International Council on Systems Engineering

A better world through a systems approach

The Value of INCOSE

incose.org

What *is* INCOSE?

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization that promotes international collaboration in systems engineering practice, education, and research.

INCOSE is the *largest* global systems engineering network!

Mission and Vision

VISION: To unite and advance the global systems community

MISSION: INCOSE fosters systems engineering knowledge exchange, application, education, and research. We are dedicated to being the world's trusted authority and forum for the practice, science, and art of systems engineering.

Four Strategic Objectives

Advance systems engineering as the world's trusted authority

Expand the systems engineering community while growing INCOSE

Foster professional development and systems engineering competencies

Achieve operational excellence

Membership Benefits

A global network of colleagues who understand systems engineering

Certification Opportunities

Access to e-Publications, *INSIGHT* and *Journal of Systems Engineering*

Electronic version of the Systems Engineering Handbook

Collaborate with experts and practitioners **worldwide**

Exclusive access to virtual collaborative space for INCOSE **m**embers only

Member discounted registration to the International Workshop and International Symposium.

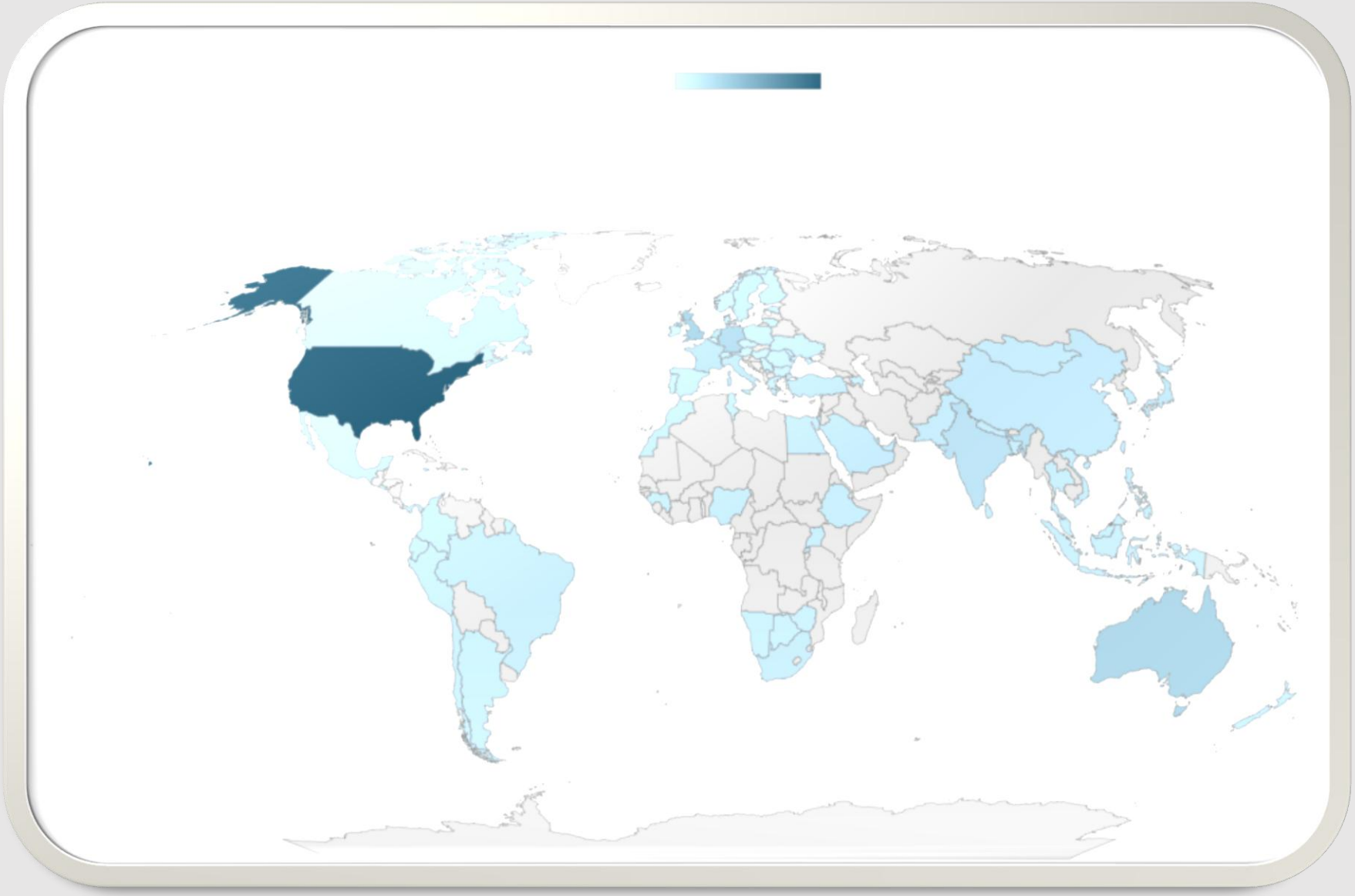
Access to a range of systems engineering technical products, resources and training.

