With over 30 years of experience, we are shaping the future of systems engineering

21,000+ Members and CAB Associates
130+ Corporate Members
50+ Working Groups
65 Chapters Worldwide
75 Countries with Active Members

A Better World Through a Systems Approach

www.incose.org
Inspired by Systems Engineering Vision 2025 and 2035, the Technical Leadership Institute (TLI) is committed to developing systems leaders equipped to face today’s product, enterprise, and societal complexity. A growing network of global leaders, the TLI is comprised of 122 members creating a shared journey of “learning together” in 18 countries around the world.

These are the current cohorts:

**Cohort 7: 19 Members**
Members will be inducted into full membership in July 2023 and are completing three major projects.

**Cohort 8: 22 Members**
Members have completed their second major workshop and are shaping the desired topics and experiences for their leadership journey going forward.

**Cohort 9: Nominations Open**
Nominations for Cohort 9 will close March 31, 2023. The cohort will hold its kickoff workshop June 19-23, 2023.

The sun never sets on the INCOSE TLI!

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The Professional Development Portal was created to provide value to new engineers, experienced systems engineers, contributors, and corporate officials.

For the minimum viable service (MVS) / Initial Operations Capability (IOC), the PDP was built to provide capabilities for users to conduct a competency self-assessment, browse and search the content catalog, save learning resources to a personal bookshelf, develop a learning development plan, and report completed professional development to managers.

Continuing the coordination and collaboration, the PDP Leadership Team reached across INCOSE to tie in related professional development products, services, and activities including:

- Certification Program
- Chief Information Officer (CIO) and IT Developers
- Competency Working Group
- Fellows Heuristics Team
- Internal INCOSE Professional Development Discussions
- Mentoring Program
- Systems Engineering Online Laboratory
- Technical Operations

[PDP Website]

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The Certification Program offers an internationally recognized systems engineering qualification at three levels; confirming an individual’s competency including knowledge, confirmed experience, and technical leadership. The levels are: Associate Systems Engineering Professional (ASEP), Certified Systems Engineering Professional (CSEP) and Expert Systems Engineering Professional (ESEP).

[Certification Webpage]

Stats from December 2022

- ASEP: 1,379
- CSEP: 2,216
- ESEP: 363

Candidates for ASEP and CSEP can prove their knowledge of systems engineering through multiple assessment methods, available around the world.

Online exams can be scheduled at any time and are taken through the candidate’s computer with a remote proctor watching through video.

Chapters and conferences may host exams in classrooms or meeting rooms, using printed exams.

University coursework can meet the knowledge requirement if the university has academic equivalency.
A better world through a systems approach.

People are at the center of the most complex challenges facing today's municipalities around the world. Economic development, homelessness, healthcare, racial equity, and many other issues are directly related to the people in the city. Meanwhile, technology continues to provide new resources and opportunities. Smart Cities efforts often attempt to leverage technology to solve the human challenges, however these efforts can fall short. The INCOSE Smart Cities Initiative has developed an approach to focus on the humans in the city and identify solutions to best support their needs.

We propose a human-centric model to help cities make decisions with human needs in focus. The model helps identify and classify technological and other investments with the greatest positive impact for the residents. This document proposes a new framework, a definition of a smart city, and metrics to consider for evaluating a smart city.

Realizing Relevance: Stories For Our Digital Era

Why “Everything Is a System” should be your new mantra!
Successful organizations such as ours owe their success to the involvement of our volunteers who take time away from their daily engagements and contribute to INCOSE. We are eternally thankful and commend them for their dedication. Consider becoming involved in your chapter or working group of your interest. There are both paid and volunteering opportunities available at INCOSE.

One of the opportunities recently posted received eleven submissions from seven different countries.

International Volunteer Day took place on December 5, 2022. We ran a week long social media campaign to celebrate the contribution that volunteers make to INCOSE. Below are the results of this successful campaign.

THE BEST ENGINEERS ALLOW FOR A LITTLE GIVE.

Become an INCOSE volunteer today! incose.org/volunteer

Volunteering Webpage

16,047 Impressions
730 Engagements

Volunteerism

The INCOSE Membership function, which reports to the INCOSE Secretary, includes three main functions: New Member Recruitment, Member Engagement and Retention and Lapsed Member Recapture.

In 2022, the New Member Engagement Team launched major initiatives to support member engagement and lapsed member recapture. The New Member Welcome Center program, which consists of the Welcome Center and the monthly Cafés. About 100 people per month attend the Café sessions, which include an overview of INCOSE and a featured guest speaker.

Launching a new lapsed member recapture campaign in 2022, we made use of a new tool called PropFuel, which enables dialog with member and past members. We found that about half of our lapsed members didn't know they had lapsed, and that many of them wished to rejoin. Through our campaigns in 2022, over 400 lapsed members have rejoined INCOSE.

