



International Council on Systems Engineering

*A better world through a systems approach*



# **2023 INCOSE ANNUAL REPORT**

# INCOSE

# INTRODUCTION

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded to develop and disseminate the transdisciplinary principles and practices that enable the realization of successful systems.

## ABOUT US

INCOSE is designed to connect systems engineering professionals with educational, networking, and career-advancement opportunities in the interest of developing the global community of systems engineers and systems approaches to problems.

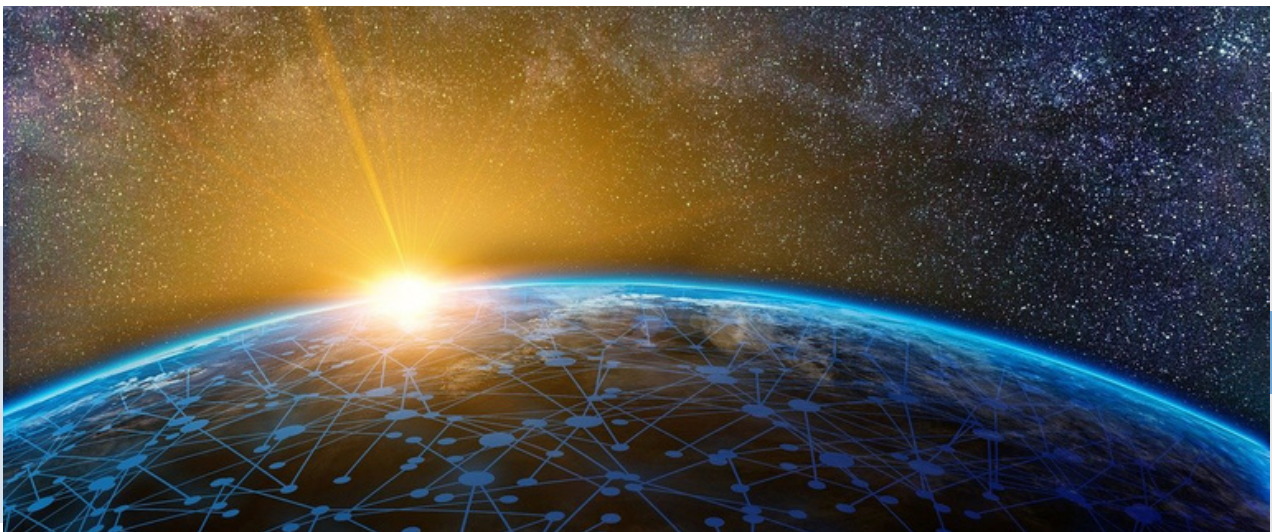
We are also focused on producing state-of-the-art work products that support and enhance this discipline's visibility in the world.

## OUR MISSION

Our mission is to address complex societal and technical challenges by enabling, promoting, and advancing systems engineering and systems approaches.

## OUR VISION

A better world through a systems approach.





# MESSAGE FROM THE PRESIDENT



Members, colleagues, and systems community stakeholders,

It is my honor to present this annual report, highlighting our organization's significant accomplishments in 2023.

The last year of my presidency was a time of significant change and growth for INCOSE. We saw record-setting numbers for our flagship International Workshop and International Symposium events. We recognized outstanding members with awards, published valuable new resources like the Systems Engineering Competency Assessment Guide and the Natural Systems Primer, and launched several new initiatives, including a member survey and SWOT analysis. INCOSE also began hiring a full-time professional staff to align the organization with professional association best practices and maximize the time and energy of our volunteers.

Last year, there was a significant increase in membership, reflecting the growing global recognition of the value of systems engineering. Our chapters and working groups were active in hosting events, developing educational materials, and conducting research that pushed the boundaries of the field. INCOSE's online following grew to record numbers, and the continued engagement of INCOSE in local industry communities worldwide, both virtually and in-person, has propelled our organization toward becoming the world's trusted authority in systems engineering.

This annual report provides a detailed look at INCOSE's achievements over the past year. It includes information about our membership growth, geographic presence, influence on the greater systems engineering community, publications, and many other initiatives.

I am proud of the work INCOSE accomplished in 2023 and am confident that we will continue to make significant contributions to systems engineering in the years to come.

I want to thank our members, volunteers, and staff for their dedication and hard work. Together, we are making a difference in the world.

My sincerest regards,

Marilee Wheaton

INCOSE President 2022 & 2023

# 2023 INCOSE MEMBERS & ASSOCIATES

INCOSE's influence extends worldwide, with a thriving community of members and associates actively shaping the landscape of systems engineering. This collaborative network spans countries, embodying the organization's commitment to fostering a global community dedicated to advancing the practice and impact of systems engineering.

