

# U.S. Young and Emerging Professionals Program Framework

## Introduction

### History

Standards and conformity assessment play an important role in society, driving state-of-the-art safety requirements and facilitating global trade. The future of next-generation standardization lies with the young professionals today, and one way to ensure participation of young people within the International Electrotechnical Commission (IEC) is through the IEC Young Professional's (YP) Programme. The United States National Committee (USNC) has participated in the IEC YP Programme since its inception in 2010. The popularity and success of the program is reflected by a record number of new applicants year after year. The international program convenes young professionals from IEC member countries for a workshop that provides an in-depth introduction to the IEC, how it functions, and the impact of the organization. Additionally, participants join a cohort of young experts from across the world for various trainings, interactive sessions, and events, and in many cases, make life-long professional connections and friendships.

Before the formal U.S.-level Young and Emerging Professionals (YEP) Committee was created in 2016, the IEC YP nomination process was organized by the USNC Communications and Continuing Education Committee (now the USNC Communications Committee) and USNC policy committee leaders, with support from YPs from previous years. The increasing number of mentors, former IEC YPs, and those passionate about encouraging young professionals' participation in standards and conformity assessment led to the formation of the USNC YEP Committee in May 2016. Following the USNC's bilateral talks at the 2019 IEC General Meeting (GM) and affirmation at the YEP Roundtable event in November 2019, the USNC YEP Committee began laying the foundation for a national program to expand the continued participation of young and emerging professionals beyond the former representatives of the IEC YP Programme. The goals, vision, and action plan are detailed in this document, the *U.S. YEP Program Framework*, which was drafted between January-December 2020. The goal of this program is to create a platform for active engagement among all YEPs with interests in standards development and conformity assessment in the United States.

### Other National Programs

As of January 2020, 21 other National Committees have IEC YP programs:

Australia	Finland	Italy	Mexico	Russian Federation
Austria	France	Japan	New Zealand	Saudi Arabia
China	Germany	Republic of Korea	Norway	Singapore
Denmark	India	Malaysia	Poland	South Africa
				United Kingdom

Each program is structured to best meet the goals of the country. One common thread amongst the international community is the willingness to collaborate with other national YP programs who have expressed a desire to establish a national program, including the USNC YEP Committee's effort to launch the U.S. YEP Program. There is broad recognition across the IEC that national YP programs serve to make the international YP program and the IEC as a whole stronger.

### Outline of this Framework

The *U.S. YEP Program Framework* is the foundational document to outline the USNC YEP Committee's vision and goals in establishing the first national standards and conformity assessment young professional program in the U.S. This document is intended to set the foundation for this effort, detailing an action plan and activities that will evolve as the program planning effort progresses. The following sections are included:

- Definitions
- Value Proposition of the Young Professionals Program
- Identified Challenges and Potential Solutions
- Target Audiences
- Strategic Objectives
- Action Plan for the Strategic Objectives
- Gathering Feedback

### Definitions

For common understanding, definitions of commonly used acronyms and names are provided below.

- **Young Emerging Professional (YEP):** term used by the USNC to describe a young and/or emerging professional that may be young in age or is new to standards, but is not limited by age or experience.
- **Young Professional (YP):** term used at the IEC level to describe a young professional (mid-20s to 30s). Refers to participants in the IEC YP Programme. During the Programme, three IEC YP Leaders are selected to represent each global region. These Leaders represent their cohort of YPs and spend the following year on a project to further the goals of the YP Programme, typically returning to share lessons learned and assist in the next YP Programme.
- **USNC YEP Committee or YEP Committee:** a standing committee of the USNC, comprised of a group of previous IEC YPs, mentors, and others passionate about the advancement and involvement of young people in standards and conformity assessment. This group is responsible for drafting the framework for the U.S. YEP Program.
- **U.S. YEP Program or YEP Program:** the program described in this framework. The U.S. YEP Program is designed to create a community for young and emerging standards and conformity assessment professionals in the United States.
- **IEC YP Programme or YP Programme:** annual program hosted by the IEC. Each member country may send up two (three for certain NCs) YPs to the annual IEC General Meeting. If a member country is sending an IEC YP Leader from the previous year, this person does not count toward the total number of YPs that a member country may send.