The increased use of social media in 2022, and the dramatic increase in followers on LinkedIn and other sites, supported new member recruitment. We also offer our New Member Welcome Center cafés to new members through social media to educate non members on what INCOSE is all about.

New Membership Engagement (NMET) Webpage

INCOSE is starting a central mentoring program. A pilot mentoring program began in January 2023 and will run to June 2023; to check and collect feedback on the process, as well as initiate new or extend existing mentor/mentee relationships.

Members of the established mentoring team have designed the mentor-mentee matching process, published an INCOSE mentor-mentee matching website, recruited a starting set of mentors, and developed a position description for an Assistant Director for Mentoring. Following the six-month pilot, feedback will be incorporated, and a full central mentoring service is anticipated by the end of 2023. Project timeline:

- November 2022 - Recruit mentors
- December 2022 - Open pilot to prospective mentees
- December 2022 to May 2023 – Q pilot program
- February 1, 2023 - Send out first survey to obtain mentor and mentee feedback
- April 1, 2023 - Send out second survey to obtain mentor and mentee feedback
- June 1, 2023 - Send out final survey to obtain mentor and mentee input for revisions
- July 2023 - Present pilot results at the INCOSE Symposium
- August 2023 - Launch INCOSE mentor matching program

Mentoring Webpage

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Mentoring Webpage
The SySTEAM Initiative is founded on the belief that systems skills should be part of every student’s foundation, so that all students can have the interdisciplinary skills they need to succeed in their chosen endeavors and as global citizens.

We have continued to further our overarching mission of "improving education for all students, everywhere" through a number of our activities, including:

- Growing our international and interdisciplinary community of volunteers (currently 200+ on our email list).
- Regular community meetings and working sessions revolving around developing recommendations for integrating systems thinking and systems engineering competencies into education and training.
- Focused discussions on the incorporation of ST/SE principles into the arts and humanities, in addition to science/engineering education.
- Developing a preliminary report regarding the current state of systems thinking/systems engineering education, and SySTEAM’s recommendations for solutions to identified gaps and issues in SE education, training, and certification.

SySTEAM Webpage

The INCOSE DEI Initiative is working to bring awareness to the SE industry to achieve the following:

- Promote cognitive diversity and neurodiversity within industry and government organizations.
- Find the intersection between technology, SE, policy, etc. that will enhance systems thinking required to develop a more robust and innovative solutions in diverse industries.
- Help achieve a more diverse and inclusive workforce to solve evolving and complex problems
- Continue to raise awareness and promote cognitive and neurodiversity through papers, publications through INCOSE INSIGHT, SE Vision 2035, mission, scope, and goals through the INCOSE IW, and INCOSE IS.

Upcoming:

- Bi-weekly meetings with the members and advisory board members of DEI.

Empowering Women Leaders in Systems Engineering has been supporting the new mentor/mentee pilot program and the Diversity, Equity, Inclusion Advisory team and Associate Director, and will continue to do so in 2023. EWLSE plans to nominate one or more candidates to the next INCOSE TLI cohort.

EWLSE plans to continue to raise awareness of the EWLSE vision, mission, scope, and goals through INCOSE IS and other global events in 2023 including:

- Speaking at the “Women Advancing Systems Engineering” in Israel and at the Israel chapter meeting, both in January 2023.
- Running a workshop to create awareness about, discuss, and reflect on diversity, equity and inclusion at the INCOSE EMEA WSEC 2023 conference hosted in Seville, Spain in April, 2023.
- Featuring EWLSE 2023 as a leadership workshop the day following AOSEC 2023, in Bangalore, India. On October 14, 2023.

Source: Groves Learning Organization (groveslearning.org)
**Chapter Updates**

- **April 2023**
  - The Healthcare Working Group will be hosting the 8th Annual Systems Engineering in Healthcare Conference in Minneapolis.

- **March 2023**
  - The Information Communications Technology Working Group will be presenting at the International Wireless Communication Expo in Las Vegas.

- **February 2023**
  - The Competency Working Group has published the Systems Engineering Competency Assessment Guide.

- **January 2023**
  - The MBSE Working Group met at IW2023 and reviewed 14 recent, current, and startup projects.
  - The International Workshop 2023 took place in Torrance, California; bringing together working groups from across INCOSE.

- **December 2022**

- **November 2022**
  - The Humans Systems Integration Working Group held the HSI Worldwide Workshop 2022 with 88 participants in attendance.

- **January to December 2022**
  - The AI Systems Working Group held a series of events called the ‘AI Explorer Series’. The sessions were attended by over 500 people in 2022.

**Working Group Updates**

- **April 2023**
  - The Healthcare Working Group will be hosting the 8th Annual Systems Engineering in Healthcare Conference in Minneapolis.

