



# International Council on Systems Engineering

**Chesapeake Chapter** 

**Strategic Plan** 

2020-2025

April 5, 2021

## Strategic Plan 2020-2025

Reviewed and amended by the INCOSE Chesapeake Chapter Board of Directors for the chapter's Fiscal Year April 1, 2021 – March 31, 2022.

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## 1 1. Introduction

- The Chesapeake Chapter, one of the chapters in the America Sector, is the Northern and Central Maryland area chapter of the International Council on Systems Engineering (INCOSE), formed to support INCOSE in the expansion of systems engineering understanding, practice, definition, and evolution for the benefit of our members and stakeholders. The INCOSE Chesapeake Chapter of Maryland will continue to support the mandate, strategic goals, and objectives of INCOSE as well as the application of systems engineering to all areas of emerging interest as reflected by the inputs from the chapter membership.
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10 Local industry has in the past been dominated by information technology. This industry has grown and

11 created a meaningful profession for many systems engineers and will continue into the foreseeable future.

With the recent stand-up and expansion of the US Cyber Command at Fort Meade, cyber security will likely dominate the systems engineering landscape over the next several years. Other areas of interest include:

14 integration of systems, the Internet of Things, Critical Infrastructure Protection (CIPR), and transportation

systems to include public issues such as mass transit; energy conservation through proper analysis of new

16 energy schemes such as wind power; survival of chemical, nuclear, biological events; resiliency of

17 communities, and control of civil disorder.

18

These issues are likely to remain as topics of interest to systems engineers, employers and the general public. System engineers have a leading role to play in bringing logic and discipline to these systems and programs. The Chesapeake Chapter's (the Chapter) ability to adapt to our rapidly changing political and social environment could influence major events and provide services to the country that are as yet unimagined. This document defines the strategic plan that the Chapter will use to guide its activities and efforts beginning in January 2020 and continuing through 2025. For budgetary and planning purposes, the Chesapeake Chapter Fiscal Year begins on April 1 and ends on March 31.

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This document follows the INCOSE strategic vision described in the "Vision 2025 Report - A World in
Motion, Systems Engineering 2025", July 2015. This report is available for download to all INCOSE
members free of charge on the INCOSE web site at www.incose.org.

## 30 2. INCOSE Mandate

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The Chapter Board of Directors has taken care to ensure that the Chesapeake Chapter strategic plan aligns
 with the latest INCOSE Vision 2025 and the INCOSE International Strategic Plan.

#### 35 2.1 INCOSE Mission

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Share, promote and advance the best of systems engineering from across the globe for benefit of humanityand the planet.

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#### 40 2.2 INCOSE Vision

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The INCOSE vision is captured in the "Vision 2025 Report - A World in Motion, Systems Engineering
2025", August 2014. The INCOSE vision is to *inspire and guide* the direction of systems engineering
across diverse stakeholder communities, which include:

- 45 Engineering Executives
- 46 Policy Makers
- 47 Academics & Researchers

48		- Practitioners
49 50		- Tool Vendors is vision will continue to evolve based on stakeholder inputs and on-going collaborations with
51 52	pro	fessional societies. <sup>1</sup>
53 54	2.3	3 INCOSE Strategic Goals
55 56	1.	Provide a focal point for dissemination of systems engineering knowledge.
57 58	2.	Promote collaboration in systems engineering education and research.
59 60	3.	Assure the establishment of professional standards for integrity in the practice of systems engineering.
61 62	4.	Improve the professional status of all persons engaged in the practice of systems engineering.
63 64 65	5.	Encourage governmental and industrial support for research and educational programs that will improve the systems engineering process and its practice.
66 67	2.4	INCOSE Strategic Objectives
68 69 70 71	1.	INCOSE Customers: Identify, describe, and understand our stakeholders and their systems engineering- related needs. Seek to ensure that our membership strives to both understand the diversity of our stakeholders and the variations in their needs.
72 73 74 75	2.	Products and Services: Identify, develop, provide, and continually improve a diverse and expanding set of products and services that meet or exceed the expectations of our INCOSE stakeholders. Strive to create new and innovative products and services.
76 77 78 79	3.	Communication: Become so publicly recognized and so reliable a source of information about systems engineering development and use, that INCOSE is the primary reference for industry, academia, and government and the media.
80 81 82 83	4.	Outreach and Collaboration: Increase membership along with INCOSE's ability to raise awareness of systems engineering principles and increase their application through collaboration, corporate and academic partnerships, and support of related efforts by other technical societies and organizations.
84 85 86 87 88 89	5.	Theory, Research, and Education: Identify opportunities for, facilitate sponsorship of, and disseminate rigorous professional research in topical areas that are important to systems engineering and society at large. Seek to expand both the quantity and quality of academic and industrial research that is focused on growing the body of systems engineering theory and knowledge. Promote education and training on the systems engineering discipline.
90 91 92	6.	International, National, and Regional Involvement: Become a known and respected presence and resource in the advocacy and support of international, national, and regional initiatives that would benefit from world class systems engineering.
93 94 95	7.	Structure and Operations: Evolve INCOSE's structure and operations to effectively and efficiently support a growing membership and constituency.

## 96 3. Chesapeake Chapter Mandate

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98 This section contains the Chesapeake Chapter mission statement, vision, strategic goals and strategic
 99 objectives. In order to have an executable Operating Plan, this section of the Strategic Plan must be very
 100 clear, complete, and as concise as possible.