## Value Proposition of the U.S. YEP Program

Participation in IEC and USNC activities is often done on a volunteer basis. The USNC YEP Committee acknowledges that some participants may need to justify their involvement to their employers and has provided tangible examples of the value of participation both for justification purposes as well as to demonstrate the value of involvement generally. Ideally, the value of participation in these activities will be so clear to participants and employers that their participation can be incorporated as a required element of the position instead of a volunteer effort.

- *Increase participation in IEC-level activities:* Participation in the U.S. YEP Program introduces participants to the processes, procedures, etiquette, and vocabulary of IEC-level participation. Participants will also gain visibility into available opportunities that suit their specific skills or interests.
- *Increase participation at USNC-level activities:* Knowledge gained through exposure to IEC-level activities will translate to USNC participation. This synergy will facilitate knowledge transfer and expertise development key to achieving the strategic initiatives of the USNC.
- *Increase participation at technical committee level:* The U.S. YEP Program will allow participants to gain insight into the level of professional and interpersonal skills necessary to participate at the technical committee level. Further, the growing network of current and past participants will serve as an invaluable resource for identifying opportunities for the application of expertise of the participants and previously unconsidered areas of interest.
- *Mentoring and succession planning:* Participation in the U.S. YEP Program will create a new generation of standards and conformity assessment participants. With a focus on promoting long-term participation and professional network development, current YEPs will develop into future leaders, who in turn are invited to mentor a new generation.
- *Enterprise impact assessment template:* Participants may reference this template as a way to communicate the value of their involvement with USNC and IEC activities. *This table is adapted from IEC Participation Benefit materials.*

<i>Value proposition</i>	<i>Describe the size of corporate investments this standard activity impacts (value/number of products, parts, materials, tooling, testing, etc. governed by this standard).</i>
<i>Detailed overview of benefits</i>	<i>Outline here specific benefits you expect to achieve through your participation in the standards and conformity assessment development process (impact on products, parts or processes).</i>
<i>Competitive environment</i>	<i>Identify positive benefits if you participate such as first mover advantage; not let competition decide alone; market intelligence, compliance, etc.</i>

<i>Relationship building</i>	<i>Describe the value your participation can achieve in terms of relationships with customers, suppliers, industry, government, etc.</i>
------------------------------	--

### Ensuring Support from Employers

One of the main challenges of recruiting YEPs to participate in the standards and conformity assessment development process is the amount of time needed to actively participate. Frequently, young and emerging professionals are unable to convince their employers that active involvement in the standards and conformity assessment development process is valuable as the benefits of the standardization process, let alone involvement in the U.S. YEP Program, may not be clear to many employers. As a result, potential YEPs are left with limited options for participation as buy-in from immediate supervisors and senior management is typically required unless the YEP is willing to volunteer their personal time (and any funding needed) to participate. It is critical for the U.S. YEP Program to make the benefits clear to senior level management in all industries to ensure successful recruitment and participation of promising YEPs, an action that will also require the support of USNC leadership and members. The following approaches for various industries can assist in clearly conveying the value of the U.S. YEP Program and participation in standards and conformity assessment as a whole:

- Academia
  - Promote active communication with students and professors/educators/researchers (hereafter, simply “professors”) via regular webinars and in-person seminars at universities; and
  - Similar to the content in the Outreach section below, get professors directly involved in the process by exploring existing programs incorporating introductory technical standards and conformity assessment education into college curriculum.
- Industrial and Governmental Organizations
  - Consider drafting a letter or organizing webinars/workshops, which clearly explain the benefits for the organization of participation in standards and conformity assessment and putting forward potential YEPs. This could help describe the ability to influence standardization in the field that directly applies to the employer via changing existing or drafting new international standards and conformity assessment, which can create a tangible benefit to the employer. Additionally, notoriety associated with consistent U.S. YEP Program participation may increase brand recognition of the organization; and
  - Develop a public list of competitor involvement in the U.S. YEP Program and in what standardization efforts those competitors are now actively involved.

### Identified Challenges and Potential Solutions

The USNC YEP Committee has identified major likely challenges and potential solutions. As the program is implemented, these challenges and solutions are likely to evolve. In particular, the USNC YEP Committee acknowledges the effects of the COVID-19 pandemic are likely to persist into 2021, and will adjust accordingly. Most notably, the USNC YEP Committee will start the implementation process with an emphasis on virtual events.