Members by Country

Argentina 7
Australia 1189
Austria 48
Azerbaijan 2
Bahrain 2
Bangladesh 1
Belgium 19
Botswana 1
Brazil 109
Bulgaria 1
Canada 328
Chile 4
China 117
Chinese Taipei 4
Colombia 11
Czech Republic 2
Denmark 108
Ecuador 3
Egypt 12
El Salvador 1
Estonia 2
Ethiopia 1
Fiji 1
Finland 21
France 602
French Guiana 1
French Polynesia 1
Germany 1200
Greece 6
Guinea 1
Hong Kong 2
Hungary 7
India 421
Indonesia 12
Ireland 10
Israel 36
Italy 420
Jamaica 1
Japan 163
Republic of Korea 23
Lithuania 10
Luxembourg 6
Macao 1
Malaysia 5
Mexico 16
Moldova 1
Mongolia 2
Morocco 1
Namibia 1
Nepal 1
Netherlands 488
New Zealand 59
Nigeria 3
Norway 38
Pakistan 10
Panama 1
Peru 5
Philippines 7
Poland 26
Portugal 8
Puerto Rico 4
Qatar 2
Romania 10
Rwanda 2
Saudia Arabia 45
Serbia 2
Singapore 65
South Africa 173
Spain 107
Sri Lanka 3
Sweden 237
Switzerland 111
Thailand 9
Trinidad and Tobago 1
Tunisia 1
Turkey 180
Ukraine 2
United Arab Emirates 21
United Kingdom 1670
United States 6779
Vietnam 4
Unspecified 127

*as of Sept 2025

Members by Country



73 Established and Emerging Chapters Worldwide

Chapters play an essential role in the achievement of INCOSE's goals and objectives:

- Organizing professional and social programs
- Attracting new members from industry, government, and academia
- Supporting technical activities striving to advance the state and art of systems engineering
- Showcasing INCOSE as the international authoritative body on systems engineering

Learn more!

Working Groups

A small sample of INCOSE's 50+ Working Group domains include:

- Space Systems
- Systems Security Engineering
- Decision Analysis
- Systems and Software Interface
- Artificial Intelligence
- Model-Based Systems Engineering
- Embedding SE into Organizations
- Transportation
- Human Systems Integration
- Materials in Systems Engineering
- Product Line Engineering (PLE)
- Risk Management
- Sustainability
- Systems Safety

Learn more!

Working groups are the resource practitioners need

Discuss, collaborate, share in person, and online with a wide diversity of domain experts

Create products to advance the state, art, and practice of systems engineering

Help develop and review international standards

Bring value to other INCOSE stakeholders in your interest area

WGs run events, workshops, panels and much more

TLI and Mentoring

The Technical Leadership Institute (TLI) is a global network of INCOSE members committed to improving technical leadership skills to better address the complex sociotechnical challenges of the twenty-first century. TLI members come from a wide range of countries.

INCOSE Mentoring Service facilitates the pairing between mentors and mentees by taking information from INCOSE members interested in mentoring and those seeking a mentor.

INCOSE Certification

The Systems Engineering Professional (SEP) Certification Program offers internationally recognized systems engineering qualification at three levels, confirming an individual's competency through demonstrated knowledge, education, and experience.

For people at the beginning of their career as a systems engineer. The ASEP has "book knowledge" but not yet significant experience as a systems engineer.

For practicing systems engineers with more than five years of systems engineering professional work experience.

For systems engineering leaders with recognized systems accomplishments and who have many years of systems engineering professional work experience.

INCOSE Certification

5,801*

Current Active Certifications

222

2,852

2,727

*As of Sep 2025

Click each icon to learn more!

Resources

SEBoK
GUIDE TO THE SYSTEMS ENGINEERING BODY OF KNOWLEDGE

PDP
PROFESSIONAL DEVELOPMENT PORTAL

INCOSE VIRTUAL COMMUNITY

SETDB
SYSTEMS ENGINEERING TOOLS DATABASE

INCOSE Systems Engineering HANDBOOK

Collaboration Platform

Mentoring

INCOSE Library

INCOSE SE Laboratory

TECHNICAL LEADERSHIP INCOSE INSTITUTE

SE Lab

A computing environment where INCOSE members can use real, full versions of systems engineering tools for non-commercial INCOSE purposes, for learning, and for INCOSE projects, at no cost to the member or to INCOSE.

There are currently 31 vendor-support tools and 4 open-access tools in the INCOSE SE Laboratory

Career Resources and Virtual Job Fair

Career Center: where job seekers can find their next career move and employers can post listings for their open positions.

Career Compass: a one-stop shop for members to learn how to leverage their INCOSE membership to advance their career

Virtual Career Fair: an INCOSE-exclusive event where employers and job-seekers can connect 1:1 to make their next career move (next fair: Spring 2026)

Conferences and Events

International Symposium 2026

International Workshop 2026

Numerous virtual and regional events worldwide

INCOSE EMEA Sector
EMEASEC 2026
Europe, Middle East, Africa
31 Aug - 2 Sep 2026
Linköping, Sweden

INCOSE Asia-Oceania Sector
AOSEC 2025
Asia Oceania Systems Engineering Conference
27 - 30 October 2025
Singapore

INCOSE WEBINAR

Learn more!

INCOSE International Workshop

Attendees spend four days engaging in working sessions, contributing their knowledge to advance the discipline. This workshop enables systems engineers from diverse backgrounds and experience levels to share their expertise, collaborate with global experts, and contribute to shaping the future of systems engineering.