## TYPES OF INCOSE **MEMBERSHIP**

### Regular

Systems engineering professionals from corporate management, government & program management, academia, research & development, science and engineering, business development, and many more.

### Senior

Individual members qualify for the Senior category if they are at least 65 years of age at the time they join or renew their membership

### Student

Students enrolled in universities or colleges pursuing degrees in systems engineering or related fields

### Lifetime

Lifelong INCOSE membership



# INCOSE ASSOCIATES

In addition to individual members, INCOSE has **Corporate Advisory Board (CAB) Associates**.

A **CAB Associate** is a complimentary membership offered to employees or students of organizations that are members of the CAB. Each CAB organization is allocated a maximum number of CAB Associates based on their CAB membership status. Those Associates can upgrade their membership to individual membership (full or student) at a discounted rate.

All INCOSE Associates gain access to valuable resources not available to the public, including:

- Past symposia papers and proceedings
- SE Handbook
- Systems Engineering Journal
- Technical products
- Past webinar recordings

INCOSE's Corporate Advisory Board (CAB) acts as the "Voice of the Customer" for the organization's leadership team. The CAB comprises organizations working in and supporting systems engineering, including large corporations, government agencies, engineering and consulting firms, not-for-profit organizations, universities, and more. By having this broad representation, the CAB can ensure that INCOSE considers the perspectives of various stakeholders within the systems engineering field. This fosters the development of resources and standards that benefit a wide range of organizations.

To learn more about the CAB and view a list of all current CAB members, visit the [Corporate Advisory Board Webpage](#).

