# *INCOSE Chapter Leader Training*

# *Overview and Objectives*

# Your Interest in Chapter Leadership Is a Brilliant Move on Your Part

- Unique opportunities for deeper involvement in INCOSE, the premier systems engineering society
- Allows you to contribute to the development of fellow chapter members
- Involves you in promoting systems engineering in your community
- Provides invaluable experience in leadership and organizational development to accelerate your career growth

# Secrets of Successful Chapter Leadership

- Develop as a strong **team** member, assisting & encouraging others
- Learn and grow from the opportunities to develop valuable personal skills (for your chapter and your career)
  - Strategic and Operational planning
  - Organizing meetings and events
  - Effective presenting & persuading
  - Building personal relations to influence & motivate others
- Practice good self-management – meet commitments
- Plug into the INCOSE vast knowledge networks of officers from other chapters, and technical operations
- Leverage the myriad of available resources from INCOSE

**INCOSE**

# INCOSE – Who Are We?

- INCOSE = International Council On Systems Engineering
    - A not-for-profit membership organization founded in 1990 and dedicated to systems engineering
    - Influential in the definition of the discipline and the practices, methods, and standards for SE
- Global organization and community
    - Almost 17,000 individual members
    - 106 Corporate Advisory Board members – good diversity
        - Spans industry, academia, and government
        - Various domains
        - Over two dozen academic organizations
    - 67 chapters, plus 6 emerging
    - Span 63 countries
- Agreements and collaboration with numerous industry associations and standards development organizations
- Diversity more than geographic

**Continuing to build awareness of and value proposition for Systems Engineering**

Learn more at: www.incose.org

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# Our Focus - Elements of SE:
# Enabling Achievement of System Solutions

SE Competencies & Learning

Technical Processes

Technical Management

Domain Knowledge & Applications

**SE**

Soft Systems

Tools & Models

Systems Science

Model-Based SE

Technical Leadership

Systems/SoS Thinking

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INCOSE

# What we stand for

- Our vision, mission, and five year objectives represent **what** we are trying to achieve.

- Our values represent **who** we are.

- Our principles represent **how** we pursue our mission / vision within the bounds of our values.

# INCOSE Vision and Mission

*INCOSE Vision: **A better world through a systems approach***

*INCOSE Mission: **To address complex societal and technical challenges by enabling, promoting, and advancing Systems Engineering and systems approaches***

# Our Objectives

**_Growth_**: Double membership; expand presence in other domains *

**_Competency_**: Help raise SE competency *

**_Alliances_**: Amplify our efforts through outreach *

**_Impactful Products_**: Create and broker impactful products

**_Impactful Forums_**: Produce and support world-leading forums

**_Education_**: Raise the quality of engineering education *

**_Transformation_**: Accelerate transition of SE to model-based *



* ⇒ Developed with the SE Vision 2025 in mind
⇒ Other strategic objectives serve as enablers

Tied to meeting our Vision and Mission - Progress is being made!

