

Editorial

# Special Issue: Feature Papers to Celebrate the Inaugural Issue of *Standards*

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Standards are a set of guidelines or criteria used to ensure consistency, quality, safety, and compatibility in products, services, and processes. They provide a basis for testing, inspecting, and certifying products and services.

Companies can use various kinds of standards, including international standards such as ISO (International Organization for Standardization), national standards such as ASTM (American Society for Testing and Materials), regional standards, and corporate standards. These standards cover a wide range of topics, such as management systems, risk management, energy management, environmental management, social responsibility, quality management, and testing and calibration laboratories.

New standards are continuously emerging due to the changing needs of the industry, advances in technology, and global events such as pandemics and climate change. For example, in response to the COVID-19 pandemic, the ISO developed 30 standards related to COVID-19. As we face climate change and the need for sustainability, new standards related to energy efficiency, the circular economy, and environmental management are likely to emerge.

Standards are necessary because they provide a common language and framework for companies, governments, and other organizations to communicate and work together. They help to increase efficiency, improve quality, and reduce costs. Standards also provide a level of assurance to customers and stakeholders that products and services meet certain requirements and expectations.

Climate change and sustainability are closely connected to standards. The development and implementation of standards related to energy efficiency, renewable energy, and environmental management can help companies reduce their environmental impact and contribute to a more sustainable future. Standards also provide a framework for measuring and reporting on progress towards sustainability goals.

Being aware of the importance that standards have for the human society in general, and specifically for individuals, consumers, companies, institutions, governments, etc., MDPI (Multidisciplinary Digital Publishing Institute) established the journal *Standards* in 2021. *Standards* is an international, peer-reviewed, open access journal on standardization, inspection, verification, certification, testing, and quality control published quarterly online.

The first paper was published in *Standards* in May 2021 and the second one in August. Altogether, there were 12 papers published in 2021 and 39 in 2022. The most popular paper in 2021 has 4014 views and the top one published in 2022 has 3225 views. The most cited paper published in 2021 has seven citations so far, and the most cited in 2022 has 9 citations already. They are indexed by DOAJ (Directory of Open Access Journals). There are 102 Editorial Board members, 72 of them coming from the European Union member states.

Two Special Issues were organized in 2021, and eight of them had three additional topic titles in 2022. The present Special Issue ([https://www.mdpi.com/journal/standards/special\\_issues/Inaugural\\_Issue](https://www.mdpi.com/journal/standards/special_issues/Inaugural_Issue) accessed on 31 March 2023) is the inaugural Issue of this journal, with 29 papers in total. We thank all of the authors, reviewers, and members of the Editorial Board for facilitating the successful start of the *Standards* journal.



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## Special Issue Overview

In today's world, where sustainability, innovation and quality are the key success factors, the need for standardization has become increasingly important for many reasons, including promoting innovation, improving quality, ensuring safety and sustainability, reducing costs and increasing efficiency [1]. In this journal, we compile a collection of articles that address various aspects of standardization, its challenges and benefits. From the quality of products and services to the protection of the environment, standards play a critical role in shaping the future of businesses and societies alike [2]. In this journal, each article offers valuable insights into the role of standardization in promoting sustainable and innovative practices in different sectors. We hope that the articles will be of interest to researchers, practitioners, and policy makers in the field of standardization.

The development and implementation of standards presents various challenges, including technological and socio-economic factors [3]. In addition, the language barrier is another challenge in implementing standards [4].

Voluntary sustainability standards (VSS) are gaining momentum and are being adopted by more and more organizations [5]. Companies using quality and innovation management systems face the challenge of integrating them [1,6,7].

New technologies and processes require standardization to enable the seamless interaction of different technologies, to facilitate the integration of different applications and services, and to foster innovation, e.g., in the development of smart cities [8,9]. Manufacturers can demonstrate the quality and performance of their products, which in turn increases confidence in the construction industry and ultimately leads to a better and safer built environment [10–14].

Standardization also played a crucial role in developing effective measures and strategies in response to the pandemic [3]. In the field of medicine, standards can help establish best practices, improve accuracy and consistency, and enable fair, objective decision making processes [15–18].

The use of standardized definitions and units helps to ensure consistent and accurate measurements across countries and territories [19–22]. In chemical and environmental engineering, this is essential to ensure the safety and health of the public and the environment [23,24]. In science education, teachers must have the competence and confidence to integrate science and engineering practices into the classroom [25].

In summary, standardization can facilitate the sharing of data and best practices among stakeholders, thus promoting the adoption of more sustainable practices [19]. As science and technology continue to advance, the need for standards and guidelines will only increase [26–29].

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