INCOSE International Symposium (IS)

The Symposium is the premier international forum where practitioners, researchers, and educators share their insights, experiences, and innovations, furthering the practice of systems engineering. The symposium has occurred every year since 1991 and is the largest annual gathering of the systems engineering community.

IS 2026

Learn more!

🗓️ 13 – 18 June 2026
📍 The Pacifico Yokohama in Yokohama, Japan

Beyond Digital Engineering: Seeking WA in SE

The 2026 Symposium will center on harmonizing emerging technologies with the irreplaceable power of human creativity and Kansei (sensibility), all guided by Wa, the Japanese concept of harmony.

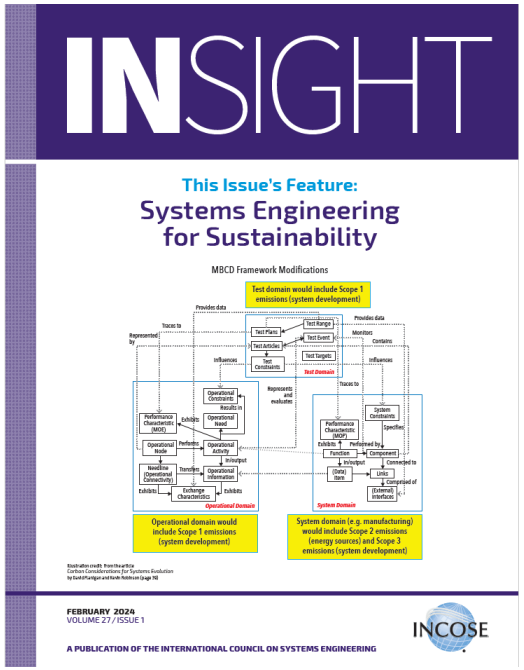
Submissions due
2 January 2026!

Publications

Click the images to learn more!

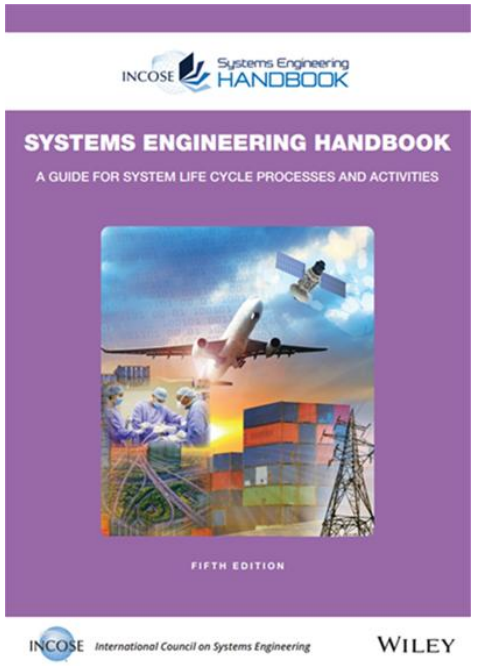
Systems Engineering Journal

An international scholarly journal and a primary source of multidisciplinary information for the systems engineering and management of products and services, and processes of all types.



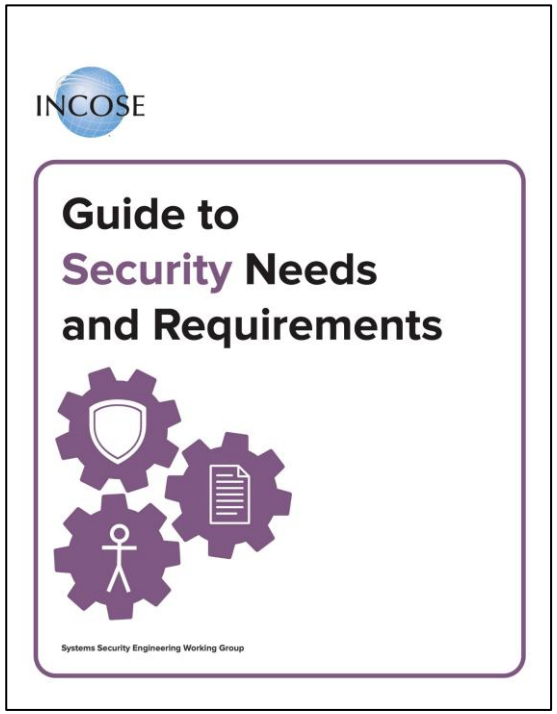
INSIGHT

The SE practitioner's magazine, containing informative articles on the state of the art and practice.



