, and provide the new Council with a vision as well as specific goals for the next few years: Short term (2024-2025) and medium term (up to and including 2027).

Present at meeting:

President	Dr. Don Tan
President Elect	Prof. Hulya Kirkici
Past Chair	Dr. Bruno Lequesne
VP Technical Activities	Dr. Burak Ozpineci
Secretary	Dr. Vignesh Rajamani
VP Membership	Prof. Zedong Zheng (remote)
VP Conferences	Prof. Steve Pekarek (remote)
Treasurer	Prof. Matthias Preindl (remote)

Others:

TEC Community Chair, 2015-2016	Prof. Phil Krein
Awards Committee Chair	Prof. Fei Gao
Fellows Evaluation Committee Chair	Dr. Hao Huang
Executive Director	Mr. Mike Kelly
Project Manager	Ms. Jane Celusak
Project Manager (incoming)	Ms. Laura Riello

Excused or absent:

VP Standards and Industry Engagement	Mr. Louis Gullo
VP Publications	Mr. Robert Rassa
VP Education	Prof. Eric Cheng
Chair, Women in Transportation Committee	Prof. Jennifer Bauman
Chair, Young Professional Committee	Prof. Cesar Diaz-Londono

Background

The 2021 Strategic Planning identified 3 high level goals, with a number of implementation tasks. The 3 high-level goals are listed below.

2022-2025 Goals summary

1. New status	2. New products	3. New members
New Transportation Electrification Council: Building IEEE's next massive megatrend	TEC's own conferences, publications and online media contents	Broader membership with underrepresented groups, young professionals, strong industry base, early career researchers, etc.

The first goal was the creation of a Council on Transportation Electrification. This Council was approved in November 2022 and came into existence on January 1, 2024, with 17 member societies, with an 18th expected to join later in 2024. A Constitution and By-laws were approved also in November 2022. Agreements were signed with relevant member societies to share in the financial sponsorship of the Transactions n Transportation Electrification (12.5% share), as well as the ITEC series and ESTS conferences (20% share). At the moment, 5,414 individual members of our constituent societies have opted to be participants in the Council, with a majority coming from Asia (close to 50%) and Europe (just under 20%), see Table 1 below.

The treasurer provided a report of the Council finances. We expect to break even in 2024.

Table 1: Council Participants per IEEE Region (as of June 2024)

Region	Members	Percent
R1(Northeastern US)	180	3.3%
R2 (Eastern US)	113	2.1%
R3 (Southern US)	219	4.0%
R4 (Central US)	199	3.7%
R5 (Southwestern US)	190	3.5%
R6 (Western US)	332	6.1%
R7 (Canada)	187	3.5%
R8 (Africa, Europe, Middle East)	1018	18.8%
R9 (Latin America)	346	6.4%
R10 (Asia and Pacific)	2630	48.6%

Council Overall Goals

The overall goals of the Council are:

- Be the go-to entity within and outside of IEEE on transportation matters
- Be on a path to long term sustainability (financial, products, volunteer engagement, etc)

2024-2027 Goal Summary

I. Awareness	II. Products and Services	III. Growth and Sustainability
<p><i>Awareness of TEC as go-to TE organization within IEEE, for individuals and organizations within and outside of IEEE.</i></p> <p>I.1. Identify societies and organizations outside of IEEE to engage and work with.</p>	<p>II.1 Conferences and events:</p> <ul style="list-style-type: none"> - Workshop linked to a conference, from member societies or outside organizations. - Workshop on future of TE. - Organize panels at conferences from our member societies. - Possible flagship conference (longer term, if appropriate). 	<p>III.1. Recognition for members:</p> <ul style="list-style-type: none"> - Fellow Committee. - IEEE Transportation Technologies Award sponsorship. - Write Policy Manuals for Committee and Council Awards.
<p>I.2. Member societies:</p> <ul style="list-style-type: none"> - Survey of members' AdComs. - TEC AdCom at member events. 	<p>II.2 Publications:</p> <ul style="list-style-type: none"> - Propose an Open Journal. - Electrification Magazine as major magazine on TE. 	<p>III.2. Global identity:</p> <ul style="list-style-type: none"> - Through webinars, workshops, DL program.
<p>I.3. Cooperate with member societies on specific events.</p>	<p>II.3 Education</p> <ul style="list-style-type: none"> - Grow webinars, tutorials, professional development, teaching material. - Strengthen department's committee structure. - Programs for professional development in industry. - Educational material for the trades. 	<p>III.3. Collaboration with non IEEE entities: See Goal I.1.</p>
<p>I.4. Chapter creation.</p> <ul style="list-style-type: none"> - Leverage member chapters. - DL program. 	<p>II.4. Technical committees:</p> <ul style="list-style-type: none"> - Form technical committees on technologies and applications. - Create a roadmap for their development. - Leverage application-based committees to attract members from industry. 	<p>III.4. YP and WIE (WITEC):</p> <ul style="list-style-type: none"> - Develop programs geared towards YP and women. - Partner with member societies. - Travel grants (as Council develops sufficient funds).
<p>I.5. Job board.</p>	<p>II.5. Standards</p> <ul style="list-style-type: none"> - Work with IEEE SA on gaps. 	<p>III.5. Develop formal committee structures as needed.</p>