**13,057**

INDIVIDUAL  
MEMBERS

**11,702**

REGULAR  
MEMBERS

**602**

SENIOR  
MEMBERS

**726**

STUDENT  
MEMBERS

**27**

LIFETIME  
MEMBERS

**10,062**

CAB  
ASSOCIATES

**23,119**

MEMBERS & ASSOCIATES

**+9.7%**

in comparison with 2022

**13,057**

INDIVIDUAL  
MEMBERS

**11,702**

REGULAR  
MEMBERS

**602**

SENIOR  
MEMBERS

**726**

STUDENT  
MEMBERS

**27**

LIFETIME  
MEMBERS

**+11.1%**

in comparison with 2022

**10,062**

CAB  
ASSOCIATES

**+10.3%**

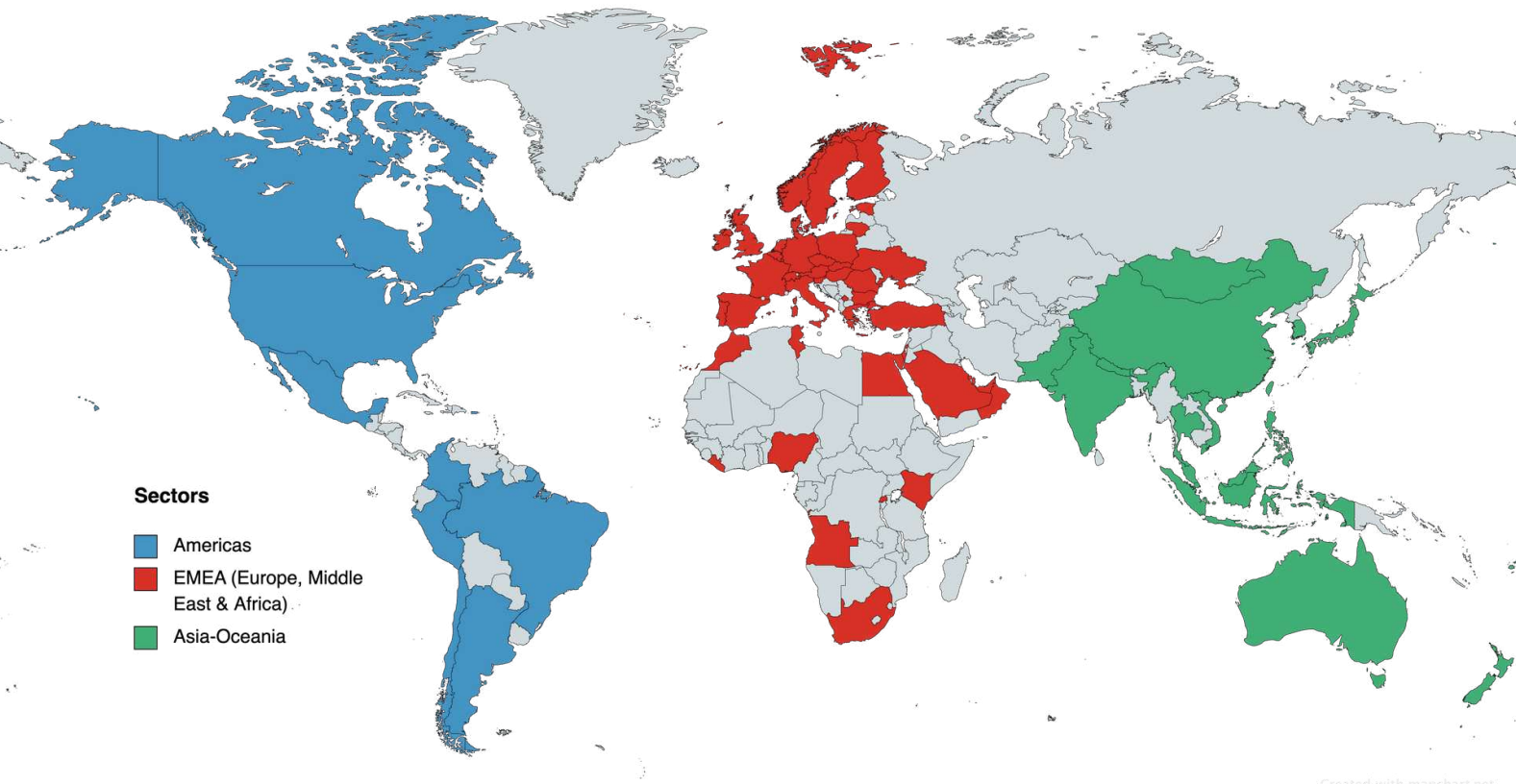
in comparison with 2022

**23,119**

MEMBERS & ASSOCIATES



# COUNTRIES WITH INCOSE MEMBERS



INCOSE members are geographically distributed across a diverse and expansive network, spanning 73 countries and organized into three major sectors:

- Sector I: Americas
- Sector II: Europe, Middle East, and Africa (EMEA)
- Sector III: Asia-Oceania

This global reach reflects the inclusive and collaborative nature of our community, showcasing a collective commitment to advancing systems engineering principles across different continents and cultural landscapes. The extensive presence of INCOSE members in these three sectors underscores the organization's dedication to fostering a worldwide network of professionals dedicated to the continual advancement of systems engineering.

# MEMBERS ARE LOCATED IN 73 COUNTRIES

## **Americas**

Argentina  
Brazil  
Canada  
Chile  
Colombia  
French Guiana  
Mexico  
Peru  
Puerto Rico  
United States

## **Asia-Oceania**

Australia  
China  
Fiji  
Hong Kong  
India  
Indonesia  
Japan  
Korea, Republic of  
Malaysia  
Mongolia  
Nepal  
New Zealand  
Pakistan  
Philippines  
Singapore  
Taiwan  
Thailand  
Vietnam

## **Europe, Middle East & Africa**

Angola  
Austria  
Bahrain  
Belgium  
Bulgaria

Czech Republic  
Denmark  
Egypt  
Estonia  
Finland  
France  
Germany  
Greece  
Hungary  
Ireland  
Israel  
Italy  
Kenya  
Kosovo  
Liberia  
Lithuania  
Luxembourg  
Morocco  
Netherlands  
Nigeria  
Norway  
Oman  
Poland  
Portugal  
Qatar  
Romania  
Rwanda  
Saudi Arabia  
Slovakia  
Slovenia  
South Africa  
Spain  
Svalbard and Jan Mayen  
Sweden  
Switzerland  
Tunisia  
Turkey  
Ukraine  
United Arab Emirates  
United Kingdom

# 2023 NUMBER OF CHAPTERS

## Americas

Established	41
Emerging	1
	<hr/>
	42

## Asia-Oceania

Established	8
Emerging	1
	<hr/>
	9

## Europe, Middle East & Africa

Established	16
Emerging	1
	<hr/>
	17

**68 Established & Emerging Chapters**

# CHAPTERS ARE LOCATED IN 29 COUNTRIES

## Americas

USA  
Brazil  
Canada  
LatAm

## Asia-Oceania

China  
India  
Japan  
Korea  
New Zealand  
Australia  
Singapore  
Thailand

## Europe, Middle East & Africa

Belgium  
Denmark  
Finland  
France  
Germany  
Israel  
Italia  
Netherlands  
Norway  
Poland  
South Africa  
Spain  
Switzerland  
Sweden  
Tunisia  
Turkey  
United Kingdom