Systems Engineering Handbook

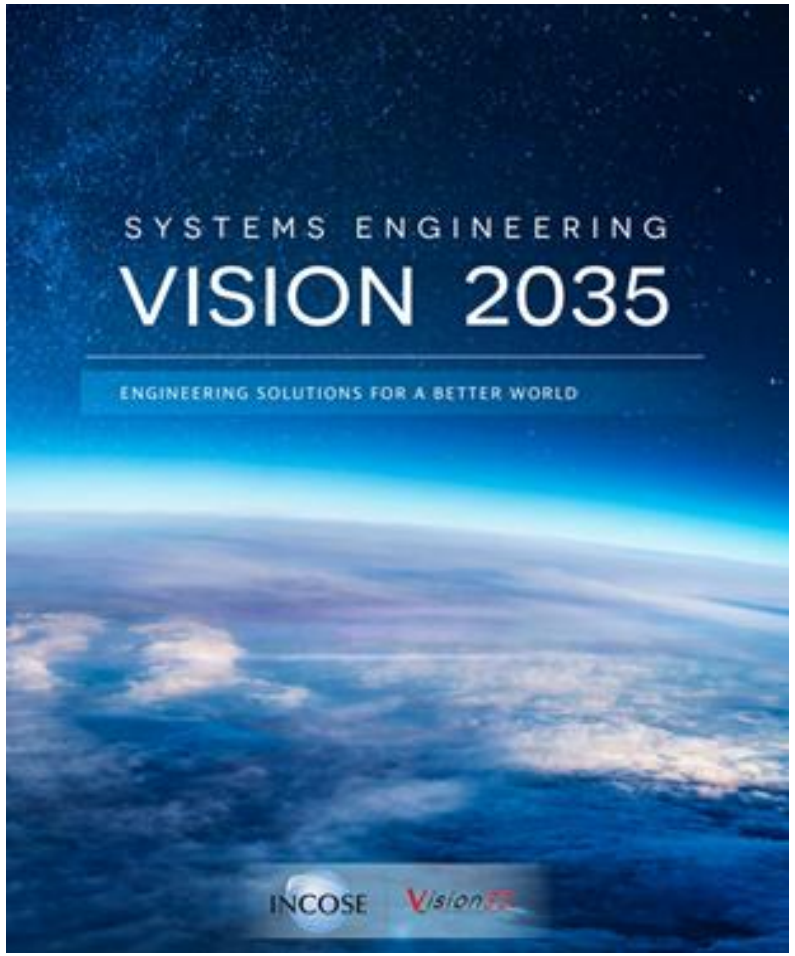
A comprehensive reference on the discipline and practice of systems engineering



Technical Products

Regularly produced technical products, produced by domain-specific and interdisciplinary Working Group efforts.

Systems Engineering Vision 2035



This Systems Engineering Vision was sponsored by INCOSE and produced by a team of leaders from the systems community, with inputs from across industry, academia, and government.

Vision 2035 addresses:

- The **Global Context** for Systems Engineering
- The **Current State** of Systems Engineering
- The **Future State** of Systems Engineering
- **Realizing the Vision**

The complete **Systems Engineering Vision 2035** is available as a website and PDF

Learn more!

The INCOSE Foundation

The INCOSE Foundation expands access to the best practices of systems engineering to create a more equitable future. It helps students and practitioners everywhere, regardless of economic ability, to join INCOSE. This enables us to reach higher levels of technical achievement, student empowerment, and equity around the globe.

FOUNDATION SCHOLARSHIPS:

- ISEF, the International Science and Engineering Fair INCOSE Award to a pre-college student
- The Chesapeake Chapter Award
- The Stevens Doctoral Award for Promising Research in Systems Engineering to a PhD Candidate
- The James E. Long Award for Post Doctoral work

Learn more!

The INCOSE Foundation

Memorandums of Understanding were completed with the University of Nairobi, Kenya; and the University of Lagos, Nigeria.

The MOUs provided:

- 10 memberships
- Registration for IW and IS
- Travel expenses for one in-person attendee

Each university has joined the Academic Council and INCOSE resources are now available to more people through the associate memberships each university is able to enroll.

UNIVERSITY OF NAIROBI

UNIVERSITY OF LAGOS
INDEED AND IN TRUTH

Learn more!

INCOSE Corporate Advisory Board (CAB)

Corporate Advisory Board membership allows organizations to guide the direction of the discipline.

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

The CAB is the Voice of the Customer to INCOSE leadership.

The CAB provides strategic guidance to technical leadership, leading to the development of systems engineering products and input on standards.

Learn more!

Lifecycle of the CAB Impact

CAB organizations influence INCOSE work and benefit from INCOSE products

CAB Member Organizations

INCOSE Corporate Advisory Board Member 2023

CAB member organizations, CAB Reps, and CAB Associates identify and document CAB needs annually based on challenges facing industry and academia

CAB needs are briefed annually to the INCOSE Board of Directors and the Technical Director; Needs are flowed to the appropriate workgroups for action

CAB Members help to Lead, Support, and Mentor Working Groups

INCOSE Vision and Strategic Plan

Working Groups and Technical Services deliver product solutions that further the systems engineering discipline consistent with the INCOSE Vision and Strategic Plan while addressing CAB needs

Value Streams / Working Groups

External Organizations

External relationships foster standardization

ISO, IEEE, ASME, IEC, AIAA

INCOSE Products and Services

Products

Events

34th Annual INCOSE international symposium hybrid event Dublin, Ireland July 2 - 6, 2024