## Funding

Without adequate and consistent funding, there will not be enough resources available to fully support the U.S. YEP Program. Funding will need to be set aside for the Program to be able to achieve the overarching goal of growing a U.S.-based platform for encouraging active engagement among all YEPs with interests in standards development and conformity assessment and to provide full benefits as described in the Value Proposition section.

## Outreach – Recruiting Young and Emerging Professionals

There is significant difficulty in encouraging the participation of a diverse group of U.S. YEPs, as many have never heard of electrotechnical standards or conformity assessment, let alone the IEC YP Programme. It is crucial to set up a framework for more structured recruitment and encouragement of potential U.S. YEPs to strengthen the U.S. YEP Program and extend outreach beyond the membership of the USNC. Potential avenues for recruitment include:

- Reaching out to active USNC Technical Advisory Group (TAG) Officers for potential YEPs
- Exploration of existing programs (e.g., NIST and Rockwell Automation activities) to incorporate introductory technical standards and conformity assessment education into college curriculum
- Hosting regular webinars and in-person seminars (e.g., trade shows and universities) on the benefits of the U.S. YEP Program
- Attempting to establish local YEP chapters across the United States

Data to understand and track the participation and diversity of YEPs will be collected, including gender, race/ethnicity, number of years in standards and/or conformity assessment, industry, expertise, and other metrics. The first few years of data collection will be used to establish a baseline, and future years of data collection will be compared against the baseline to track success in meeting the goal of a diverse, representative community of YEPs in the United States. First efforts will begin with a data collection exercise for members of the YEP Committee, but could be expanded in the future.

## Accessibility of the Standards and Conformity Assessment Processes

Currently, the standards and conformity assessment development process requires a significant amount of time, travel, and funding and may not be viewed as accessible or valuable to future YEPs. A significant challenge for the U.S. YEP Program will be ensuring that the standards and conformity assessment process can be engaging and accessible for future YEPs who may come from diverse professional and cultural backgrounds without significant prior standardization experience.

Going forward, especially considering the effects of the COVID-19 global pandemic, there will be an even greater focus on digital transformation and the incorporation of remote participation technologies throughout IEC. The modernization of the tools used to work in IEC technical committees (TCs), subcommittees (SCs), and systems committees (SyCs) will be evolving to allow for more effective virtual participation options. The virtualization and improvement of collaboration tools make participation in these committees more accessible to YEPs without requiring the resources to travel to in-person meetings. This will allow new YEPs to gain experience and virtually meet other technical experts/committee members, which could lead to more resources via the U.S. YEP Program or through employer support to attend in-person meetings to further participate and network.

## Target Audiences

The efforts of the U.S. YEP Program will be targeted at recruiting individuals who may be young or new to the standards and conformity assessment community, but will not restrict participation based on either age or experience. The USNC YEP Committee has made diversity, equity, and inclusion (DEI) a core component of its mission to support a diverse standards and conformity assessment community. The USNC YEP Committee aims to leverage the effects of diversity to ensure all end-use stakeholders are represented to improve the consensus-based standards development. Given that the use of electricity and electronics has become entwined in our daily lives, the list of stakeholders that the U.S. YEP Program would like to engage with is enormous and vastly diverse. The U.S. YEP Program understands it will be near impossible to engage all potential stakeholders equitably from the very beginning of the program. Therefore, the U.S. YEP Program plans to take a three-tier approach to outreach and engagement. The first-tier target audience for outreach and engagement will include, but is not limited to the following groups:

- Organizations that are currently involved in standards and conformity assessment development but have no active members participating in the U.S. YEP Program
- ANSI members and stakeholders who were previously, but not currently, engaged

The USNC YEP Committee believes these individuals and organizations are best suited for recruitment in the early stages of the establishment of the U.S. YEP Program given their past or current involvement in the standards and conformity assessment community. The successful establishment of a new national YEP program in the U.S. will require support and engagement from the entire national standards and conformity assessment community who believe in the importance of standards development and are best-suited to engage with new or emerging stakeholders. These outreach and engagement efforts can include promotion of the U.S. YEP Program through active involvement of USNC YEP Committee members in USNC and ANSI meetings and events, advertisement on the USNC and ANSI website and newsletters, and, perhaps, publication of a U.S. YEP Program website. Following outreach and engagement efforts with organizations within the USNC, the U.S. YEP Program will engage the second-tier target audience, consisting of professional groups and organizations outside of the USNC:

- YPs in other YP-oriented groups that are not currently active in standards and conformity assessment development
- Professional societies with already well-established student and or early career networks (e.g., American Society of Mechanical Engineers (ASME), Institute of Electrical and Electronics Engineers (IEEE), American Society of Civil Engineers (ASCE), Biomedical Engineering Society (BMES), etc.)
- Early career networks that support recent additions to the work force
- College organizations that prepare students about to enter various professions

The initial outreach for the second-tier target audience may start with providing or organizing guest speakers or lecturers to attend and present at member meetings for YP groups, professional societies, early career networks, or on college campuses. The USNC YEP Committee hopes that these initial engagements will lead to partnership opportunities between these other various organizations and the U.S. YEP Program at trade shows, conferences, or other industry events where a jointly sponsored

network hour, informational session, or happy hour can expose more YEPs to opportunities within the standards and conformity assessment development community. After establishing connections between the first- and second-tier target audiences, the USNC YEP Committee hopes to begin the development of a standards and conformity assessment curriculum that would extend our reach and begin to focus on:

- Educators and interest groups (e.g., student engineering organizations) in primary, secondary, and college schools
- Trade or professional schools
- Non-technical organizations (e.g., policy makers, lawyers, supply chains, etc.)
- The general public

Outreach for these third-tier target audiences is an ongoing long-term goal. At the point in time the U.S. YEP Program decides to begin outreach and content development for this audience, it will be beneficial to engage with international partners and other IEC National Committees who may have already reported successful engagement with these audiences and can provide lessons learned and advice on our proposed efforts within the United States. The U.S. YEP Program will maintain flexibility within this tiered system and will not pass up the opportunity to engage with audiences in the higher levels if the opportunity arises. Throughout the outreach and engagement of these target audiences, the U.S. YEP Program will continue to support DEI initiatives to ensure our membership is representative of the United States' end users.

### Strategic Objectives

The strategic objectives of the U.S. YEP Program are as follows below. An action plan for each of these objectives is outlined at the end of the document.

- In the short term (1-2 years):
  - Increase outreach to a diverse group of U.S. YEPs
  - Foster connections among YEPs who are or want to become involved in standards and conformity assessment in the U.S.
  - Facilitate connections among U.S. and international YEPs
- In the medium term (2-3 years):
  - Help YEPs engage their companies in IEC activities, thereby increasing organizational visibility as well as a YEPs' visibility within the organization
  - Provide or support mentorship, professional development, training, and technical development opportunities to YEPs
- In the long term (4+ years)
  - Leverage international partnerships to build a successful regional YEP program, starting with the Americas
  - Evolve into a program that transcends IEC activities to engage ISO, ITU, and beyond

## Action Plan for the Strategic Objectives

The USNC YEP Committee has started to envision how to implement the Strategic Objectives defined above in this action plan. As is true for the entire framework, this action plan is intended as a starting point and will evolve as the implementation process continues.

### Increase Outreach to a Diverse Group of U.S. YEPs

This objective will be achieved in the short term by:

- *Developing an online presence for concise comprehensive communication (e.g., calls for volunteers, events calendars, job boards, and mentorship program connection)*
  - **Evaluation Metric:** number of volunteers who respond to bulletin postings; tracking of visitors to website via analytical tracking tools; and number of new young and emerging professional members in USNC.
- *Increasing interest in the IEC YP Programme*
  - **Evaluation Metric:** number of participants who attend USNC YEP Committee-led IEC YP Programme informational webinars; and number of applications per year.
- *Increasing YEPs' involvement in the U.S. standards and conformity assessment community*
  - **Evaluation Metric:** number of individuals who attend USNC YEP Committee-led activities; and number of individuals who attend U.S. YEP Program activities; number of U.S. participants in IEC TCs/SCs/SyCs, USNC TAGs, other USNC policy and/or standing committees, participation in mentoring activities, and leadership positions within any of these groups.
- *Increasing diversity, equity, and inclusion with YEP involvement*
  - **Evaluation Metric:** development of a framework/mechanism for collecting diversity information, including gender, race/ethnicity, expertise/discipline, industry, sector, age, number of years in standards/conformity assessment, and geographical representation.
- *Strengthening the IEC YP Programme application process through the USNC*
  - **Evaluation Metric:** Document where and when advertising for the program commences; number of places and number of times the IEC YP Programme is advertised by the U.S. YEP Program; and number of applicants' submissions traced back to U.S. YEP Program efforts.