# Our Champions for the Objectives

- Growth – Director for Strategic Integration

- Alliances – Director for Outreach

- Education – Director for Academic Matters

- Products – Technical Director

- Forums – Associate Director for Events

- Competency – Associate Director for Professional Development

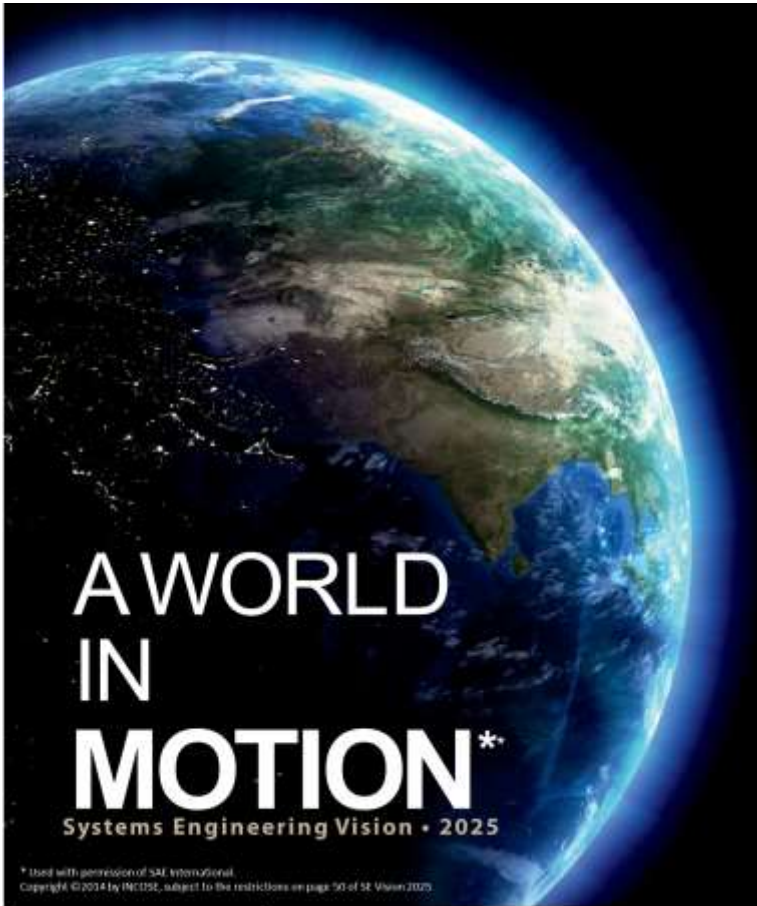- Transformation – Assistant Director for Transformation

# Value Streams

- Intent – Build a set "business" areas that provide high-value to our members and other stakeholders, as well as revenue from a wider range of sources

- Current set of Value Streams in planning
    - Certification
    - Publications
    - Events
    - Professional Development
    - Membership – individual and Organizational

www.incose.org/IW2018

# Systems Engineering Vision 2025





- Published June 2014
- "Inspiring and guiding the direction of systems engineering across diverse stakeholder communities"
- Freely available from the INCOSE website
- Hardcopies available for purchase

# *Who* we are and *How* we move forward

## Values

- Systems Thinking
- Pioneering & Innovation
- Learning & Development
- Respect, Diversity, Collaboration
- Individuals
- Volunteerism

http://www.incose.org/about/principles

## Principles

- Impact
- Partnership
- Holism
- Differentiation
- Volunteers

INCOSE

# In INCOSE, We Value:

- **Systems Thinking** – thinking and acting to apply systems approaches to address complex challenges and thus to realise successful sustainable solutions.

- **Pioneering and Innovation** – taking opportunities ourselves or with partners to evolve systems approaches to meet future challenges.

- **Learning and Development** – life-long learning with a changing world through education and continuing professional development, covering both technical and leadership competencies.

- **Respect, Diversity, Collaboration** – building and maintaining respectful relationships internally and externally in order to enable effective collaboration across the diverse community.

- **Individuals** – the importance of people, their intellect and influencing skill, to support complex decisions and to deliver enduring change.

- **Volunteerism** – volunteers and staff working together to achieve our objectives and to deliver benefit to our members, individuals and society.

# INCOSE Principles

- **Impact:** INCOSE assesses its impact based on the delivery of value to members and other stakeholders.

- **Partnership:** INCOSE builds and disseminates products and services jointly with others to maximize our impact.

- **Holism:** INCOSE emphasizes the whole over the individual parts in our creation of an integrated global technical network.

- **Differentiation:** INCOSE recognizes the unique value of those who choose to affiliate with us, prioritizing direct affiliation and active participation over indirect or passive connection.

- **Volunteers:** INCOSE is led by volunteers who set our fundamental direction.

# Benefits of Membership

- Network with **17,000** multi-national systems engineering professionals, individually, in a local chapter and in Working Groups

- Quality presentations on SE topics of interest in chapter meetings, regional meetings, international workshops and symposia, webinars

- Opportunities for career enhancing leadership training & experience

- Receive *INSIGHT*, quarterly publication published digitally

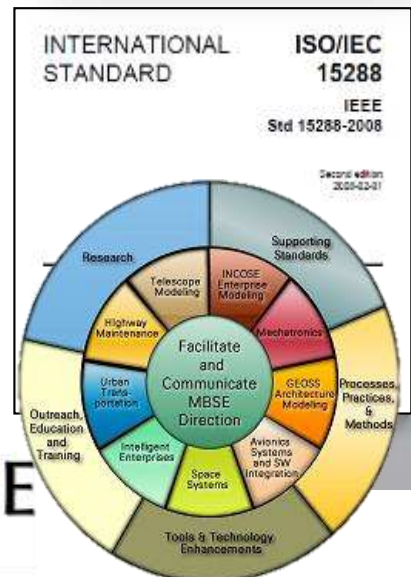- Receive *Systems Engineering, the Journal of INCOSE*, online access

