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International Standards and the Fourth Industrial Revolution



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Just as standards were crucial during the first industrial revolution, over 250 years ago, they will also play a critical role in the fourth.

The Fourth Industrial Revolution refers to the emerging technologies, which are blurring the traditional boundaries between the physical, digital and biological worlds. This increased connectivity of people and things will impact the way we produce, trade and communicate, much like steam power transformed production methods and the way of life of many societies during the first Industrial Revolution.

In the 18th century, the transition from manual work to machinery and factory work raised the need for standards. For example, to replace machine parts and enable specialized mass production of components.

Today, standards will once more play a key role in the transition to a new era. The speed of change we are witnessing would not be possible without them. Innovators rely on International Standards, like those produced by IEC, ISO and ITU, to ensure compatibility and interoperability, so that new technologies can be seamlessly adopted. They are also a vehicle to spread knowledge and innovation globally.

The rapid pace of change brought by the Fourth Industrial Revolution has its challenges. Robots and artificial intelligence will take over more and more tasks previously done by humans, additive manufacturing (also known as 3D printing) will change the way we make goods, and give us the ability to “print things” at home, and as everything from planes to baby monitors are connected digitally, the vulnerability of data and the consequences of a breach are growing exponentially. These are only some examples of the issues presented by a new generation of smart technologies characterized by big data, increased integration, cloud storage and open communication of devices to name a few. International Standards are a powerful way to ensure safety and minimize risk. For example, security standards can keep our data safe and deter hackers. And safety standards for robots, will make it easier to interact with humans.

The Fourth Industrial Revolution has begun, but in order to seize its full potential for the betterment of society, standards are needed.