# ACTIVE CAB ORGANIZATIONS

AM General LLC  
 AVIAGE SYSTEMS  
 Aerospace Corporation, The  
 Airbus  
 Analog Devices, Inc.  
 Arcfield  
 Australian National University  
 Aviation Industry Corporation of  
 China, LTD  
 BAE Systems  
 BMT Canada  
 Bechtel  
 Becton Dickinson  
 Belcan Engineering Group LLC  
 Boeing Company, The  
 Booz Allen Hamilton Inc.  
 C.S. Draper Laboratory, Inc.  
 CACI, Inc - Federal  
 California State University  
 Dominguez Hills  
 Carnegie Mellon University Software  
 Engineering Institute  
 Change Vision, Inc.  
 Colorado State University Systems  
 Engineering Programs  
 Cornell University  
 Cranfield University  
 Cubic Corporation  
 Cummins, Inc.  
 Cybernet MBSE Co, Ltd  
 DENTSU SOKEN INC  
 Dassault Systèmes  
 Defense Acquisition University  
 Deloitte Consulting, LLC  
 Denso Create Inc  
 Drexel University  
 EMBRAER  
 Eaton  
 Eindhoven University of Technology  
 FAMU-FSU College of Engineering  
 Federal Aviation Administration (U.S.)  
 Ford Motor Company  
 GE Aerospace

General Dynamics  
 General Motors  
 George Mason University  
 Georgia Institute of Technology  
 IBM  
 ISAE - Supaero  
 ISDEFE  
 IVECO Group  
 Idaho National Laboratory  
 Jama Software  
 Jet Propulsion Laboratory  
 John Deere & Company  
 Johns Hopkins University  
 KBR, Inc.  
 KEIO University  
 L3Harris Technologies  
 LEONARDO  
 Lawrence Livermore National  
 Laboratory  
 Leidos  
 Lockheed Martin Corporation  
 Los Alamos National Laboratory  
 Loyola Marymount University  
 MBDA (UK) Ltd  
 MITRE Corporation, The  
 Magna  
 Mahindra University  
 ManTech International Corporation  
 Marquette University  
 Massachusetts Institute of  
 Technology  
 Medtronic  
 MetaTech Consulting Inc.  
 Missouri University of Science &  
 Technology  
 Mitsubishi Electric Corporation  
 Mitsubishi Heavy Industries, Ltd  
 Modern Technology Solutions Inc  
 National Aeronautics and Space  
 Administration (NASA)  
 National Reconnaissance Office  
 (NRO)

# ACTIVE CAB ORGANIZATIONS

National Security Agency Enterprise Systems  
 Naval Postgraduate School  
 Nissan Motor Co, Ltd  
 Northrop Grumman Corporation  
 Pacific Northwest National Laboratory  
 Pennsylvania State University  
 Petronas International Corporation Limited  
 Prime Solutions Group, Inc  
 Project Performance International (PPI)  
 Purdue University  
 QRA Corporation  
 RTX  
 Rolls-Royce  
 SAIC  
 SPEC Innovations  
 Saab AB  
 Sandia National Laboratories  
 Saudi Railway Company  
 Shanghai Formal-Tech Information Technology Co., Ltd  
 Shell  
 Siemens  
 Sierra Nevada Corporation  
 Singapore Institute of Technology  
 Southern Methodist University  
 Stevens Institute of Technology  
 Strategic Technical Services LLC  
 Swedish Defence Materiel Administration (FMV)  
 Systems Planning and Analysis  
 TOSHIBA Corporation  
 Taiwan Space Agency  
 Tata Consultancy Services  
 Thales  
 The George Washington University  
 The University of Arizona  
 Torch Technologies  
 Trane Technologies  
 Tsinghua University

UK MoD  
 US Department of Defense  
 Universidade Federal De Minas Gerais  
 University Of Lagos  
 University Of Nairobi  
 University of Alabama in Huntsville  
 University of Arkansas  
 University of California San Diego  
 University of Connecticut  
 University of Maryland  
 University of Maryland Global Campus  
 University of Maryland, Baltimore County  
 University of Michigan, Ann Arbor  
 University of New South Wales, The, Canberra  
 University of Southern California  
 University of Texas at El Paso (UTEP)  
 VG2PLAY  
 Veoneer US Safety Systems, LLC  
 Virginia Tech  
 Volvo Cars Corporation  
 Volvo Construction Equipment  
 Wabtec Corporation  
 Weber State University  
 Woodward Inc  
 Worcester Polytechnic Institute (WPI)  
 Zuken, Inc