2024-2027 Goals Details

Goal 1: Awareness

The following are identified as tactical goals to increase awareness in the Council:

I.1. Identify societies and organizations outside of IEEE which TEC could engage and work with:

- Identify such organizations our member Societies have connection with and see potential to expand on such relationships.
- Several such organizations were mentioned as possibilities: AIAA (already working relationship through the EATS conference). SAE. Transportation Research Board (TRB) and Federal Highway (they have large meetings focused on technologies). Standards bodies, internationally. Tech Policy Conferences – for example the Next Century Cities is a group representing municipalities across the US. Advanced Technology Academic Research Center (ATARC), Public-Private Partnership Conference. FAA and corresponding international groups hold conferences for emerging technologies.

I.2. Member societies:

- Survey of member societies' AdComs.

The purpose of such a survey would be to align our practical goals with TEC member societies' view of transportation electrification. It will also serve to engage them with the new Council.

- Seek to hold our AdCom governance meeting series at member society events.

I.3. Cooperate on specific events with member societies: Panels at major conferences, co-branded tutorials, webinars, etc.

I.4. Chapter creation:

- TEC should leverage the chapters of our member societies, possibly creating joint chapters.
- A Distinguished Lecturer program should be started. To lower cost, it could start as only regional (not overseas) speakers, or use recorded versions (with speaker available remotely for Q&A).

I.5. Job board: Revitalize the Job Board started under the Community umbrella.

Goal 2: Products and Growth

The items below provide a roadmap for enhancing existing products and creating potential new ones, critical to TEC's future.

II.1 Conferences and events:

- Workshop linked to a conference, either from our member society or from outside organizations (TRB, National Academies, FAA, FHA, etc): Day before, for instance.

- Workshop, by invitation only, to look at future 5/10 years from now.
- Organize panels at conferences from our member societies.
- Could cover policy issue, with for instance IEEE USA in the US.
- Could be connected to a journal or to our magazine.
- Possible flagship conference (longer term, if appropriate).

II.2 Publications:

- Propose and present a new journal
- Open Journal. Would complement our new magazine, Electrification Magazine (EM), and TTE. Would address significant growth in this area while bringing together all our member societies.
- Electrification Magazine as major magazine on transportation electrification and flagship magazine for TEC and IEEE on the subject. Strategically focus EM for broader appeal and draw advertisers to increase revenues to offset costs – goal is B/E at a minimum.

II.3 Education:

- Opportunity in growing webinars, tutorials, professional development, teaching materials.
- Education Department formal organization in committees initiated under the Community umbrella needs to be strengthened to support this growth.
- Develop programs for professional development in industry.
- Develop educational material for the trades.

II.4. Technical committees:

- Form technical committees centered on pan-IEEE technologies (e.g., batteries) and applications (e.g., automotive, aerospace, off-road, etc). Such committees would be tasked to develop TEC programs, either in collaboration with member societies or as original TEC offerings.
- Create a roadmap for the development of technical committees, starting with topics where TEC is already present (e.g., aerospace and EATS) and moving to new areas either not well addressed by IEEE, or addressed in a scattered fashion across many societies.
- Application-based committees would be naturally industry focused, and would be a tool to attract members from industry.

II.5 Standards

- Work with IEEE SA to identify gaps.

Goal 3: Growth and Sustainability

III.1. Recognition for members

- Fellow Committee started its work by formalizing policy & procedures and accepting first candidates.
- Seek TEC's sponsorship of the IEEE Transportation Technologies Award. This may be a longer term goal.
- Write Policy Manuals for Committee and Council Award, as a framework to their establishment and development.

III.2. Global identity

- Develop our brand identity via webinars, workshops, Distinguished Lecturer program.

III.3 Collaboration with non IEEE entities:

- See Goal I.1. By working with organizations outside of IEEE, TEC can increase not only its programs, but the overall image of IEEE as a leader in transportation electrification.

III.4 YP and WIE (WITEC):

- Develop programs geared towards YP and women. Note that transportation is a young industry for electrical engineers, so the Council is an opportunity to engage industry members, young and otherwise.
- Partner with member societies.
- Travel grants (as Council develops sufficient funds).

Action Items:

1. Meetings will be held with various Vice Presidents to flesh out the recommendations and goals emanating from the Strategy Planning meeting for each area.