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Item 9 of the provisional agenda

Panel discussion: digital and green transformations and their relations to regulatory cooperation and standardization policies

Moving towards a digital and green economy: the importance of standardization and harmonized policies

Submitted by the Secretariat

Summary

This document is proposed to fuel the discussion during the 32nd session's panel discussion on digital and green transformations and their relation to regulatory cooperation and standardization policies. It is not intended to be comprehensive, but rather to propose some angles through which this topic can be addressed, in view of further integrating this topic into the work of WP.6.

Proposed decision

“The Working Party takes note of the proposed theme of the ECE's seventieth session (digital and green transformations for sustainable development in the ECE region) and the links that this theme can have with the core activities of the Working Party. It requests the Bureau to explore these links and propose options for supporting digital, green transformations within available resources and in cooperation with relevant international and regional organizations and development partners, as appropriate.”

I. Introduction

1. The 199th meeting of the ECE Executive Committee proposed that the cross-cutting theme for the high-level segment of the 70th Commission session will be “digital and green transformations for sustainable development in the ECE region” (ECE/EX/2021/32). Ahead of this decision, the Working Party on Regulatory Cooperation and Standardization Policies (WP.6) has decided to organize a panel discussion during its 32nd annual session to explore how the work of WP.6 relates to this theme. This paper aims to provide some angles from which this topic can be addressed in future work of WP.6.
2. Digital and green transformations can potentially impact all areas of a country’s economy, including quality infrastructure. These can be positive transformations, but can also pose challenges that need to be addressed.
3. Quality infrastructure is the main preoccupation of WP.6 and includes standardization, metrology, conformity assessment, accreditation, market surveillance, inspection, technical regulations, international regulatory cooperation and risk management. WP.6 also has a focus on gender-responsive standards.¹

II. Positive impact of digitalization and green transformations

3. Digitalization can help move towards automation and streamlining procedures. Any digitalization, especially the dematerialization of data exchange will always oblige the community to rethink existing processes. In order to digitalize, first all the steps of a process must be well documented. This is an opportunity to identify redundancies and duplications which can be weeded out. It can also assist in considering how the process could be better optimized. This could be the case for many aspects of quality infrastructure, for example, when considering an electronic version of a conformity certificate or when replacing a paper process in standards development with an enterprise resource planning (ERP) tool.
4. Specific digital tools can help to optimize processes within quality infrastructure. Many accreditation processes require conducting interviews and visiting of warehouses or production sites. During the COVID-19 pandemic, many of these processes needed to be either postponed or conducted virtually through distant meeting tools. As this has now proven possible, with an equivalent level of trustworthiness, it is possible to continue such virtual consultations.
5. Digital measuring tools can also help to ensure accuracy of metrology and inspection services, eventually to the millionth of a millimetre. Such tools can also ensure that this is done in a consistent manner over time, without fluctuations. This ensures consistency and fairness in controls.
6. Artificial intelligence and machine learning can assist with risk management analysis and improve controls based on real data. This can help to expedite legitimate trade and help identify movement of goods which could potentially cause harm. Artificial intelligence could also be used in areas such as standardization, market surveillance, conformity assessment among others, in order to streamline the processes and ensure that analysis are based on quality data.
7. The above digitalization can contribute to reducing a carbon footprint and lead towards a green transformation. This is especially true for the use of virtual meeting tools which avoid that experts have to travel extensively, sometimes across continents. Dematerializing paper processes either through electronic declarations or ERP systems can also reduce the impact on use of paper and the transport of that paper between parties (albeit keeping in mind the cost of electronically storing such data for regulatory archival periods).

¹ W.P.6 does not work on agricultural or pharmaceutical products but could work on agricultural machinery or pharmaceutical devices.

III. Challenges linked to digitalization and green transformations

8. Quality infrastructure controls products. Technology is integrated more and more in today's products. This can potentially raise challenges.

9. For example, there is a product on the market of a pillow with a clock integrated. What standards should apply to the product: standards for pillows, or for a digital clock, or both? How should the conformity assessment of the product be conducted: as for a pillow, as for a digital clock or the culmination of both? How should safety inspections be conducted?... and so on. For a product that combines two different characteristics, would the controls be based on a culmination of controls each time? This would make inspections and conformity assessment more expensive (because testing against multiple criteria). Or should there be new standards for such products?



Source: Nihondeikimasho 7 April, 2014 in Blog as published on <https://nihondeikimasho.wordpress.com/2014/04/07/un-reveil-oreiller-vibrant-vibrating-alarm-clock-pillow/>

10. A pillow with a clock is relatively easy to visualize, but there is invisible technology in many of the products that surround us. The internet of things (IoT) can integrate microchips into products that are inactive until they are in proximity to a respondent device that reads their information. Such microchips can be as small as a pin, interwoven into fabric. How to test and ensure the conformity of these elements when they are barely visible?

11. Artificial intelligence is also being integrated into many products that we use daily. These algorithms may be communicating information through internet connections to distant servers (in other countries) and may even be receiving instructions back. Quality infrastructure is in large part in place to protect consumers and the society, but how to ensure this when these algorithms are in the hard coding of the products and potentially invisible to regulatory authorities and inspection agencies?

IV. Potential way forward for Working Party 6

12. Digitalization and green transformations can be strongly linked to quality infrastructure and the work of WP.6. WP.6 could further study both the opportunities and the challenges that this theme presents and develop guidance and/or organize conferences on the topic, while still staying in line with the objectives and programme of work of WP.6. Some questions for discussion during the 32nd session:

- What are the interaction between digitalisation and green transformations and their relevance for the different areas of work of WP 6?
- What are the challenges and opportunities arising in these areas of interaction?
- What can WP 6 and its subgroups do to facilitate the digital and green transformations in the PanEuropean region, and in particular in UNECE's 17 programme countries?