

USNC Candidate Essay:

The standards community plays a key role in exploring emerging industries, fostering innovation, and addressing challenges to meet future demands. Famously, American architect, systems theorist, and futurist Buckminster Fuller noticed that until 1900 human knowledge doubled approximately every century and created the “Knowledge Doubling Curve”¹. However, by the end of 1945, Fuller said knowledge was doubling every 25 years and by 1982 it was doubling every 12-13 months. In coherence with this exponential growth, experts at IBM now estimate that human knowledge doubles every 11 hours.² With this monumental challenge to understand new knowledge and information, standard bodies must keep and stay ahead of technological advancements.

Standards development must adapt to technological advancements, evolving industries, and changing societal needs. Fortunately, the standards community is actively addressing the future of standards development in several explicit ways such as the exploration of emergent technologies where standardization bodies are proactively studying and developing standards for emerging technologies such as artificial intelligence, blockchain, and the Internet of Things. These efforts aim to ensure interoperability, security, sustainability, and ethical considerations, thereby facilitating the responsible implementation of these technologies. For these efforts to be well-aimed the standards community strategically promotes collaboration among diverse stakeholders, including industry experts, researchers, regulators, policymakers, and end-users. By involving a wide range of perspectives, standards can be developed that are comprehensive, relevant, and widely accepted. On account of the amalgamation of diverse topics with scopes that may appear separate but overlap it is important to have communication between different standard bodies. For example, some standardization bodies, including IEC, are aligning their work with the United Nations' Sustainable Development Goals (SDGs). With SDGs, standards related to renewable resources, energy efficiency, and social inclusivity are being developed to contribute to the achievement of these global goals from fields ranging from telecommunications to agriculture.

It can be observed that the standards community is embracing the internet as their primary means of communicating and collaborating with their own digital transformation occurring by employing advanced technologies to improve the standards development process. This includes the use of digital platforms, data analytics, and automation to enhance efficiency, accessibility, and real-time updates for stakeholders and end-users. This evolution of interfacing has led to standards bodies to develop their outreach programs and approaches. Standards communities also recognize the importance of attracting and engaging the next generation of professionals through seminars, webinars, and conferences. Initiatives such as mentorship

¹ Fuller, R. Buckminster, and Kiyoshi Kuromiya. *Critical path*. Macmillan, 1981.

² Corporation, IBM. “The Toxic Terabyte.” Internet Archive, 2006, ia801003.us.archive.org/2/items/TheToxicTerabyte/The%20Toxic%20Terabyte.pdf.

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programs, educational partnerships, and outreach activities are being implemented to raise awareness about the value of standards and encourage active participation.

In conclusion, the standards community is tackling the future of standards development in a multitude of ways such as embracing emerging technologies, promoting collaboration, aligning with global goals, engaging new professionals, and embracing digital transformation. In a rapidly changing world, the standards community's dedication to innovation, collaboration, and addressing future demands is crucial. By actively adapting and leading in these areas, the community ensures that standards development remains relevant, effective, and impactful for industries, technologies, and society as a whole.