- **Exclusive access to INCOSE Connect, the collaborative space for INCOSE**

- **Contribute to product creation through INCOSE working groups**

- **Collaborate with experts and practitioners**

- **Download INCOSE products and resources free from web**

- **Lowest prices on INCOSE publications, e.g. SE Handbook**

Continuous Building of the Systems Engineering Body of Knowledge

# INCOSE: The Organization

A Brief Overview of the Organization

# INCOSE Simplified

In the simplest terms, INCOSE consists of two primary operational entities

- Chapters
- Technical Operations

Overseen and supported by

- Overall leadership (Board of Directors)
- Administrative support (Central Office)

*Of course it is not that simple, but it is a good place to start*

# INCOSE Simplified

## Chapters
- Primary gateway for new members
- Provides local, year-round "home-room" support
- A primary conduit for distribution of technical information to members and their companies

## Technical Operations
- Draws members from chapters for events and mostly virtual technical work groups
- Advances the technical and operational aspects of systems engineering

*In actuality they are symbiotic with mutual dependencies and each entity sharing some of the other's functions*
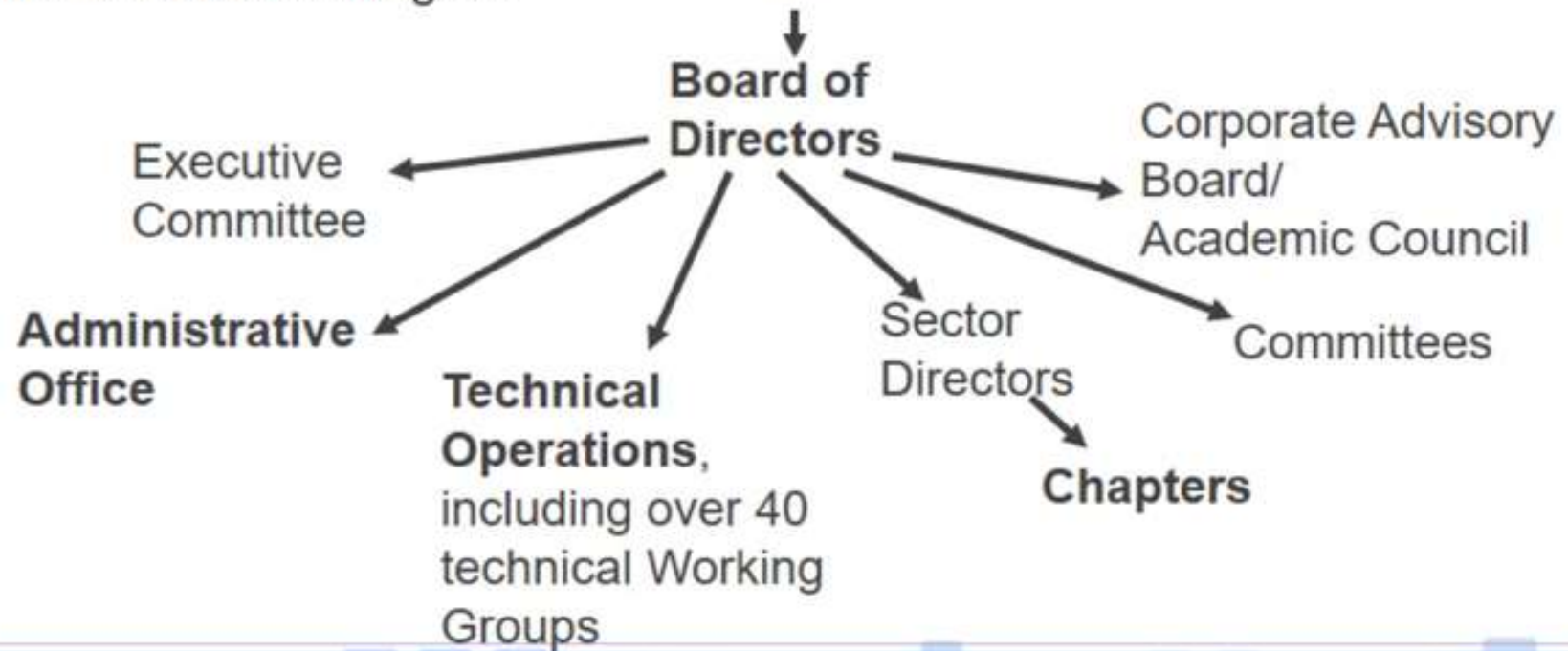
# INCOSE Structure Provides Support for Key Areas of Operation