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#### **102 3.1** Chapter Mission

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104 The Chesapeake Chapter supports INCOSE in the expansion of systems engineering understanding, 105 practice, definition, and evolution for the benefit of our members and stakeholders. The Chapter is dedicated 106 to improving membership participation though focused programming including: distribution of 107 information, education and development, and the exchange of ideas. The Chapter intends to further the 108 systems engineering reach through augmenting and sustaining this organization which is dedicated to 109 systems engineering excellence.

#### 111 3.2 Chapter Vision

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113 The Chapter will serve the professional community by encouraging, promoting, and advancing the systems 114 engineering discipline while striving to be recognized as a world-class systems engineering organization. 115

#### 116 3.3 Chapter Strategic Goals

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118 These goals provide a roadmap of the Chapter's direction for the next five years. Objectives have been 119 derived (see next section) from these goals, and they will be reviewed on an annual basis to determine their 120 continued relevance, probability of successful implementation, and sustained alignment with INCOSE 121 strategic thinking.

Provide a regional forum for industry, government, and academic organizations to meet regularly and discuss systems engineering technology, the systems engineering process, its application to present and future technologies, and the management of systems engineering activities.

- Provide outstanding support to Chapter stakeholders (including system engineers, engineering organizations and systems engineering customers) in their efforts to understand, apply, and support systems engineering in industry, academic, and government domains.
- Provide stakeholders with education, information, training and exchange of ideas for the application
   of systems engineering to current and future technical areas of interest for improved job performance
   and individuals' growth opportunities. This includes support of INCOSE's efforts to certify systems
   engineering professionals.
- Invigorate and grow efforts to support the development and interest in systems engineering among
   young people to include primary, secondary and college students. Create and enrich student divisions
   affiliated with the Chesapeake Chapter.
- Attract and recruit new members capitalizing on the Chapter's convenient location with respect to
  Defense and Aerospace companies, and other organizations involved in the growing information
  technology and cyber-security fields. Diversify and expand membership to other corporate,
  government and academic organizations that comprise emerging technical areas such as: healthcare,
  mass transit, energy, bio-medical/technology, commercial and non-commercial organizations.

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146	3.4 Chapter Strategic Objectives				
147	on onapter brategie objectives				
148	Unlike the goals, our objectives are quantified and time-framed. The Chapter will strive to achieve them				
149	within the next three to five years. They are specific and will serve to measure how well the Chesapeake				
150	150 Chapter is meeting general goals. The objectives include:				
151	1	Build the membership base by retaining existing members, reaching out to lapsed members, and			
152	1.	recruiting new members. Grow our membership base at a minimum of 20% per year, consistent with			
153		the INCOSE International objective to increase membership by 100% over the next 5 years.			
154					
155	2.	In addition to maintaining monthly Chapter technical meetings, provide local and regional tutorials			
156		and workshops throughout the year.			
157					
158	3.	Encourage participation in INCOSE Working Groups. Double the number of Chapter members who			
159		are active in a Working Group over a two-year period.			
160					
161	4.	Establish a chapter initiative or Special Interest Group (SIG) dedicated to increasing participation			
162		among Women Systems Engineers within the Chapter.			
163					
164	5.	Maintain annual contributions to the INCOSE Foundation to sponsor the Chapter's Academic and			
165		Student outreach to young people interested in pursuing an engineering or technical career through			
166		college scholarships offered in the Chesapeake Chapter's name.			
167	~				
168	6.	Establish additional Student Division(s) affiliated with the Chesapeake Chapter between 2020 – 2025.			
169	7	E-mail the Charter's management of the formula the implementation of a tallity have the			
170	1.	Expand the Chapter's presence and influence through the implementation of satellite locations			
171 172		(virtual meetings), and investigate alternative locations to our core operations, storage and events for			
172		contingency purposes.			
173	8.	Annually provide to membership at least four (4) opportunities to participate in Student Outreach to			
175	о.	the central Maryland community. Activities to be supported are school district engagements that			
176		encourage and educate students with regard to the STEM disciplines such as: science fairs, robotic			
177		competitions, and other student mentoring in STEM.			
178		competitions, and other student mentoring in STEW.			
178	0	Build more collaborative relationships with other INCOSE Chapters co-sponsoring at least one			
180	9.	annual event such as briefings, panel discussions, technical meetings, workshops and symposia.			
181		annual event such as orienings, panel discussions, technical meetings, workshops and symposia.			
182	10	Establish enduring collaboration efforts with other professional societies, universities, and			
183	10.	organizations (e.g., PMI, IEEE) by conducting, on an annual basis, at least two joint initiatives that			
184		involve advancing the body of knowledge in systems engineering.			
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186	11.	Provide ongoing support for INCOSE's system engineer certification efforts in the central Maryland			
187		area by facilitating meetings between INCOSE representatives and potential candidates and their			
188		firms, sponsoring preparation workshops for engineers applying for certification, and general			
189		advertising and promotion of certification activities.			
190		-			
191	12.	Facilitate and support research and education efforts by Chapter members and their parent			
192		organizations to include successful paper or panel applications for the International Symposium,			

- research articles in the Systems Engineering Journal, application papers in other refereed journals, and sponsorship of tutorials at the international and regional workshops.
- 196 13. Complete an annual Operational Plan that contains specific actions that support the Chapter's strategic goals and objectives.

### 199 4. Summary

The Chesapeake Chapter BOD believes that all of the objectives stated in this plan meet the standard of specificity, measurability, attainability, relevance, and time framed. The plan provides a robust roadmap that will serve as a guide to the Chesapeake Chapter companion 2021 Operating Plan which will contain more concrete actions and directions. Questions about this plan should be directed to the President of INCOSE Chesapeake Chapter at <u>president@incose-cc.org</u>.

StrategicPlan2021

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