2024 Annual INCOSE international symposium HYBRID EVENT Torrance, CA, USA January 27 - 30, 2024

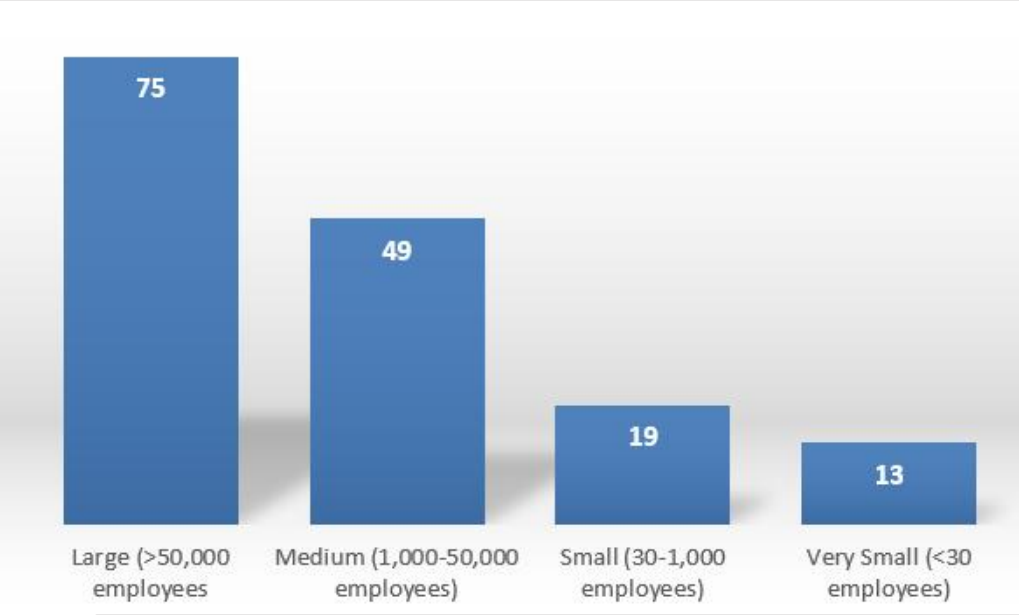
Certification

INCOSE ASEP, INCOSE CSEP, INCOSE ESEP

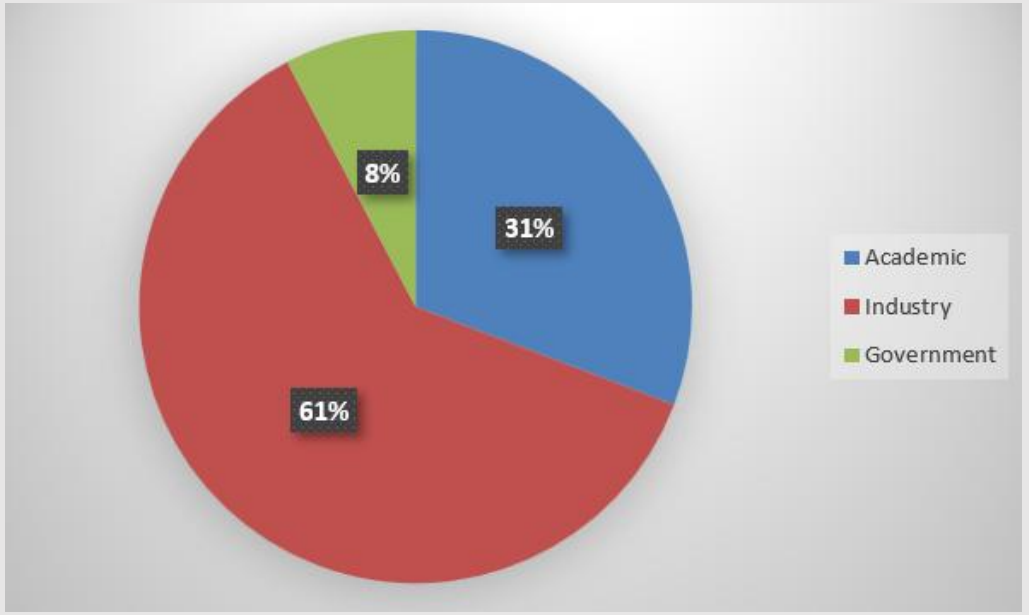
CAB Metrics

- There are currently 156 CAB Member Organizations*
- Every organization has equal input