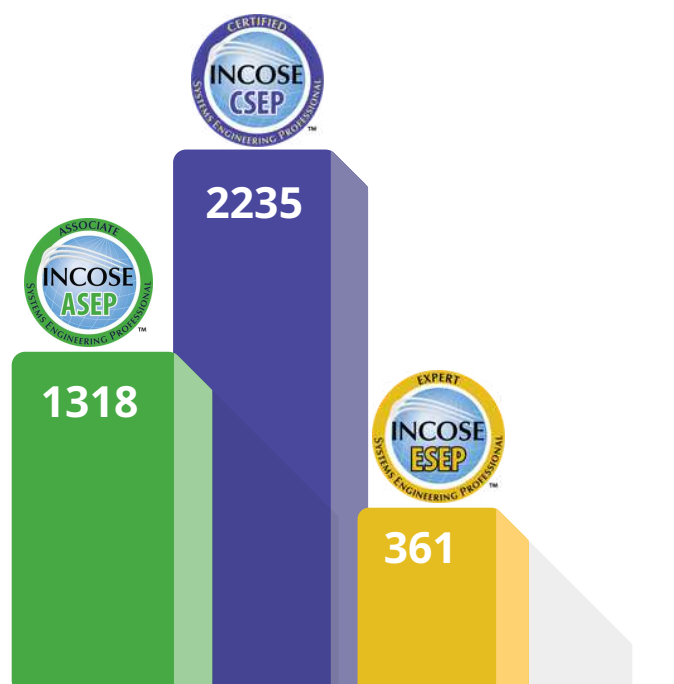
# INCOSE CERTIFICATION

A major objective of INCOSE is to promote systems engineering knowledge, and one way of doing this is through our three-tiered certification program. INCOSE offers three levels of certification ASEP, CSEP and ESEP.

The **Associate Systems Engineering Professional** (ASEP) recognizes individuals as knowledgeable but without demonstrated SE experience. The qualification for the ASEP is possession of SE knowledge typical of a junior systems engineer, as evidenced by meeting the knowledge requirement.

The **Certified Systems Engineering Professional** (CSEP) recognizes systems engineering practitioners who have demonstrated knowledge and experience in many aspects of the discipline. The qualifications for this level include both SE knowledge and SE experience that serve various job profiles of an independent, all-round systems engineer.

The **Expert Systems Engineering Professional** (ESEP) certification is for those system engineers who have distinguished themselves by demonstrating both substantial experience and technical leadership. The ESEP has at least twenty years of systems engineering experience and is the person others seek with specific, challenging, technical questions. He or she is not an expert in all aspects of systems engineering but is the expert for some aspects of SE and could perform well in many.



Number of INCOSE Systems Engineering Professionals in 2023



# 2023 INCOSE **INCOSE EVENTS**

The background of the lower half of the page is a dark blue field filled with a complex network of glowing white nodes connected by thin white lines, creating a sense of global connectivity and technology.