Started in August 1990 by 35 senior technical managers

Incorporated as nonprofit technical society in January 1992

**Board of Directors**

Executive Committee

Corporate Advisory Board/ Academic Council

**Administrative Office**

**Technical Operations**, including over 40 technical Working Groups

Sector Directors

Committees

**Chapters**

# INCOSE Organizational Structure - BoD

**INCOSE Officers**

| Garry Roedler<br>President<br>IW2018 – IW2020 | Kerry Lunney<br>President-Elect<br>IW2018 – IW2020 | Tina Srivastava<br>Secretary<br>IW2017 – IW2019 | René Oosthuizen<br>Treasurer<br>IW2018 – IW2020 |

**Voting Board Members**

| Mike Celentano<br>Technical Director<br>IW2017 – IW2019 | Zane B Scott<br>Chair, Corporate Advisory Board<br>IW2018 – IW2020 | Ariela Sofer<br>Director for Academic Matters<br>IW2017 – IW2020 | Gina Guillaume-Joseph<br>Director for Outreach<br>IW2018 – IW2021 |

| Bill Chown<br>Chief Information Officer<br>IW2018 – IW2021 | Rachel LeBlanc<br>Director for Marketing and Communications<br>IW2016 – IW2019 | Art Pyster<br>Director for Strategic Integration<br>IW2017 – IW2020 | |

| Tony Williams<br>Director, Americas Sector<br>IW2016 – IW2019 | Jean-Claude Roussel<br>Director, EMEA Sector<br>IW2017 – IW2020 | Serge Landry<br>Director, Asia/Oceania Sector<br>IW2018 – IW2021 | |

**Non-voting Board Members**

| David Endler<br>Deputy Technical Director<br>IW2017 – IW2019 | TBD<br>Corporate Advisory Board Co-Chair<br>IW2018 – IW2020 | Andy Pickard<br>Chief of Staff<br>IW2016 – IW2019 | |

**Administrative Office**

| Christine Kowalski<br>Operations Manager | Carol Bernardino<br>Certification Operations Manager | Danielle "Danni" LaRoche<br>Chapter and Certification Administrator | |

# Sector Directors are the "Voice of the Chapter and Members" Within INCOSE

- Elected representatives from each Sector I, II, III
- Represents the chapters and their members
- Resource, support for local chapters

## Sector Directors' focus:
- Promote INCOSE goals to external organizations within their Sector
- Conduit between the BoD, Chapters & Working Groups
- Oversee activities that support all members

# INCOSE Technical Program: Technical Working Groups

- 46 different working groups in our Technical Operations organization

- The technical heart of INCOSE supported by many national and local working groups

- Focused on solving providing relevant problems and creating products for global use

- Sponsors multiple monthly webinar series that are archived and available online

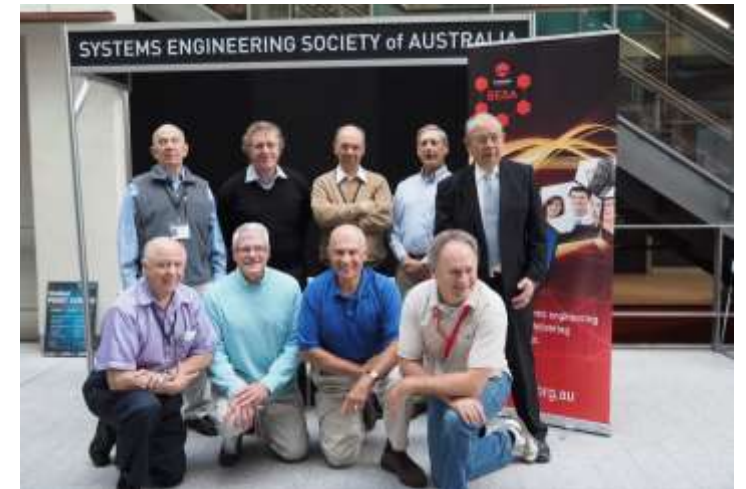- Also, includes a very influential Standards Initiative & MBSE Initiative