Organizations by Size



Organizations by Category



*Stats as of September 2025

Current CAB Member Organizations

*as of September 2025

Industry

- 3DSE Management Consultants
- Advanced Systems Engineering, LLC
- Aerospace Corporation (The)
- Airbus Group
- Albers Aerospace
- AM General LLC
- Analog Devices, Inc.
- ANSYS
- ArcField
- Aviage Systems
- Aviation Industry Corporation of China, Ltd.
- BAE Systems
- Bechtel
- Becton Dickinson
- Belcan Engineering Group
- BMT Canada
- The Boeing Company
- Booz Allen Hamilton Inc.
- Boston Scientific Corporation
- BTW Software Solutions
- C.S. Draper Laboratory, Inc.
- Capgemini Engineering
- Change Vision, Inc.
- Cubic Corporation
- Cummins, Inc.
- Dassault Systemes
- Deloitte Consulting
- DENSO Create, Inc.
- DENTSU SOKEN, Inc.
- Eaton
- Embraer S.A.
- Ford Motor Company
- General Electric Aerospace
- General Dynamics
- General Motors
- Hitachi Energy
- Honeywell Aerospace Technologies
- Huawei Technologies Co. Ltd
- IQNOX, LLC
- ISDEFE
- IVECO Group
- Jama Software
- Jet Propulsion Laboratory
- John Deere & Company
- KBR, Inc.
- L3 Harris Technologies
- Leidos
- Leonardo
- Lockheed Martin Corporation
- Magna
- MBDA (UK) Ltd.
- ManTech International Corp.
- Medtronic
- MetaTech Consulting, Inc.
- The MITRE Corporation
- Mitsubishi Electric Corporation
- Mitsubishi Heavy Industrials
- Modern Technology Solutions, Inc.
- Nissan Motor Co, Ltd
- Northrop Grumman Corporation
- Parametric Technology GMBH PTC
- Petronas International Corp Ltd
- Prime Solutions Group, Inc.
- Project Performance International
- RealmOne
- Redwire Space
- Rolls-Royce
- RTX
- SAAB AB
- SAFRAN
- SAIC
- Saudi Railway Company
- Senseonics
- Shanghai Formal-Tech Information Technology Co., Ltd
- Shell
- Sierra Nevada Corporation
- Siemens
- SPEC Innovations
- Strategic Technical Services, LLC
- Studio SE, Ltd
- Systems Planning and Analysis
- TATA Consultancy Services
- Thales
- Torch Technologies
- TOSHIBA Corporation
- Trane Technologies
- Toshiba Corporation
- Trane Technologies
- UNCOMN
- Veoneer
- Volvo Cars Corporation
- Volvo Construction Equipment
- Wabtec Corporation
- Woodward Inc
- Woven by Toyota, Inc
- Zuken, Inc

Government

- Federal Aviation Administration (U.S.)
- Idaho National Laboratory
- Lawrence Livermore National Laboratory
- Los Alamos National Laboratory
- National Aeronautics and Space Administration (NASA)
- National Reconnaissance Office (NRO)
- Pacific Northwest National Laboratories
- Sandia National Laboratories
- Swedish Defence Materiel Administration
- Taiwan Space Agency
- UK MoD
- US Department of Defense

Academic

- Auburn University
- Australian National University
- California State University Dominguez Hills
- Carnegie Mellon University Software Engineering Institute
- Colorado State University
- Cornell University
- Cranfield University
- Defense Acquisition University
- Drexel University
- FAMU-FSU College of Engineering
- Florida Institute of Technology
- George Mason University
- Georgia Institute of Technology
- George Washington University
- ISAE SUPAERO
- John Hopkins University
- KEIO University
- Loyola Marymount University
- Marquette University
- Massachusetts Institute of Technology
- Missouri University of Science & Technology
- Naval Postgraduate School
- Penn State University
- Purdue University
- Singapore Institute of Technology
- Southern Methodist University
- Stevens Institute of Technology
- Universidade Federal de Minas Gerais
- Tsinghua University
- Virginia Tech
- Wayne State University
- Weber State University
- Wichita State University
- Worcester Polytechnic Institute
- University of:
    - Alabama in Huntsville
    - Arizona
    - Arkansas
    - California San Diego
    - Connecticut
    - Maryland
    - Maryland, Baltimore County
    - Maryland Global Campus
    - Michigan, Ann Arbor
    - New South Wales, Canberra
    - South Alabama
    - Southeastern Norway
    - Southern California
    - Texas at Arlington
    - Texas at Austin
    - Texas El Paso
    - Utah

Key CAB Member Benefits

Recognition on the INCOSE CAB home page with a link to the organization.

Complimentary Registration at the International Symposium for the CAB representative.

The designated representative of each CAB member is granted full INCOSE membership for the years they serve as their organization's CAB representative.

Opportunity to submit candidates for INCOSE's Technical Leadership Institute.

CAB Associates are given access to the SE Tools Database and can receive some INCOSE Publications

Reduced rates on selected advertising within INCOSE and ability to participate in virtual career fairs.

Academic Council

Learn more!

The Academic Council (AC) is the "Voice of the Academic Community." The AC:

- Evaluates and makes recommendations regarding policy issues relevant to the academic community to the Board of Directors.
- Initiates and facilitates discussion and exploration of issues the AC members deem important to the systems engineering academic community.
- Evaluates and makes recommendations on INCOSE products and services.
- Assesses the state and health of the systems engineering academic community every 3 years.
- Nurtures a healthy, internationally recognized systems engineering academic community.

AC Members include:

Representatives of organizations that offers systems engineering or systems-related education in an institute of higher education

Representatives of K12 education in charge of curriculum design

Tenure-track faculty that conducts research in systems engineering or a systems-related field

Faculty pursuing the establishment of a systems engineering or systems engineering-related program at their institution

The Value of Partnering with INCOSE

- Connect with the most engaged and active systems engineers worldwide
- Increase brand visibility
- Showcase COMAC's expertise
- Build connections with industry leaders
- COMAC's presence in the INCOSE CAB would amplify the voice of:
  - International joint ventures and complex global supply chains
  - The global civil aerospace OEM perspective
  - Chinese regulatory and industrial frameworks

By contributing these perspectives, COMAC can help guide the direction of systems engineering practices and standards within INCOSE.

