

# The International Organization for Standardization

## *A Seventy-Five-Year Journey toward Organizational Resilience*

*Stephanie Bijlmakers\**

### 13.1 INTRODUCTION

The International Organization for Standardization (ISO) has grown to become one of the world's most influential standards development organization (SDO) since its creation in 1946 (formally in 1947). A main source of its influence resides in its epistemic authority and standard-setting capacity, reflected, among others, in the increasing number of International Standards and standard-like instruments it has developed over the years, totaling 22,913 by 2020.<sup>1</sup> These standards cover a wide spectrum of issues in the economic, environmental, and social spheres. These issues range from terms and definitions and the dimensions and physical interoperability of goods, to product and service quality and safety requirements, management standards, conformity assessment practices, social responsibility, and climate change.<sup>2</sup> ISO standards and deliverables have an important role in the global economy; their use can improve the efficiency of production, the dissemination of innovation and best practices, and facilitate trade and market access. ISO standards are voluntary in that individuals or organizations have no legal

\* This research has received funding from the European Research Council (ERC) under the Horizon 2020 research and innovation program (Grant Agreement No ERC-2016-CoG 725798 - REVEAL). I am thankful for the comments by Panagiotis Delimatsis, Enrico Partiti, M. Konrad Borowicz, and participants at the ERC conference on “The Evolution of Transnational Private Rule-Makers” in November 2020, and the research support from Zuno Verghese, Shrvan Subramanyam and Paul Forrester. Any errors are of the author's alone.

<sup>1</sup> ISO, About Us: ISO in Figures, [www.iso.org/iso-in-figures.html](http://www.iso.org/iso-in-figures.html). Also see C. Ruwet, Towards a Democratization of Standards Development? Internal Dynamics of ISO in the Context of Globalization (2011) 5:2 *New Global Studies* 9, [www.degruyter-com.tilburguniversity.idm.oclc.org/document/doi/10.2202/1940-0004.1140/pdf?stream=true](http://www.degruyter-com.tilburguniversity.idm.oclc.org/document/doi/10.2202/1940-0004.1140/pdf?stream=true).

<sup>2</sup> A. Bryden, Standards are boring? Think twice . . ., *ParisTech Review*, June 21, 2010, <http://www.paristechreview.com/about-us/>.

obligations to use or adhere to them.<sup>3</sup> Nonetheless, ISO standards are influential in shaping global markets and the behavior of companies and organizations, including their management of environmental and social impacts, thereby affecting the conditions under which people live. ISO does not develop its standards with the intention to establish regulation, nor does it perceive its organization to engage in any rule-making activity.<sup>4</sup> However, public authorities use and reference ISO standards in legislation and regulation and rely on them in support of public policy decisions and actions or as an alternative for regulation.<sup>5</sup>

ISO's history and evolution has been well-documented in the literature. This chapter builds on this literature to illuminate how many changes within ISO's organizational system and its standard-setting activities are a response to trends, changes and related challenges within the environment in which ISO operates. ISO's evolution can be explained in relation to its ability to respond and adjust to meet these challenges, in order to ensure its continued relevance. While it is possible to examine ISO's growth over the almost seventy-five years of its existence, this chapter posits that it is especially during crisis moments that ISO has undergone rapid transformation and change. During such decisive moments, the viability of the organization is threatened. The organization itself may be affected and its legitimacy and capacity to realize its goals questioned. Such organizational crises "require an urgent response by the organization under conditions of considerable uncertainty as to the precise causes and probable consequences of the situation at hand."<sup>6</sup>

Kuipers and Wolbers distinguish between three types of crises: a crisis whose cause and problems both originate from within an organization, upsetting its primary process or performance; a crisis to an organization that is caused by an exogenous event or development but implicates the organization, having caused or allowed it to occur; and a crisis about the organization, or an institutional crisis, in the form of a perceived performance deficit becoming "so deeply problematic that the organization itself is subject to intense scrutiny and criticism." According to the authors, "even the most tangible crises in organizations do not only prompt a functional response (putting out the fire, informing those directly affected), but have a political dimension too (regarding the legitimacy of the organization, and accountability for the problems and its functional response to the crisis)."<sup>7</sup>