Individual Members Can Join – Chapters Can Collaborate

# INCOSE Technical Program: Working Groups & Initiatives

- Affordability
- Agile Systems and Systems Engineering
- Anti-terrorism International
- Architecture
- Automotive
- Autonomous Systems Test & Evaluation
- Competency
- Complex Systems
- Cost Engineering
- Critical Infrastructure
- Decision Analysis
- Defense Systems
- Enterprise Systems
- Global Earth Observation SoS
- Healthcare

- Human Systems Integration
- Infrastructure
- Knowledge Management
- Lean Systems Engineering
- Life Cycle Management
- SE Management
- MBSE Initiative
- Measurement
- Model-Based Conceptual Design
- Natural Systems
- Object Oriented SE Method
- Oil & Gas
- Ontologies
- Patterns
- PM-SE Integration
- Power & Energy Systems
- Process Improvement

- Product Lines
- Reliability Engineering
- Requirements
- Resilient Systems
- Risk Management
- SE in VSE
- Space Systems
- Standards Initiative
- Systems of Systems
- Systems Science
- System Security Engineering
- Systems Safety Integration
- Systems Security Engineering
- Tools Integration & Model Life Cycle Management
- Training
- Transportation

For more information or the complete list, visit http://www.incose.org and click "Find a Working Group"

Join a Working Group – make a difference!

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# Corporate Advisory Board

- "Voice of the Corporate Customer" for INCOSE
- Provides guidance on overall INCOSE direction, focus, and priorities
  - Includes priority needs and assessment of achievement of the needs
- Acts as a conduit between INCOSE and sponsoring organizations for
  - information exchange
  - key corporate systems engineering-related issues
  - access to corporate executive management
- Provides additional resources for INCOSE and support for chapters
- Includes the Academic Council

# Academic Council: Educational Focus

- Academic Council Composition
  - Comprises 28 universities
  - Collaborates with SE Research Center (SERC); e.g., "Worldwide Directory (WWD) for Systems Engineering and Industrial Engineering Academic Programs"
- Academic Forums
  - 3-4 per year focused on prioritizing and addressing key educational needs
- Influence of Systems Engineering and Engineering Curriculum
  - Key collaborator and primary steward for the Graduate Reference Curriculum for Systems Engineering (GRCSE)
  - Working with accreditors - participation in ABET
  - Collaboration with CSAB and IEEE-CS on Cybersecurity curriculum
- Growth of student divisions

# INCOSE Student Divisions

- Got a local student division?  Then get involved!
- Don't have a local student division?  Then be a champion to get one started!
  - Chapter sponsorship
  - Local faculty sponsor
  - Motivated students
- Student members get all of the membership benefits
- Opportunities
  - Interact with chapter and WGs on projects
    - Get hands-on learning
    - Contribute to SE as you learn
    - Mentoring – side by side with experts
  - Identify a need of INCOSE that the Student Division can achieve

# Professional Development Opportunities

- Professional Development Steering Group in place
  - Lead by Associate Director for Professional Development
- Webinars
  - Technical Operations, Working Groups, and other entities
  - Live and recorded
  - Listen or give
- Tutorials
  - Live and recorded
  - Currently 4 topical areas – SE Handbook; SE Fundamentals; Requirements; Technical Leadership
  - Plan for Affordability Analysis
  - Currently taking a more strategic, structured look
- Events – Global, National, Regional, Chapter
- SE Certification
- Leadership Institute
- Offerings from MOU organizations

# Professional Development Initiative & Projects

- Competency Framework
  - Collaborative project with other industry associations
  - Aligned with key SE references (15288, SEH, SEBoK)
- Professional Development Portal
  - Self-Assessment
  - Links to key assets related to identified skill development opportunities
- Professional Training Initiative
- Technical Leadership Institute
- Research on Characteristics of Effective Systems Engineers
  - Collaboration with SE Research Center - Helix Project
- Industry Collaboration for SE Research
- SE Certification

# INCOSE Administrative Office Provides Support

- Universal Management Services, LLC
  7670 Opportunity Road, Suite 220
  San Diego, CA 92111
  858-541-1725
  info@incose.org
- Provides executive management services
- Serves as single point-of-contact for inquiries
- Manages membership database
- Publication and Product sales
- Certification administration

*"Got a question?  Contact the INCOSE Office"*

INCOSE

# Brand Guidelines

We love that you love INCOSE. We want to make it easy for you to use our brand in the right way - explore this quick guide to our basic design elements to see how to do it.