INCOSE Board of Directors - Officers

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President

Michael Watson

President-Elect

Stueti Gupta

Secretary

Alice Squires

Treasurer

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Heidi Davidz

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Tami Katz

Technical Operations Director

David Long

Strategic Integration Director

Alejandro Salado

Academic Matters Director

Renee Steinwand

Americas (Sector I) Director

Sven-Olaf Schulze

EMEA (Sector II) Director

Quoc Do

Asia-Oceania (Sector III) Director

INCOSE Board of Directors – Non-voting

Robert Bordley

Corporate Advisory Board (CAB) Deputy Director

Chris Browne

Services Deputy Director

Jimmie McEver

Technical Operations Deputy Director

Steve Records

Executive Director


Thank you

Contact Us

International Council on Systems Engineering

A better world through a systems approach

For more information contact info@incose.net
www.incose.org

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Appendix1: Additional SEP Certification Information

incose.org/certification

INCOSE SEP Program Purpose and Benefits

The INCOSE Systems Engineering Professional (SEP) program offers independent assessment of system engineering professionals benefiting:

SYSTEMS ENGINEERING COMMUNITY:

- Creates the standard to identify and develop systems engineering professionals.
- Establishes a formal, recognized body of knowledge for the systems engineering community.

SYSTEM ENGINEERING PROFESSIONALS:

- Provides a portable standard of recognition for attainment of knowledge, education, and experience.
- Serves as a mechanism for continued professional development through recertification requirements.

ORGANIZATIONS/INSTITUTIONS:

- Offers a universal, industry-approved measure of a professional's knowledge – achieved through the independent evaluation of relevant tasks, projects, and programs.

Employer Job Postings ask for SEP

- **Employers who recognize and value SEP certifications and list it as a requirement or preferred qualification:**


What Certification is Right for You?

No matter where you are in your professional career, we offer SEP's for every level.

If you have just started (or plan to start) practicing systems engineering or have recently graduated and are interested in systems engineering

If you are a practicing Systems Engineer with more than five years of systems engineering professional work experience

If you are a systems engineering leader with recognized systems accomplishments and have many years of systems engineering professional work experience

Different Requirements for Each Level

You can enter at whatever SEP level is appropriate and transition between levels when ready.

ESEP focused on:
- Leadership
- SE Accomplishments
- Significant SE Experience

CSEP focused on:
- SE Experience
- Applied SE Knowledge

ASEP focused on:
- SE Knowledge

SEP Candidates

Associate Systems Engineering Professional

If you have just started practicing – or want to start practicing – systems engineering, then ASEP is for you. This certification is for people at the beginning of their career as a systems engineer. The ASEP has "book knowledge" but not yet significant experience as a systems engineer.

- Knowledge verification required
- Suitable for students, early career professional, project and program managers, and all those who "speak systems engineering"

Certified Systems Engineering Professional

If you are a practicing Systems Engineer with more than five years of systems engineering professional work experience, then CSEP is for you.

- Knowledge verification required
- At least five years of experience required
- At least five years of experience verification required
- Suitable for independent practitioners, which includes most systems

Expert Systems Engineering Professional

If you are a systems engineering leader with recognized systems accomplishments and have many years of systems engineering professional work experience, then ESEP is for you.

- At least 20 years of experience required
- At least 10 years of experience verification required
- Suitable for technical leaders who have “moved the needle” in applying systems engineering within a community, which may include their employer, client, or a professional society. Few individuals meet the ESEP requirements, even if they have been practicing systems engineering for a long time

Knowledge Verified by Exam or Coursework

Knowledge Requirements

- Based on INCOSE Systems Engineering Handbook v5
- Required for ASEP and CSEP certification
- Can be verified through knowledge exam
- Can be verified through university coursework

Exam is

- 100 multiple-choice questions
- 100 minutes for exam
- Proctored by video through computer or in-person at INCOSE events
- Administered online with video proctoring
- Offered as a pencil-and-paper test at many INCOSE events
- Allowed to be attempted up to 3 times per 12 months

Academic Equivalency allows course assessments to meet knowledge requirement

- Must score highly in pre-approved university course
- Course may be taught in any language and may use a wide variety of assessment methods
- Course must use INCOSE SE Handbook

Experience Documented By Area

CANDIDATE MUST PROVIDE A MAP OF THEIR EXPERIENCE
CSEP: 1 Year Experience in 3 of the Areas
ESEP: 2 Years Experience in 6 Areas

- Requirements Engineering
- System and Decision Analysis
- Architecture / Design Development
- System Integration
- Verification and Validation
- System Operation and Maintenance
- Technical Planning
- Technical Monitoring and Control
- Acquisition and Supply
- Information Management and Configuration Control
- Risk and Opportunity Management
- Lifecycle Process Definition and Management
- Specialty Engineering
- Organizational Project Enabling Activities
- Other

Certification & Reference Experience Requirements

SYSTEMS ENGINEERING EXPERIENCE

- CSEP has > = 5 years of professional-level SE experience
- ESEP has > = 20 years of professional-level SE experience

EXPERIENCE CONFIRMATION

- Recommendations from at least 3 colleagues / peers / managers
- References must confirm SE experience claims
- References must be knowledgeable of systems engineering but need not be SE's