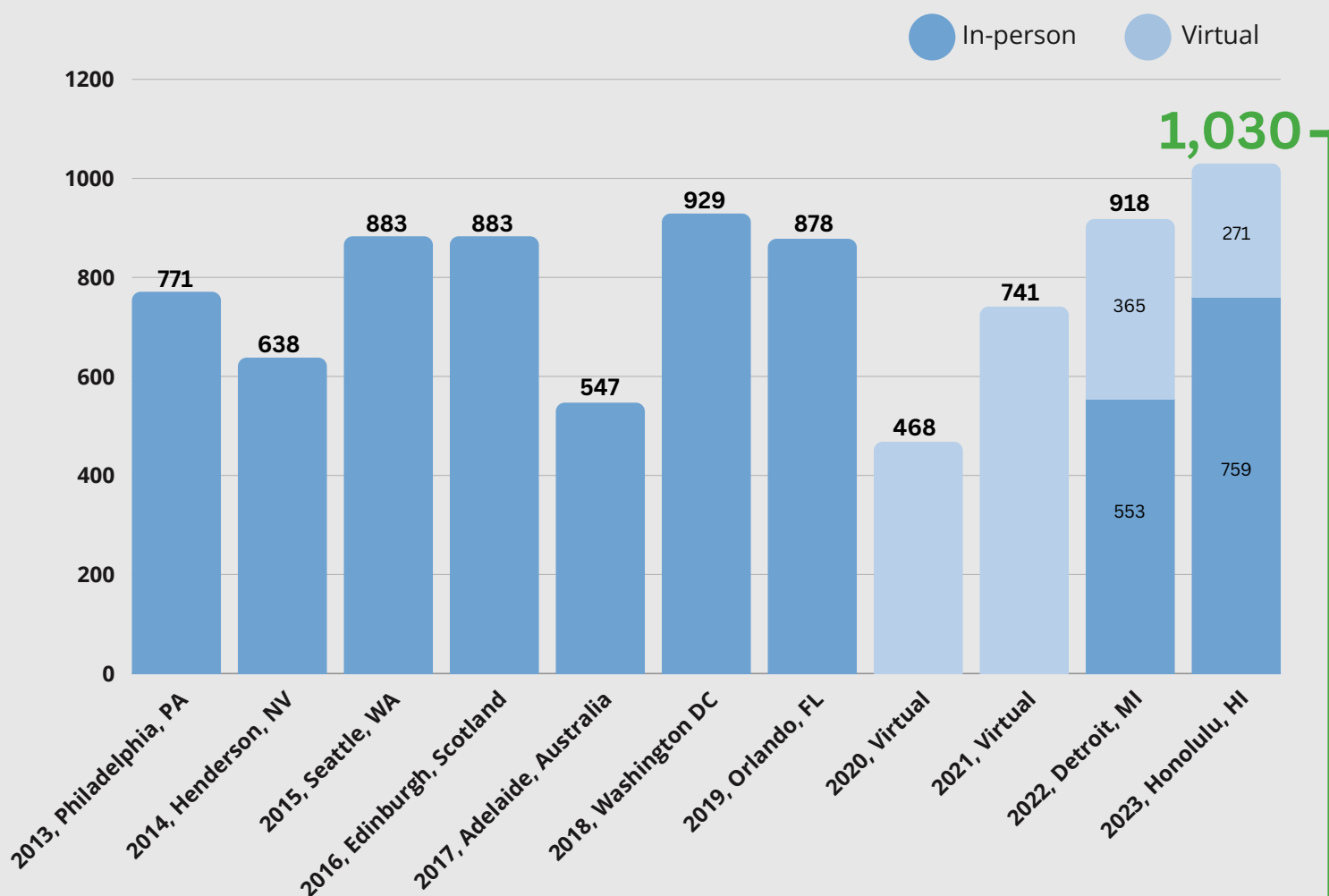
**INCOSE  
INTERNATIONAL  
SYMPOSIUM**

**INCOSE  
INTERNATIONAL  
WORKSHOP**

**ADDITIONAL  
INCOSE EVENTS  
AND CONFERENCES**

# INCOSE INTERNATIONAL SYMPOSIUM

The INCOSE International Symposium (IS) 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.