🗋 Download INCOSE Guidelines
🗋 Download INCOSE Official Color Palette

# INCOSE Logos

Looking to download the INCOSE logos? Artwork files for print (.EPS), broadcast and web (.JPG and .PNG) can be downloaded from here. For proper usage, refer to our Brand Guidelines.



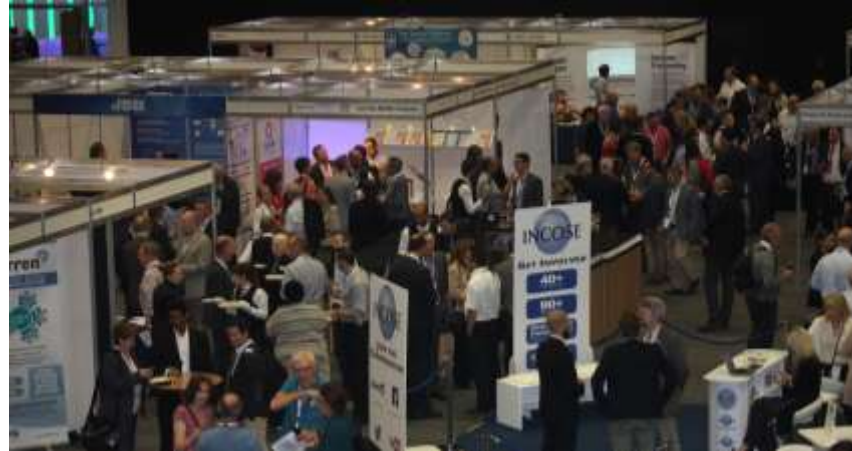Download INCOSE Logo



Download INCOSE Symposium Logo



Download INCOSE Workshop Logo

By using the INCOSE Logo and resources on this site, you agree to follow the INCOSE Guidelines in our Brand Guidelines - as well as our Terms and Service and all other INCOSE rules and policies. If you have any questions, contact us at ✉ marcom@incose.org.

# International Events Facilitate Collaboration of Systems Practitioners around the World

# Upcoming Events

- International Symposium
  - 2018: July 7-12, 2018 – Washington D.C., USA
  - 2019: July 2019 – Orlando, USA
  - 2020: July 2020 – Cape Town, South Africa

- International Workshop
  - 2018: January 20-23, 2018 – Jacksonville, FL
  - 2019: Torrance, CA

- Regional and Chapter Events

- Co-sponsored or Joint Events

# Quick Reference (Need to check links)

| Information | Where Found |
|---|---|
| About INCOSE | http://www.incose.org/about/index.aspx |
| Articles of Incorporation | http://www.incose.org/about/policies.aspx |
| Budget | Obtained from central office |
| By-Laws | http://www.incose.org/about/policies.aspx |
| CAB (Corporate Advisory Board) | http://www.incose.org/about/organization/cab.aspx |
| Chapter Information | Chapter drop-down menu on www.incose.org https://connect.incose.org/mb/chapters/effective |
| Code of Ethics | http://www.incose.org/about/ethics.aspx |
| INCOSE Store | http://www.incose.org/ProductsPubs/incosestore.aspx |
| INSIGHT | https://connect.incose.org/INSIGHT%20Library/Forms/AllItems.aspx |
| Insurance Information | Contact central office if needed |
| Journal | http://www.interscience.wiley.com/jpages/1098-1241/ |
| Leadership | http://www.incose.org/about/leadershipdirectory.aspx#BOD |
| Mission/Vision/Goals | http://www.incose.org/about/index.aspx |
| Operating Plan | http://www.incose.org/about/aop.aspx |
| Policies | http://www.incose.org/about/policies.aspx |
| Publications/Products | Products & Publications drop-down menu on www.incose.org |
| Regions & Chapters | Chapter drop-down menu on www.incose.org |
| Roles & Responsibilities | http://www.incose.org/about/organization/officersdirectors.aspx |
| Strategic Initiatives | http://www.incose.org/practice/strategicinitiatives.aspx |