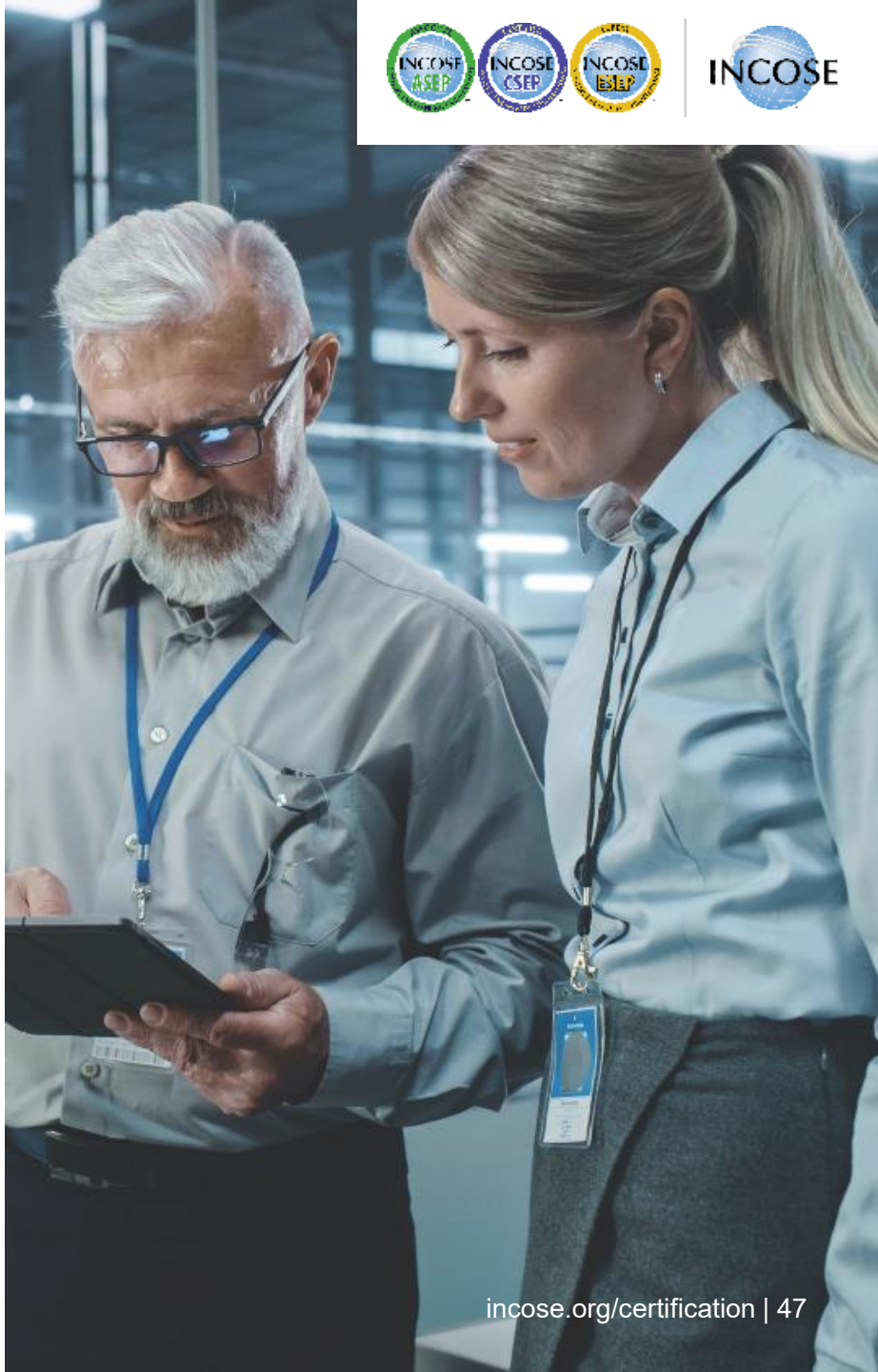
MUST USE INCOSE FORMS

ESEP Technical Leadership Requirements

Minimum of 5 years of professional development

- Product Development Leadership, Technical Society Leadership, and Advanced Academics

ESEP candidates participate in audio interview to confirm SE leadership



ASEP and CSEP Renewal

CERTIFICATION IS VALID FOR DEFINED TIME PERIOD

5 Years for ASEP

3 Years for CSEP

Indefinite for ESEP

All levels must maintain INCOSE individual membership

CERTIFICATION RENEWAL REQUIRES CONTINUING EDUCATION

- Minimum of 120 Professional Development Units (PDUs)
  - Technical Society participation
  - SE course work and publications
  - SE job functions beyond daily work

What People Are Saying

Diego Rangel

“I understood that it is essential to certify your knowledge, especially at the beginning of your career. The SEP certification is an excellent way to demonstrate your qualification standard since it is internationally recognized. This motivated me to get SEP Certification.”

David R. Schneider

“For the university, Academic Equivalency helps to ensure that the curriculum is well-aligned to the INCOSE methodologies and hence has significant professional value for our students. It also distinguishes the course(s)/program offering academic equivalency from peer institutions.

For students, they too earn additional distinction as it is not just the institution stating their SE skill capability, but the student has demonstrated that they met the larger standard established by INCOSE.”

Raksha Mani

“The SEP certification by the INCOSE is a universally recognized certification, helping me prove my competence and knowledge in the different aspects of systems engineering.”

Kahdeem Cohens

“I promote SEP certification. I would suggest that everyone considering it do some introspection on their "why."

In an ideal world, all systems engineering professionals are INCOSE SEPs for personal motivations like recognition, objective communication of your knowledge, and the ability to apply systems engineering learnings in the workplace.”

SEP Certification Introduction Video