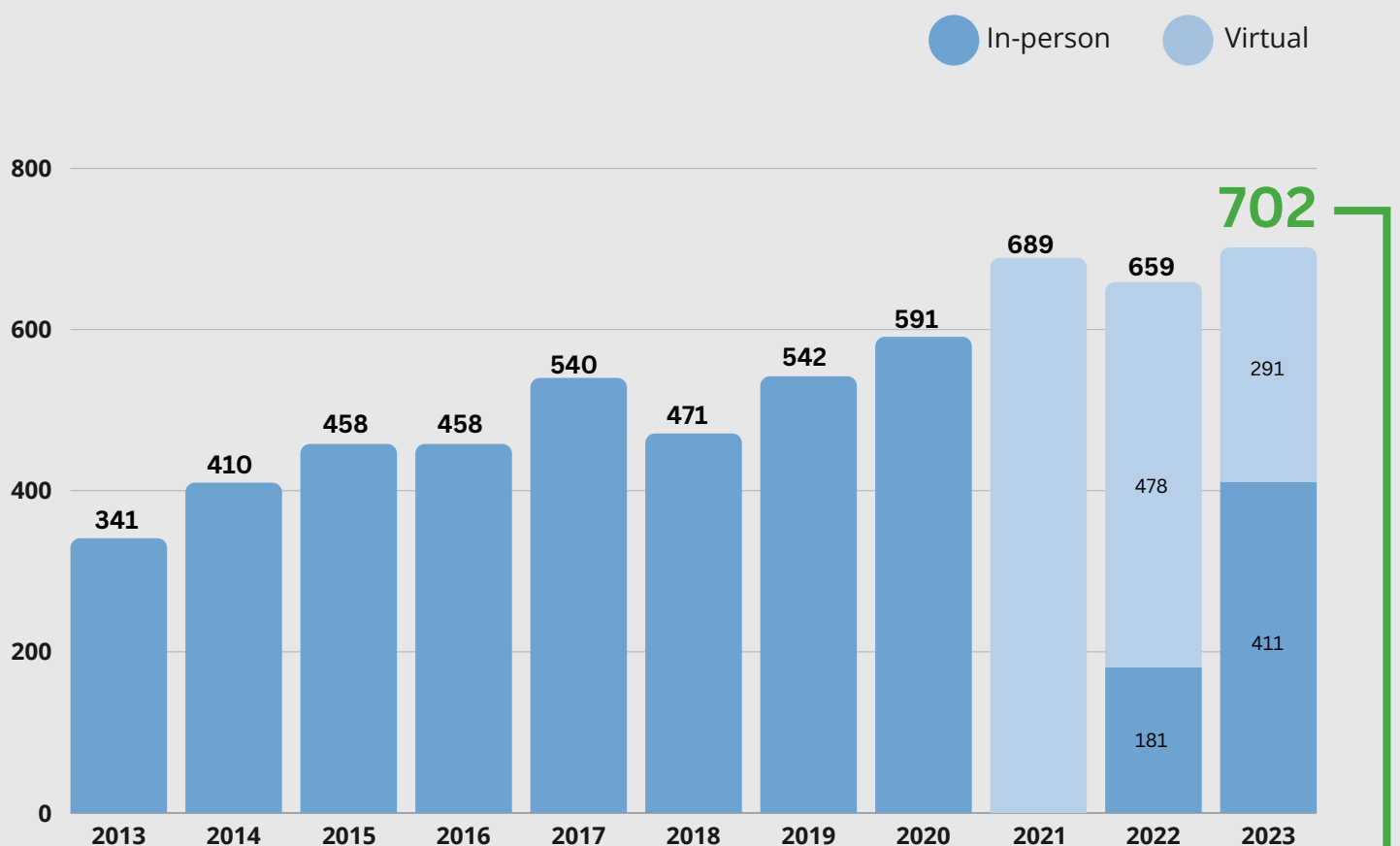


**INCOSE International Symposium Attendance Figures (2013-2023)**

Record breaking attendance in IS2023  
**1,030 attendees**

# INCOSE INTERNATIONAL WORKSHOP

The INCOSE International Workshop (IS) is the premier collaborative systems engineering event where professionals can contribute knowledge and experience to advance the discipline. Unlike INCOSE's annual International Symposium and other conferences, there are no papers, panels, or tutorial presentations. Instead, attendees spend four focused days working alongside fellow systems engineers who are there to make a difference. Systems engineers at all levels and from all backgrounds are encouraged to engage in working sessions and learn from one another as they advance systems engineering.



INCOSE International Workshop Attendance Figures (2013-2023)

Record breaking attendance in IW2023  
**702 attendees**



# ADDITIONAL INCOSE EVENTS AND CONFERENCES

In addition to the IS and IW, the INCOSE community also organizes regional conferences, working group sessions, and various domain-specific interest events and training. These events are typically smaller in scale compared to the flagship IS and IW and tend to focus on specific themes or target a particular geographical region.

Any INCOSE Working Group or Chapter can submit an event to be shared with the greater INCOSE membership. Between the ongoing advancements in hybrid event management and the open and welcoming nature of the community, INCOSE brings together the global systems engineering community for learning, networking, and professional development.

Regional conference highlights from 2023 included:



# INCOSE PRODUCTS AND PUBLICATIONS

INCOSE develops cutting-edge resources to share its knowledge with the systems engineering community. These resources are developed by INCOSE experts with vast theoretical and practical knowledge, focusing on providing impactful guides for the community.

The leading publications that INCOSE produces are:

- **Systems Engineering Handbook:** a comprehensive reference guide considered the baseline knowledge for the discipline and practice of systems engineering. It is a valuable resource for anyone involved in the conception, development, and support of complex engineered systems.
- **INSIGHT Magazine:** a quarterly publication aimed at systems engineering practitioners. It is a critical resource for keeping up to date with the latest advancements and provides practical guidance and real-world examples for systems engineers.
- **Systems Engineering Journal:** an international scholarly journal and a primary source of multidisciplinary information for systems engineering theoretical foundations. Articles present original peer-reviewed research papers that explore new concepts, methodologies, and theoretical underpinnings of systems engineering.
- **Technical Products:** resources developed and published by INCOSE to provide formal information and guidance on various aspects of systems engineering. These products aim to equip practitioners with the knowledge and tools necessary to excel in the field.

You can find ALL INCOSE Products and Publications in the [INCOSE Store](#).