INCOSE

# Back-up Charts

# Our Objectives: Growth



**Growth**: Double membership; *expand presence in other domains*

Graphic Source: SE Vision 2025.
Copyright © 2014 by INCOSE.
All rights reserved.

| | |
|---|---|
| ***Competency***: Help raise SE competency | ***Alliances***: Amplify our efforts through outreach |
| ***Impactful Products***: Create and broker impactful products | ***Impactful Forums***: Produce and support world-leading forums |
| ***Education***: Raise the quality of engineering education | ***Transformation***: Accelerate transition of SE to model-based |

- Many industry outreach efforts
- Growing number of domain application working groups
- Establishing plans that further extend SE across domains
- Formation of PM-SE Integration WG

- Growth Strategy has strong focus on broadening the practitioner base (one of the Visions objectives)

- Benefit:
  - Allows INCOSE to work more effectively towards addressing the challenges across domains

**Imperative Addressed: Expanding the APPLICATION of SE across industry domains**

# Our Objectives: Competency



Competency: Help raise SE competency

The Professional Development Learning System

Provide Value!

INCOSE

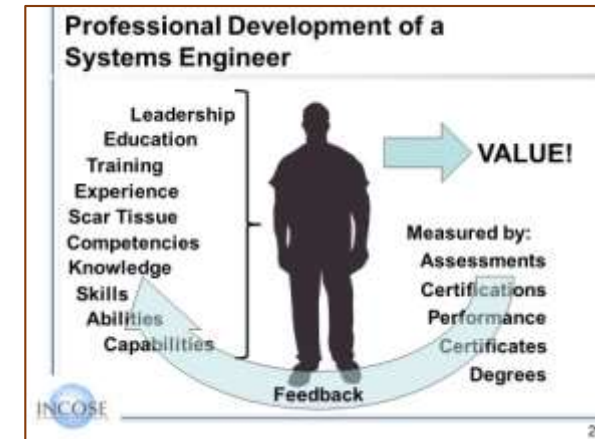| | |
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- Led by Professional Development Steering Group
- Includes Comprehensive set of initiatives and projects
- Strong collaboration with others across industry
- Focus on entire career; continuous learning
- Involves stakeholders at all points in development

- Comprehensive Professional Development (PD) capability being developed

- Benefit:
  - Helps to address the top SE issue identified across industry and government
  - Ensures having skilled people needed to address key challenges



Professional Development of a Systems Engineer

Leadership
Education
Training
Experience
Scar Tissue
Competencies
Knowledge
Skills
Abilities
Capabilities

VALUE!

Measured by:
Assessments
Certifications
Performance
Certificates
Degrees

Feedback

INCOSE

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**Imperative Addressed: Enhancing EDUCATION and TRAINING to grow a SE WORKFORCE that meets the increasing demand**

# Our Objectives: Alliances


**Alliances**: Amplify our efforts through outreach

*Growing Industry Collaboration*

| | |
|---|---|
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- Recognition of value in collaboration
- Building collaboration opportunities and strategic alliances
- Focus is on defining the outcomes and benefits to meet other objectives
- Includes reaching out to adjacent disciplines and targeted industry domains

- Collaboration rather than competition; MOUs with other industry associations
  - Not just associations focused on SE

- Benefit:
  - Integrated approach for systems

**Imperative Addressed: Expanding the APPLICATION of SE across industry domains; Enables other imperatives through collaborative projects**

# Our Objectives: Impactful Products



**Impactful Products**: Create and broker impactful products

| | |
|---|---|
| **Growth**: Double membership; expand presence in other domains | **Competency**: Help raise SE competency |
| **Alliances**: Amplify our efforts through outreach | **Impactful Forums**: Produce and support world-leading forums |
| **Education**: Raise the quality of engineering education | **Transformation**: Accelerate transition of SE to model-based |

- Continued focus on providing value to the members and industry
- Working on new product development life cycle
- Working on product registry that will bring together products from many sources

- Strong product focus to build value
  - More products with easier access

- Benefit:
  - Disseminate information and facilitate learning, discussion, and collaboration