This chapter adds to the existing literature an empirical account of how ISO has responded and transformed in connection to such critical moments throughout its history. ISO has experienced various and different types of crises compelling it to

<sup>3</sup> OECD/ISO, *International Regulatory Co-operation and International Organizations: The Case of the International Organization for Standardization* (2016), at 36, [www.oecd.org/gov/regulatory-policy/ISO\\_Full-Report.pdf](http://www.oecd.org/gov/regulatory-policy/ISO_Full-Report.pdf).

<sup>4</sup> Interviewee. ISO, Policy, <https://policy.iso.org/home.html>.

<sup>5</sup> ISO/IEC, *Using and Referencing ISO and IEC Standards to Support Public Policy* (2015), [www.iso.org/files/live/sites/isoorg/files/store/en/PUB100358.pdf](http://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100358.pdf).

<sup>6</sup> S. Kuipers and J. Wolbers, *Organizational and Institutional Crisis Management*, in *Oxford Research Encyclopaedia of Politics* (2021), [doi.org/10.1093/acrefore/9780190228637.013.1611](https://doi.org/10.1093/acrefore/9780190228637.013.1611).

<sup>7</sup> *Ibid.*

change. ISO's continued existence and relevance despite and because of these challenges demonstrate its resilience as an organization. An analysis of ISO's resilience is also justified at this moment, in light of the recent COVID-19 pandemic. ISO is considered to have demonstrated "agility, flexibility and solidarity" during this crisis.<sup>8</sup> It seized opportunities to promote and rapidly disseminate existing ISO standards<sup>9</sup> and initiated the development of new standards in support of the global effort in dealing with this pandemic. ISO promoted the International Standard ISO 22301 (updated in 2019) Security and resilience – Business continuity management systems as a dynamic tool that can assist businesses and other organizations in navigating through it.<sup>10</sup>

This chapter builds on the theoretical framework provided by Delimatis<sup>11</sup> and tests some of its claims against the empirical findings. This framework captures how crisis moments present both challenges and opportunities for private or hybrid standard-setting organizations, such as ISO, to grow more resilient and more influential as an organization. When an organization experiences a crisis, its adaptability is put to the test. Such crisis moments create a need and incentives to respond and adopt strategies that activate internal processes of change to restore the equilibrium. Opportunities arise to accumulate knowledge and develop the capacity to expect the unexpected and absorb it. Resilience is viewed as "the capacity to absorb stress and reorganize after the occurrence of a disturbance that upsets the equilibrium."<sup>12</sup>

This empirical study is based on eleven semi-structured interviews with officials currently or formerly working for ISO. Next to the empirical data collected from the interviews, this study is based on research of primary sources (ISO official documents, minutes of meetings, brochures, etc.) and secondary sources (mainly but not exclusively empirical studies about ISO).<sup>13</sup>

Section 13.2 explains the origins of ISO and its rise to prominence. Section 13.3 provides an illustrative example of ISO's responses and adaptations to one of its first crisis moments, originating from the needs of its new member national standardizing bodies (NSBs) from developing countries, including ISO's creation of its Committee on Developing Country Matters (DEVCO) in 1961. Section 13.4 identifies ISO's most essential qualities, how ISO acquired or leveraged these qualities in face of crises, and their cultivation over time. Finally, the chapter concludes and reflects on ISO's future (Section 13.5).

The empirical research points to several (external) events being of special importance in driving transformative change of the ISO system. This chapter identifies key

<sup>8</sup> ISO, Strengthening Standardization More Important Than Ever in Times of Crisis, [www.iso.org/news/ref2571.html](http://www.iso.org/news/ref2571.html).