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The INCOSE Foundation Board of Directors met during International Workshop 2023 with several important actions taken:

- Elected a new board member – Ty Theriot, DAU Chair of the Department of Engineering who has been working with the Foundation through the DAU Rotation program mandated by the US Congress. Ty brings the board to 11 members.
- Authorized the expansion of the SE Global Member Project. This will allow The Foundation to pursue channels to engage up to 200 members in the second phase.

Business concluded, the Board prepared to greet guests at the Wine Soiree. Well over 200 people gathered and enjoyed the wines and hors d’oeuvres filling tables. The Corporate Advisory Board has been the sponsor for the Wine Soiree every year since it began.

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**Corporate Advisory Board (CAB)**

**What is the Corporate Advisory Board?**

- The advisory board, consisting of corporate and academic members, shapes and influences the direction of INCOSE’s work in advancing the profession and practice of systems engineering.
- The CAB provides strategic guidance to technical leadership, leading to the development of systems engineering products and standards to meet their needs.
- CAB representatives bring the value of INCOSE to their organizations and promote the profession and practice of systems engineering.

**Why Join the INCOSE CAB?**

- CAB membership allows your company to guide the direction of the discipline.
- Employees can gain access to the state-of-the-art products.
- Gain better access to talent – find and hire competent, certified Systems Engineers through your INCOSE connection.
- Align with peers and fellow industry leaders, grow your global footprint, and learn about how other industry leaders are applying Systems Engineering to solve problems.

**New CAB Members since July 2022:**

- ARCFIELD
- CACI
- IVECO GROUP
- Lawrence Livermore National Laboratory
- Mahindra University
- Saudi Arabian Airlines
- Volvo

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The Future of Systems Engineering (FuSE)

2023 Key Events

1. International Workshop
2. EMEA WSEC EMEA Workshop and Conference 2023
3. International Symposium
4. AOSEC Asia Oceania Systems Engineering Conference 2023

Join the FuSE Yammer Community

FuSE Webpage

Mission

- Engage and inspire the systems community for sustaining the future of systems engineering in realizing the Systems Engineering Vision 2035.
- FuSE refines and evolves the SE Vision 2035 across competencies, research, tools & environment, practices, and applications.
- FuSE identifies critical gaps towards the vision realizations and initiates & supports relevant actions.
- FuSE fosters involvement and collaboration within and outside of INCOSE.
- FuSE educates, shares success, and expands.

4 FuSE Streams

1. The SE Vision and Roadmaps stream continuously refines, evolves, and complements the SE Vision 2035. Furthermore, we create an integrated set of roadmaps.
2. The SE Foundations stream has its basis in both theory and industrial practice. First goal is to assess the adequacy of the foundations and identify gaps to determine future directions.
3. The SE Methodologies stream guides the advancement of practices, methods, and tools for engineering systems to be fit for purpose.
4. The SE Application Extensions stream integrates social sciences and soft systems into systems engineering practice to address grand challenges.

Success Factors

- Inclusive: From an exclusive club to inclusive initiative
- Attractive: Engage members and non-members
- Implementation: The degree to which the road map is realized
- Fresh: Relevant and updated road map and context
- Close to application: Involvement of companies and domains
- Global promotion: Attractive global digital marketing
- Passion: To get the working groups proud to be part of it

FuSE at International Workshop 2023

- 26hrs worked on FuSE topics
- ~1.5 years total lifetime invested:
- >500 Active participants who joined FuSE sessions:

Inclusive: From an exclusive club to inclusive initiative

Attractive: Engage members and non-members

Implementation: The degree to which the road map is realized

Fresh: Relevant and updated road map and context

Close to application: Involvement of companies and domains

Global promotion: Attractive global digital marketing

Passion: To get the working groups proud to be part of it

International Council on Systems Engineering / A better world through a systems approach / www.incose.org
TIMELINE

LinkedIn followers reached 20,000

INCOSE Elections Opened

SEBok 10 year Anniversary

JULY 2022

SE Journal Volume 25, Issue 5

SEPTEMBER 2022

INCOSE Mentor Program Launched

Q3 2022 Members Newsletter published

OCTOBER 2022

SE Student Career Fair

NOVEMBER 2022

Human Systems Integration Workshop

DECEMBER 2022

Q4 2022 Members Newsletter published

JANUARY 2023

Professional Development Portal Launched

FEBRUARY 2023

Systems Engineering Competency Assessment Guide Launched

INCOSE Mentor Program Launched

MARZ 2023

Calling All Systems Launch

APRIL 2023

Natural Systems Primer Launch

MAY 2023

INCOSE Member Newsletter published

JUNE 2023

Professional Development Portal Launched

JULY 2023

Professional Development Portal Launched

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