Acknowledgements and Release History

The printable version is no longer supported and may have rendering errors. Please update your browser bookmarks and please use the default browser print function instead.

Video Created by Rob Cloutier. (2019 SEBoK Editor in Chief, SEBoK Original)

This article describes the contributors to the current version of the SEBoK. For information on contributors to past versions of the SEBoK, please follow the links under "SEBoK Release History" below.

The BKCASE Project began in the fall of 2009. Its aim was to add to the professional practice of systems engineering by creating two closely related products:

- Guide to the Systems Engineering Body of Knowledge (SEBoK)
- Graduate Reference Curriculum for Systems Engineering (GRCSE)

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BKCASE History, Motivation, and Value

The Guide to the Systems Engineering Body of Knowledge (SEBoK) is a living authoritative guide that discusses knowledge relevant to Systems Engineering. It
defines how that knowledge should be structured to facilitate understanding, and what reference sources are the most important to the discipline. The curriculum guidance in the Graduate Reference Curriculum for Systems Engineering (GRCSE) (Pyster and Olwell et al. 2015) makes reference to sections of the SEBoK to define its core knowledge; it also suggests broader program outcomes and objectives which reflect aspects of the professional practice of systems engineering as discussed across the SEBoK.

Between 2009 and 2012, BKCASE was led by Stevens Institute of Technology and the Naval Postgraduate School in coordination with several professional societies and sponsored by the U.S. Department of Defense (DoD), which provided generous funding. More than 75 authors and many other reviewers and supporters from dozens of companies, universities, and professional societies across 10 countries contributed many thousands of hours writing the SEBoK articles; their organizations provided significant other contributions in-kind.

The SEBoK came into being through recognition that the systems engineering discipline could benefit greatly by having a living authoritative guide closely related to those groups developing guidance on advancing the practice, education, research, work force development, professional certification, standards, etc.

At the beginning of 2013, BKCASE transitioned to a new governance model with shared stewardship between the Systems Engineering Research Center (SERC), the International Council on Systems Engineering (INCOSE), and the Institute of Electrical and Electronics Engineers Computer Society (IEEE-CS). This governance structure was formalized in a memorandum of understanding between the three stewards that was finalized in spring of 2013 and subsequently updated. In January 2020, the IEEE Systems Council replaced the IEEE-CS in representing IEEE as a steward. The stewards have reconfirmed their commitment to making the SEBoK available at no cost to all users, a key principle of BKCASE.

As of May 2022, SEBoK articles have had over 6M pageviews from more than 2M unique visitors. We hope the SEBoK will regularly be used by thousands of systems engineers and others around the world as they undertake technical activities such as eliciting requirements, creating systems architectures, or analyzing system test results; and professional development activities such as developing career paths
for systems engineers, and deciding new curricula for systems engineering university programs.

**Governance**

The SEBoK is shaped by the SEBoK Editorial Board and is overseen by the BKCASE Governing Board. A complete list of members for each of these bodies can be found on the BKCASE Governance and Editorial Board page.

**Content and Feature Updates for version 2.9**

This version was released on 20 November 2023. This release included:

- Governance and Editorial Boards changes including a new Editor-in-Chief and Managing Editor
- A new article on Reverse Engineering a UAV Prototype using Agile Practices
- A new article on System Security that replaces the one found in SEBoK 2.8
- A new article on the An Overview of the SWEBOK Guide that replaces the one found in SEBoK 2.8
- An updated article on Loss Driven Systems Engineering, A Framework for Viewing Quality Attributes from the Lens of Loss
- An updated article on System Resilience
- A transition from the use cases originally published in SEBoK v. 1.0 to more persona-driven guidance for different types of users
- Minor updates to articles throughout the SEBoK

**SEBoK Release History**

There have been 21 releases of the SEBoK to date.

**Main Releases**

- Version 2.9 - current version.
- Version 2.8 - this release included new articles on systems engineering and enterprise IT, and system adaptability; minor updates to several articles throughout the wiki; improvements to the wiki
infrastructure; and Rob Cloutier's final edition of the SEBoK as Editor-in-Chief.

- Version 2.7 - this release included new articles on loss-driven systems engineering and the history of systems engineering; updates to the article on systems and industrial engineering; and minor updates to improve resources and align with evolving practices throughout part 3, including in the articles around systems engineering standards and to the articles in Part 5, particularly the addition of new resources. There were also some improvements in the SEBoK wiki infrastructure.