<sup>9</sup> ISO, Covid-19 Response: Freely Available ISO Standards, [www.iso.org/covid19](http://www.iso.org/covid19).

<sup>10</sup> B. Lewis, Never Too Late to Get Ready, ISO, March 30, 2020, [www.iso.org/news/ref2494.html](http://www.iso.org/news/ref2494.html).

<sup>11</sup> See P. Delimatis, "The Resilience of Private Authority in Times of Crisis" in this volume (Chapter 1).

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*

crisis moments during which ISO was compelled to change, their drivers, and some of the resilience strategies enacted by ISO during these episodes. Discussing these events and their implications for ISO in detail goes beyond the scope of this chapter. The author therefore views merit in further empirical research on ISO's organizational responses and adaptations to these crisis events and the internal dynamics behind decision-making and ISO's enactment of resilience strategies.

The chapter finds confirmation in the empirical data for the claim that ISO's core standard-setting capacity and flexibility, and specifically ISO's ability to promulgate voluntary standards rapidly and to ensure their quality and diffusion on a global scale, is a key dynamic property of ISO. This property is essential for ISO to achieve its strategic goals and mission. It confers resilience onto ISO in the face of adversity and enables it to establish or expand its (relative) influence within and across various domains of standard-setting. The research also points to ISO's institutional structure and its complexity and its continued adherence to certain governance principles founding this structure, along with its business model, as key strengths of the ISO system. These qualities render ISO stronger and more influential today, as it seeks to contribute to the realization of the United Nation's (UN) 2030 global agenda for sustainable development and meeting the many global challenges under the seventeen Sustainable Development Goals (SDGs), thereby also ensuring its continued relevance.

### 13.2 ISO'S ORIGINS AND ITS GROWTH IN STRENGTH AND INFLUENCE

ISO was created in 1946, in response to a need for international standards that could support the economic recovery after World War II and facilitate industrial growth worldwide. At the initiative of the UN Standards Coordinating Committee (UNSCC), under the direction of Charles Le Maistre, sixty-five delegations representing twenty-five countries gathered at the London Conference in 1946. The first Statute and Rules of Procedure for ISO were drafted at this conference. ISO formally came into existence on February 23, 1947, after their formal ratification by the necessary fifteen countries. ISO succeeded the International Federation of the National Standardizing Associations (ISA); this main prewar standard-setting organization with a generic mandate had ceased to exist during World War II.<sup>14</sup> ISO adopted many of ISA's statutes and standard development procedures. ISO's standard-setting work began in 1947 with the creation of sixty-nine technical committees. These committees were concerned with the development of technical

<sup>14</sup> Creating a new international standardization institution was preferred over reactivating ISA in order to avoid any prejudices that the involvement of ISA's old membership from "enemy countries" might cause to future standard-setting work. J. Yates and C. N. Murphy, *Coordinating International Standards: The Formation of ISO*, at 24, <https://web.mit.edu/iandeseminar/Papers/Fall2006/Yates.pdf>.

standards. ISO's approach to standard development was to harmonize existing "national standards," to then recommend the re-implementation of the international standard nationally. The purpose of these international standards, referred to as "Recommendations" then, was to enable "industry to operate smoothly by having technical standards to refer to in order to harmonize terminology or ensure interoperability, exchange information, test performance etc."<sup>15</sup>

ISO was legally established as a nonprofit association under Swiss law, with its main seat in Geneva. It was structured as a federation of NSBs, one representing each country in the world. ISO's membership was made up of a heterogeneous group of NSBs, whose statute (public/hybrid or private) and membership composition varied, depending on the country context. Decision-making within ISO was based on the principle of "one country, one vote." ISO was given three official languages: English, French, and Russian. The ISO Constitution defined the organization's institutional structure, consisting of a General Assembly (GA), a Council, a president, a vice-president, a secretary-general, and a treasurer. Members would meet once a year in ISO's General Assembly (GA), its plenary organ. The secretary-general would oversee the secretariat, its executive organ, which coordinates the system and runs its day-to-day operations. The International Electrotechnical Commission (IEC) was formally integrated within the ISO structure by its constitution, treating it as an autonomous "technical division" within ISO.<sup>16</sup>