### Foster connections among YEPs who are or want to become involved in standards and conformity assessment in the United States

This objective will be achieved in the short term by:

- *Hosting programs for YEPs to connect (e.g., webinars, in-person networking events, lectures, info-sessions).*
  - **Evaluation Metric:** number of activities hosted per year; number of participants who RSVP yes to programming; and number of participants who attend programming.
- *Providing standards and conformity assessment education for professional development.*

- **Evaluation Metric:** number of educational activities hosted per year; number of participants who RSVP yes to educational activities; and number of participants who attend educational activities.
- *Ultimately, establishing regional YEP chapters to provide increased opportunities for in-person networking, professional development, and educational training across the United States will be considered.*
  - **Evaluation Metric:** to be determined when the opportunity arises.

#### Facilitate connections among U.S. YEPs and international YPs

This objective will be achieved in the short term by:

- *Hosting and participating in internationally-focused events, including webinars and meet-and-greets, to share information and foster network-building.*
  - **Evaluation Metric:** number of activities hosted per year; number of countries represented in participation (when hosting); number of participants who RSVP yes to programming; and number of participants who attend programming.
- *The hosting of bilateral meetings for the building of international partnerships. Meetings will be targeted towards common issues, which will facilitate the sharing of lessons learned and best practices.*
  - **Evaluation Metric:** number of YEP participants in attendance at the bilateral meeting; and number of YEP contributions in agenda topics for bilateral meeting.

#### Help YEPs engage their companies in IEC activities, thereby increasing organizational visibility as well as YEPs' visibility within the organization

This objective will be achieved in the medium term by:

- *Hosting portfolio workshops directed at providing YEPs the materials that highlight benefits of standards and conformity assessment involvement for companies.*
  - **Evaluation Metric:** number of activities hosted per year; number of participants who RSVP yes to programming; number of participants who attend programming; and number of new members, per company, in USNC.
- *Involving YEPs in IEC and USNC activities, meetings, and events.*
  - **Evaluation Metric:** Number of new young and emerging professional members in USNC; and number of U.S. participants in IEC TCs/SCs/SyCs, USNC TAGs, other USNC policy and/or standing committees, leadership positions within any of these groups, representation at USNC and IEC events and meetings.

Provide or support mentorship, professional development, training, and technical development opportunities to YEPs

This objective will be achieved in the medium term by:

- *Supporting YEPs' participation in the USNC Communications Committee's mentoring program*
  - **Evaluation Metric:** appointment of a communications mentorship program liaison; number of USNC YEP Committee members committing to and attending USNC Communications Committee mentoring program activities; number of USNC YEP Committee volunteer mentors; number of USNC YEP Committee volunteer protégés; number of mentorship contact hours; and number of executed mentorship programming activities per year.
- *Developing programs to introduce new members to standards and conformity assessment and providing or facilitating ongoing technical education for all members*
  - **Evaluation Metric:** number of activities hosted per year; number of participants who RSVP yes to programming; and number of participants who attend programming.

Leverage international partnerships to build a successful regional YEP program, starting with the Americas

This objective will be achieved in the long term by:

- *Partnering with our nearest neighbors, Canada and Mexico, and hosting on-going meetings and informational sessions (via informal meet-and-greets).*
  - **Evaluation Metric:** number of 'nearest neighbors' activities hosted per year; number of countries represented in participation (when hosting); number of 'nearest neighbors' activities invited to per year; number of participants who RSVP yes to hosted, and invited, programming; and number of participants who attend programming.
- *Ultimately, extending the YEP network to the rest of the Americas to develop a regional YEP network.*
  - **Evaluation Metric:** TBD, given this is a long-term goal.

Evolve into a program that transcends IEC activities to engage ISO, ITU, and beyond

This objective will be achieved in the long term by:

- *Hosting and participating in collaborative events, including webinars and meet-and-greets, to share information and foster network-building between the three organizations*
  - **Evaluation Metric:** number of activities hosted per year; number of countries/organization represented in participation (when hosting); number of participants/organization who RSVP yes to programming; and number of participants from each organization who attend programming.

- *Ultimately, building educational opportunities such as exchange programs between countries and organizations.*
  - **Evaluation Metric:** TBD, given this is a long-term goal.