**Imperative Addressed: Enablers for many of the imperatives**

# Our Objectives: Impactful Forums



**Impactful Forums**: Produce and support world-leading forums

27th annual INCOSE international symposium
Adelaide, Australia
July 15 - 20, 2017
SESA

| | |
|---|---|
| **Growth**: Double membership; expand presence in other domains | **Competency**: Help raise SE competency |
| **Alliances**: Amplify our efforts through outreach | **Impactful Products**: Create and broker impactful products |
| **Education**: Raise the quality of engineering education | **Transformation**: Accelerate transition of SE to model-based |

- Looking at opportunities to add forums of different types, modes, locations, …
  - Includes collaborative events
- The goal is to provide a set of high value events that span the breadth and depth of SE
  - Includes specific application areas

- Strong event focus to build value
  - More local forums, collaborative events, and focused high-impact events

- Benefit:
  - Disseminate information and facilitate learning, discussion, and collaboration

INCOSE

**Imperative Addressed: Enablers for many of the imperatives**

# Our Objectives: Education

**Education**: Raise the quality of engineering education

GRCSE ® BKCASE

*Graduate Reference Curriculum for Systems Engineering*

- Strong focus on engineering education needs
- Alignment & advancement of SE Research
- Benefit:
  - Motivate the pursuit of SE
  - Develop capabilities to support future challenges and needs

| | |
|---|---|
| ***Growth***: Double membership; expand presence in other domains | ***Competency***: Help raise SE competency |
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- Academic Council
  - Consists of 28 universities
  - Collaborates with SE Research Center (SERC); e.g., Worldwide Directory (WWD) for SE and IE Academic Programs
- Academic Forums (3-4 per year)
  - Focused on prioritizing and addressing educational needs
- Influence of Systems Engineering and Engineering Curriculum
  - Graduate Reference Curriculum for Systems Engineering (GRCSE)
  - Working with accreditors - participation in ABET
  - Collaboration with CSAB and IEEE on Cybersecurity
- Growth of student divisions

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**Imperative Addressed: Enhancing EDUCATION and TRAINING to grow a SYSTEMS ENGINEERING WORKFORCE that meets the increasing demand**

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# Our Objectives: Transformation

**Transformation:**
Accelerate transition of SE to model-based

**Growth**: Double membership; expand presence in other domains

**Competency**: Help raise SE competency

**Alliances**: Amplify our efforts through outreach

**Impactful Products**: Create and broker impactful products

**Impactful Forums**: Produce and support world-leading events

**Education**: Raise the quality of engineering education

- MBSE has been an INCOSE focus for several years
- Benefit:
  - Ability to deal with more complexity, trades, interrelationships, changes, emergence, etc.
  - Achieve higher levels of adaptability & scalability

- Strategy and Plan for Transformation
- Business Case / ROI briefing – Storylines, Case studies, and principles
- 10 different collaboration efforts internal and external to INCOSE
- Integrated into mainstream of INCOSE
  - 17 different WGs/Initiatives involved in MBSE
- Developed case studies from across 5 domains
- Collaboration to develop external views on analysis modeling, tool integration, verification and validation (CIMdata, ASSESS, NAFEMS, ASME and NIST)

**Imperative Addressed: Advancing the TOOLS and METHODS to address complexity**

# We are a global organization

Corporate Members (CAB/AC)

CAB/AC Employees, Faculty, Students

Board and Committees

Professional Support

Individual Members

Chapters/Sectors

Working Groups

Partner Organizations

INCOSE

# We need to act globally

**Project INCOSE Globally**

- Be steered by INCOSE Vision, Mission, Values and Principles, SE Vision 2025, INCOSE strategy
- Speak to people in their language and domain terminology
- Talk to people about what is important to them

**Work together effectively**

- INCOSE language for formal outputs is US English
- Take care with language, even between English speakers
- INCOSE preferred time expression is UTC
- Calendar – be aware of national and religious holidays, and different seasons
- We need to comply with California Law as it applies to INCOSE

# What we have to help

## Project INCOSE Globally

- www.incose.org – IT
- Branding & Logo – MARCOM
- Intellectual Property, Patents and Copyright - Publications
- Sanctions compliance
- Data Protection – CIO
- Translation – Publications
- Copy writing – MARCOM
- Legal advice – President-Elect (Legal Counsel if needed)

## Work together effectively

- INCOSE Connect, mailing lists, member directory – Admin
- Times and Timezones
- Calendars and Holidays
- …