ISO experienced rapid growth in output from the 1960s onwards. An important transition facilitating this growth was ISO's change of approach to standard development. That is, from harmonizing national standards, ISO moved to the direct development of international standards at ISO level.<sup>17</sup> ISO's renaming of the output of its technical work from "Recommendations" to "International Standards" in 1971 exemplified this change.<sup>18</sup> ISO, as a developer of these International Standards, became directly involved in the international community by supporting international organizations in their efforts to facilitate trade by way of harmonizing technical regulations, in which reference could be made to ISO standards.<sup>19</sup> This involvement increased as international trade grew and markets opened throughout the 1960s and 1970s.<sup>20</sup> ISO's standard-setting activities accelerated in the 1980s after ISO began its development of product quality-related standards for an increasingly

<sup>15</sup> Interviewee.

<sup>16</sup> C. N. Murphy and J. Yates, *The International Organization for Standardization (ISO): Global Governance through Voluntary Consensus* (2009), at 17.

<sup>17</sup> An important impulse behind this shift was the work of ISO's TC 104 – Freight containers and its publication of ISO Standard 668. This standard encompassed the ISO Series 1 container, a standard for a middle-sized container that ISO TC 104 had developed from scratch. See ISO, *Friendship among Equals: Recollections from ISO's First Fifty Years* (1997), at 41. Also see Section 12.3 in this volume.

<sup>18</sup> Also see OECD/ISO, *supra* note 3, at 11–12.

<sup>19</sup> ISO, *supra* note 17, at 60.

<sup>20</sup> Interviewee.

globalizing market. The scope of ISO's standard-setting activities further broadened after that, to management and organizational issues, service standards, and conformity assessment practices. ISO standards now cover practically all technical and economic activities.<sup>21</sup>

### 13.3 MEETING THE NEEDS OF DEVELOPING COUNTRIES AND DEVCO'S CREATION

One of the first critical episodes ISO encountered after its creation was between 1950 and 1960, resulting in ISO expanding its membership from developing countries and adapting to accommodate their evolving needs and requirements. The so-called new countries had recently gained their autonomy or independence from their colonial rulers. They were aware that adherence to international standards was a *quid pro quo* to access international trade and supply chains.<sup>22</sup> These developing countries were less interested in the “threads, bolts and nuts” that ISO standards had addressed previously and preferred ISO to develop standards on topics for which they required a solution.<sup>23</sup> ISO recognized that most countries in the world were developing countries and that these countries should have a say and actively participate in ISO in order for ISO to meet global needs and create globally relevant standards.<sup>24</sup> Against this background, and to the end of being able to identify and respond to the specific needs and requirements of developing countries in the fields of standardization and related areas, ISO created its Committee on Developing Country Matters (DEVCO) in 1961. A main objective of DEVCO was to provide a forum for discussion about all aspects of standardization and related activities in developing countries and the exchange and sharing of experiences among developed and developing countries.<sup>25</sup>

Further organizational changes followed to meet this challenge of ensuring active involvement of ISO's membership from developing countries. In 1964 and 1992, ISO created the new membership categories of “correspondent” and “subscriber” to facilitate their access in the ISO system. This status enabled developing countries to be informed about international standardization without having to incur the full costs of membership.<sup>26</sup> Changes were made to ISO's governance structure to ensure that the ISO Council would have a fair representation of the various sizes of the

<sup>21</sup> A. Bryden, Sustainable Development, Emerging Technologies, Can International Standards Make a Difference, *ParisTech Review*, May 29, 2014, [www.paristechreview.com/2014/05/29/sustainable-development-standards](http://www.paristechreview.com/2014/05/29/sustainable-development-standards).

<sup>22</sup> Interviewee.

<sup>23</sup> See, ISO, *supra* note 17, at 51.

