



## 1 PURPOSE

Evaluate evolving changes to systems engineering processes and practices and develop measures to integrate social and socio-technical systems understanding at theoretical, applicative and technical levels, in collaboration through outreach initiatives with the social sciences and interested stakeholder groups.

## 2 GOALS

1. Regularly assess relationships between systems engineering and social sciences
2. Identify and support communities of practice at the intersections
3. Share common challenges, best practices and productive approaches
4. Enhance understanding of interactions between systems engineering and social systems, and respective drivers of change
5. Develop work products for and monitor changes in systems engineering processes and practices
6. Grow in participation and effectiveness

## 3 SCOPE

While the relationship between systems engineering and social science is an area not currently covered in systems engineering standards, handbooks and textbooks, connections between social systems and systems engineering are deep. Through joint work with applicable social science disciplines - such as anthropology, economics, geography, history, law, politics, psychology and sociology - SocWG seeks to 1) normalize the linkage of social science and systems engineering 2) apply sociological principles in the integration of teams and communities that are engineering systems and 3) improve integration of systems engineering with the social scientific evaluation of social and socio-technical systems. We aim to develop useful products that foster the understanding and application of social systems' relevance in systems engineering practice and the development of products for the implementation of social systems engineering in systems engineering processes. In addition, we aim to highlight, demonstrate and develop methods for how systems engineering can be applied in the understanding of social systems.

## 4 COLLABORATIVE STAKEHOLDERS

Skills and expertise drawn from social scientists, systems theorists, and stakeholder groups are sought to collaborate on successful outcomes from the SocWG. This expertise will be acquired initially through networking and developing relationships with the social science professional societies, such as (\*relationship established): American Sociological Association, Rural Sociology Society, European Rural Sociology Society\*, European Social Policy Association\*, System Dynamics Society\* and Association for Public Policy and Management. The SocWG will also seek



collaborations with academic councils, industry working groups, stakeholder group experts, and consultancies on an ongoing and as-needed basis.

### 5 OUTCOMES (PRODUCTS/SERVICES)

The outcomes of the SocWG include:

1. Develop working relationships with other working groups
2. Social systems primer for systems engineering
3. Guidelines for ethical Practice/best practices
4. Review and develop contributions to:
  - Tools Database
  - SEBoK
  - SE Handbook
  - ISO standards, such as 15288 (TBD)
5. IS papers and Systems Engineering journal papers

### 6 APPROACH

The SocWG will meet at least quarterly on business matters in addition to ad hoc meetings on any joint projects, the IS and IW. We will also have presentations with other working groups, such as the Natural Systems WG and the Complex Systems WG.

Decision-making concerning WG tasks will be decided by the co-chairs following consensus/vote after discussion at the meetings. The SocWG co-chairs are responsible for QA and follow-up of their respective/agreed task deliverables. The SocWG co-chairs are also responsible for general working group communication and handling any subsidiary conflicts that arise.

### 7 MEASURES OF SUCCESS

Success of the SocWG will be measured by the development of products listed above in 5 Outcomes and progress on the listed Goals. Further, we also consider ~~the size of~~ participation in the SocWG activities as a measure of success, as well as the number and quality of collaborative relationships the SocWG has with other working groups, and collaborating stakeholders.

### 8 RESOURCE REQUIREMENTS

The SocWG will document the overall resources requested and received from INCOSE to attain success in terms of both human and annual dollar (US) requirements. This may include infrastructure support (e.g. telecoms, Microsoft LiveMeeting) to support collaborative activities consistent with the interests of the INCOSE organization and its members.

If resources outside INCOSE are required to support specific WG activities, the SocWG will plan what resources, as well as roles, responsibilities, and the proposed method(s) to secure attainment of these resources.



## 9 DURATION

This Charter will remain in effect until rescinded by the signatory.

## 10 APPROVAL (INCLUDE MEMBER ROLES & RESPONSIBILITIES IN ADDENDUM)

Technical Director, INCOSE

Date

### Revision History

<u>Date</u>	<u>Revision</u>	<u>Description</u>	<u>Author</u>
27 Sept 2019	1.0	Initial Draft.	Erika Palmer/Randy Anway