- Version 2.6 - this update included substantial evolution of Parts 2 and 3, the foundations of systems engineering and systems engineering approaches, methods, processes, and tools. The version also included more information on Model-Based Systems Engineering (MBSE) and Digital Engineering, refinement of systems science foundations of systems engineering, and a new article on agile approaches. In Part 6 there were many new articles and updates to existing articles on the relationships between systems engineering and other disciplines.

- Version 2.5 - This version included an update of the main page; creation of the Editor's Corner; new sponsors and sponsorship packages; new navigation in the left-hand menu; small edits to address the comments received from the community. This release also updated to the latest version of MediaWiki, tightened up the IT infrastructure, and made some adjustments to improve performance.

- Version 2.4 - This was a minor release, including reorganizations of Part 6 and 8 to handle new knowledge areas and topics. In addition, several new articles were added, including, Systems Engineering Heuristics, Diversity, Equity, and Inclusion, Systems Engineering and Geospatial/Geodetic Engineering Knowledge Area, System Hardware Assurance, Socio-technical Systems, Verification and Validation of Systems in Which AI is a Key Element, and an introductory article on Artificial Intelligence. The content on Systems of Systems (SoS) was also updated.

- Version 2.3 - This was a minor release, including two new articles: Cycles and the Cyclic Nature of Systems
and Portfolio Management. A number of additional minor edits, including a new overview graphic for the SEBoK, cleanup of existing pages, software updates, etc. were incorporated.

- **Version 2.2** - This was a significant release, including the first new Part to be added since v. 1.0 - Emerging Knowledge - which is a place to highlight new topics in systems engineering that are important but may not yet have a large body of literature. Recent dissertations around emerging topics are also included. A new case study on Apollo 1 was added to Part 7, which has also been reorganized around topics. Additional minor updates have occurred throughout.

- **Version 2.1** - This was a significant release with new articles, new functionality, and minor updates throughout.

- **Version 2.0** - This was a major release of the SEBoK which included incorporation of multi-media and a number of changes to the functions of the SEBoK.

- **Version 1.9.1** - This was a micro release of the SEBoK which included updates to the editorial board, and a number of updates to the wiki software.

- **Version 1.9** - This was a minor update which included updates to the System Resilience article in Part 6: Related Disciplines, as well as a major restructuring of Part 7: Systems Engineering Implementation Examples. A new example has been added around the use of model based systems engineering for the thirty-meter telescope.

- **Version 1.8** - This was a minor update, including an update of the Systems of Systems (SoS) knowledge area in Part 4: Applications of Systems Engineering where a number of articles were updated on the basis of developments in the area as well as on comments from the SoS and SE community. Part 6: Related Disciplines included updates to the Manufacturability and Producibility and Reliability, Availability, and Maintainability articles.

- **Version 1.7** - This was a minor update, including a new Healthcare SE Knowledge Area (KA), expansion of the MBSE area with two new articles, Technical Leadership and Reliability, Availability, and Maintainability and a new case study on the Northwest Hydro System.

- **Version 1.6** - This was a minor update, including a
reorganization of Part 1 SEBoK Introduction, a new article on the Transition towards Model Based Systems Engineering and a new article giving an overview of Healthcare Systems Engineering, a restructure of the "Systems Engineering and Specialty Engineering" (now Systems Engineering and Quality Attributes) KA.

- Version 1.5 - This was a minor update, including a restructure and extension of the Software Engineering Knowledge Area, two new case studies, and a number of corrections of typographical errors and updates of outdated references throughout the SEBoK.
- Version 1.4 - This was a minor update, including changes related to ISO/IEC/IEEE 15288:2015 standard, three new case studies and updates to a number of articles.
- Version 1.3 - This was a minor update, including three new case studies, a new use case, updates to several existing articles, and updates to references.
- Version 1.2 - This was a minor update, including two new articles and a revision of several existing articles.
- Version 1.1 - This was a minor update that made modest content improvements.
- Version 1.0 - This was the first official version of the SEBoK intended for broad use and was released 15 September 2012.

Click on the links above to read more information about each release.

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SEBoK v. 2.9, released 20 November 2023