<sup>24</sup> Interviewee. Also see, ISO, ISO/DEVCO Committee on Developing Country Matters, [www.iso.org/committee/55004.html](http://www.iso.org/committee/55004.html).

<sup>25</sup> Council Resolution 44/1975 (DEVCO Terms of reference)

<sup>26</sup> ISO, About Us, [www.iso.org/about-us.html#6](http://www.iso.org/about-us.html#6). Also see, ISO, Capacity Building, [www.iso.org/capacity-building.html](http://www.iso.org/capacity-building.html).

economy. For instance, in 1980, the ISO Council passed a resolution recommending to member states that “when they make nominations to fill seats of Council . . . they should bear in mind that six members should be member bodies from developing countries.”<sup>27</sup> In 1985, ISO created the ISO Programme for Developing Countries (DEVPRO), to provide training on topics related to standardization, sponsorship to attend technical meetings, and manuals on technical matters related to standardization, free for use by developing country members.<sup>28</sup>

The adoption of the WTO Agreement on Technical Barriers to Trade (the TBT Agreement) in 1994 created new impetus behind this effort.<sup>29</sup> Many of ISO’s members from developing countries belong to or operate under the policy direction of the public service of their countries, for instance, the Ministry of Trade and Industry. Most importantly, the TBT Agreement sets the requirement for WTO members that when having identified a need to regulate to fulfil certain public policy objectives, their technical regulation must be based on international standards, or the relevant parts thereof – if these standards exist or their completion is imminent (Article 2.4).<sup>30</sup> This harmonization of the development of technical regulations by use of international standards serves the TBT Agreement’s objective of ensuring that national regulations, standards, and conformity assessment procedures do not create unnecessary obstacles to international trade. The TBT Agreement also establishes criteria for the development of standards by NSBs through the TBT Code of Good Practice for the Preparation, Adoption and Application of Standards (the TBT Standards Code) in Annex 3 to this agreement, related to balanced representation of interests, coordination to avoid overlap, and the availability of the standards to the public.

ISO has responded to the TBT Agreement’s adoption by actively promoting the implementation of its provisions, of which certain aspects are of special relevance to developing countries.<sup>31</sup> As an observer to the WTO Committee on Technical Barriers to Trade (the TBT Committee), ISO has been “aware and attentive” to

<sup>27</sup> See ISO, *supra* note 17, at 46.

<sup>28</sup> S. Gujadhur, International Trade Centre, Commonwealth Secretariat, *Influencing and Meeting International Standards: Challenges for Developing Countries* (2005), [www.intracen.org/uploadedFiles/intracencorg/Content/Exporters/Exporting\\_Better/Quality\\_Management/Redesign/ENGINfluencingVol2.pdf](http://www.intracen.org/uploadedFiles/intracencorg/Content/Exporters/Exporting_Better/Quality_Management/Redesign/ENGINfluencingVol2.pdf).

<sup>29</sup> The adoption of the WTO TBT Agreement was a critical moment for ISO for various reasons. For a study of ISO’s responses to this event, see P. Delimatsis and S. Bijlmakers, *How Standard Setting Bodies Have Grown Resilient by Overcoming Adversity in Times of Crisis: A Theoretical Perspective* (on file with the author).

<sup>30</sup> Article 2.5 establishes the presumption that a domestic regulation is compatible with the TBT Agreement insofar as it is in accordance with relevant international standards and pursues a public policy objective.

