INCOSE Strategic Vision

Michael D. Watson (Michael.watson@incose.net)

INCOSE is a Nexus of integration of advancements in systems engineering. We provide an opportunity for contributions from individuals in all industrial sectors and in countries across the world to contribute to the application and advancement in systems engineering. As an international organization, we facilitate the sharing of systems engineering knowledge, validation of concepts across industries and cultures, and opportunity for integration into world class products as we advance systems engineering. The opportunities that we have today are shaped by the initiatives we have started over the past several years. I am seeking to continue these initiatives, facilitate their progression, and expand our reach into different sectors in industry and culture across the world.

I joined INCOSE at the International Workshop 2014. I am currently serving as the Systems Engineering Principles Action Team (SEPAT) chair and the Complex Systems Working Group (CSWG) chair. As CSWG chair I advocated for the establishment of the Social Systems Working Group and have worked to establish collaborations across several working groups. I started my systems engineering career with the National Aeronautics and Space Administration (NASA) in 1989, serving in lead systems engineering for a number of NASA Program projects and NASA Branches including the Spacelab Program, International Space Station (ISS) Program, Ares I, SLS, founder of the NASA Systems Engineering Research Consortium, and Advanced Concepts Office Technical Advisor. After retiring from NASA, I joined Leidos Dynetics and am the SE&I Branch Manager in the Space Division.

I am a strong advocate for the advancement of the practice and theory of systems engineering. The Future of Systems Engineering (FuSE) initiative is an important part of this advancement. Connecting FuSE initiatives with application in our processes is essential to improve the practice of systems engineering as we expand the theoretical understanding. I would like us to define the roadmap for connecting these important results. Having led a systems engineering research consortium for several years, I believe that theory is important and that theory that leads to improved practice is essential.

Engaging in INCOSE working groups and activities by our members provides personal growth in application of systems engineering knowledge and contribution to advancing the theory and practice of systems engineering. This is the value that we bring to the systems engineering communities. There are areas where economic circumstances can limit participation including academic students, smaller industrial based countries and regions, and small businesses. I would like to see how can enable these groups to be more active, improving accessibility in support of increasing INCOSE membership and global impact.

INCOSE efforts have been focused mainly on certification of individuals. I believe that INCOSE can also provide resources to support certification at the corporate level. INCOSE should support companies in the education and qualification/certification of systems engineers at the organizational level as well as at the individual level. I would like to see INCOSE develop complimentary programs to support organizations striving to improve their systems engineering basis.

INCOSE has an organizational culture that is respectful of individuals, their understanding of systems engineering, and personal growth in systems engineering. This is an important characteristic for an organization that is made up of people from many different cultures throughout the world. I support this diversity in our membership and will strive for this in our participation opportunities at all levels.