2023

# Highlights



## Key Themes

IN 2023  
PUBLICATIONS

**Complex Systems**

**Sustainability**

**Smart Cities**

**Human Systems  
Integration**

**Future of Systems  
Engineering (FuSE)**

# INCOSE SERVICES

**Professional Development Portal (PDP)** achieved Full Operational Capability (FOC) V1.0



**Systems Engineering Laboratory** launched



**Technical Leadership Institute (TLI)** Cohort 7 inducted and Cohort 9 onboarded



**5 Calling All Systems** programs hosted



**Mentoring Service**  
Empowering Systems Engineers

**Mentoring service**  
established

2023 Services  
**Highlights**

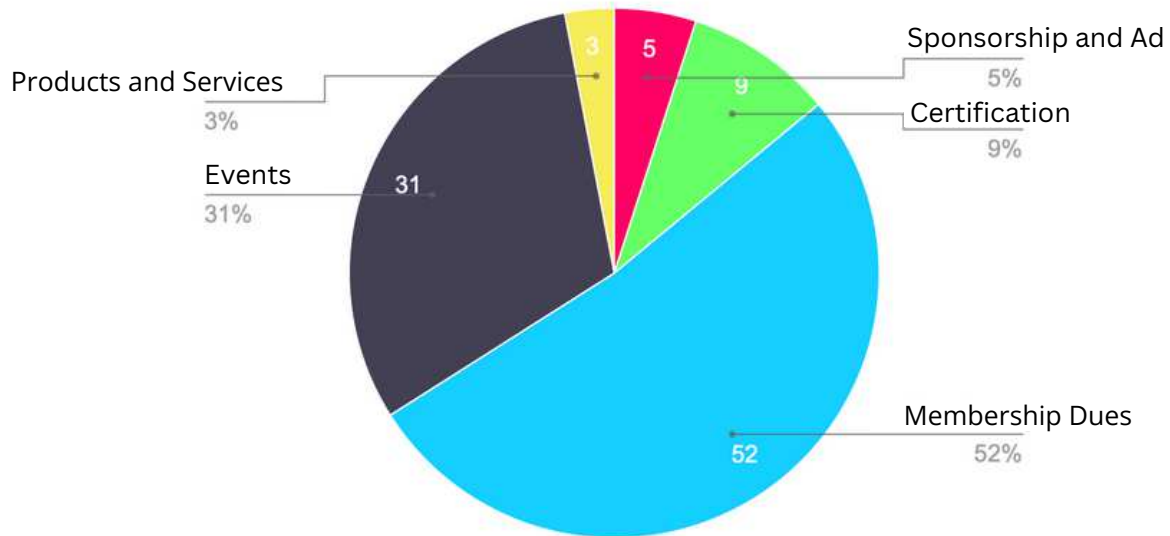
*For more information about each service, please click on the corresponding logo to visit its dedicated landing page.*



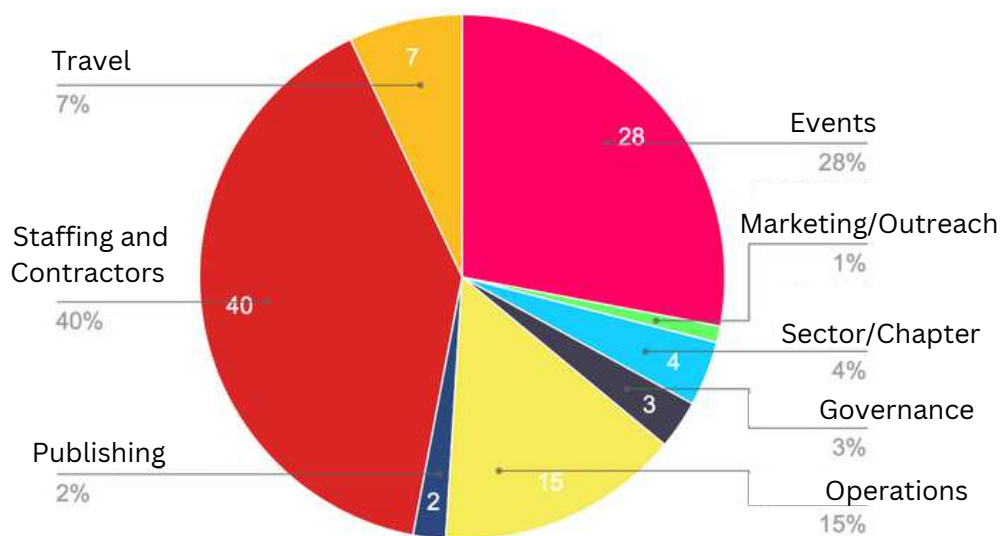
# INCOSE FINANCIAL OVERVIEW

INCOSE is pleased to present a positive financial performance for the year 2023. We maintain a solid financial position supporting our vision to create a better world through a systems approach.

## REVENUE



## EXPENSES



*A note on transparency: INCOSE members can request a more detailed financial report, including a complete breakdown of revenue and expenses. We are committed to transparency and accountability to our membership.*

# INCOSE BOARD OF DIRECTORS

<b>Marilee Wheaton</b> President (Officer)	<b>Ralf Hartmann</b> President-Elect (Officer)	<b>Donald M. York</b> Secretary (Officer)
<b>Michael J. Vinarcik</b> Treasurer (Officer)	<b>Sven-Olaf "SOS" Schulze</b> Director, EMEA Sector	<b>Serge Landry</b> Director, Asia-Oceania Sector
<b>Richard Beasley</b> Director, Services	<b>Renee L. Steinwand</b> Director, Americas Sector	<b>Olivier Dessoude</b> Director, Technical Operations
<b>Kirk Michealson</b> Director, Outreach	<b>Alejandro Salado</b> Director, Academic Matters	<b>David A. Long</b> Director, Strategic Integration
<b>Ronald "Ron" Giachetti</b> Chair, Corporate Advisory Board	<b>Barclay R. Brown</b> Director, CIO	

## NON-VOTING MEMBERS

<b>Steve Records</b> Executive Director	<b>Michael Dahlberg</b> Deputy Director, Corporate Advisory Board	<b>Tami Katz</b> Deputy Director, Technical Operations
<b>Heidi L. Davidz</b> Deputy Director, Services		



*A Better World Through a Systems Approach*

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USA

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