<sup>31</sup> See WTO Committee on Trade and Development, *Special and Differential Treatment Provisions in WTO Agreements and Decisions*, March 2, 2021, WT/COMTD/W/258, at 41–53, <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:WT/COMTD/W258.pdf&Open=True>.

the issues that arise within the WTO in relation to standard development.<sup>32-33</sup> An important development was the adoption by the TBT Committee of the six WTO principles that guide the development of international standards,<sup>34</sup> of which principle 6 requires WTO members to facilitate the effective participation of developing countries in international standardization. ISO has pledged alignment of its standard development processes to these principles. A response by ISO that can be linked to this change was ISO's creation of a TMB task force to facilitate the participation of developing countries in ISO's work.<sup>35</sup> ISO updated its Directives in 2003 to introduce provisions on "twinning," that is cooperation between a developed and developing country, for instance, in leading a working group or a technical committee,<sup>36</sup> a concept that was expanded to "partnering" in 2007.<sup>37</sup>

In September 2004, the ISO Council endorsed ISO's first Action Plan for developing countries (2005–2010).<sup>38</sup> ISO's Developing Countries Task Force (DCTF), created in 2002, had issued a report on developing a program of action to increase the immediate involvement of developing countries in ISO's standard-setting work. A high-level ad hoc group was established in 2003 to study this task force's recommendations relating to ISO governance, which resulted in ISO con-

<sup>32</sup> WTO Committee on Technical Barriers to Trade, Assistance to ISO Developing Country Members, Statement by Rob Steele, ISO Secretary-General, July 2, 2010, G/TBT/GEN/101.

<sup>33</sup> P. Delimatsis, "Relevant International Standards" and "Recognised Standardization Bodies" under the TBT Agreement, in *The Law, Economics and Politics of International Standardization* (P. Delimatsis ed., 2015), at 114.

<sup>34</sup> In 2002, the TBT Committee decided that the development of international standards should comply with the six WTO principles (transparency, openness, impartiality and consensus, relevance and effectiveness, coherence, and developing country interests), in order to ensure the quality of these standards and the effective application of the TBT Agreement. The TBT Committee adopted this decision during its second triennial review. See Annex 4, Decision of the Committee on Principles for the Development of International Standards, Guides and Recommendations with relation to Articles 2, 5 and Annex 3 of the Agreement, contained in the Second Triennial Review of the TBT Agreement, [https://docs.wto.org/dol2fe/Pages/FE\\_Search/FE\\_S\\_S009-DP.aspx?language=E&CatalogueIdList=231,4879&CurrentCatalogueIdIndex=1](https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=231,4879&CurrentCatalogueIdIndex=1).

<sup>35</sup> TMB resolution 36/2001, [www.open-std.org/jtc1/SC22/WG20/docs/n848-TMB%20Resolutions.pdf](http://www.open-std.org/jtc1/SC22/WG20/docs/n848-TMB%20Resolutions.pdf).

<sup>36</sup> WTO, TBT Committee, Developments within the International Organization for Standardization (ISO) that are Related to the Second Triennial Review of the TBT Agreement: Communication from ISO, G/TBT/W/158, May 18, 2001, <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/G/TBT/W/158.pdf&Open=True>.

<sup>37</sup> See WTO, Committee on Technical Barriers to Trade, Summary Report of the TBT Workshop on the Role of International Standards in Economic Development (2009), [https://docs.wto.org/dol2fe/Pages/FE\\_Search/FE\\_S\\_S009-DP.aspx?language=E&CatalogueIdList=131032,85352,50747,98991,93791,86196,86668,97091,68966,90563&CurrentCatalogueIdIndex=6&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True](https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=131032,85352,50747,98991,93791,86196,86668,97091,68966,90563&CurrentCatalogueIdIndex=6&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True). Also see, ISO, Action Plan for Developing Countries (2004) 2(11) ISO Focus.

<sup>38</sup> ISO, ISO Action Plan for Developing Countries 2005–2010, [www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/actionplan\\_2005.pdf](http://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/actionplan_2005.pdf).



verting DEVPRO into a five-year Action Plan.<sup>39</sup> ISO's first Action Plan covered the entire spectrum of ISO's activities of interest to developing countries and structured these activities with five clear objectives.<sup>40</sup> This Action Plan was intended to more effectively link ISO's organizational structure for developing countries to ISO's strategy. It implemented those elements of the ISO Strategic Plan 2005–2010 relating to developing countries. This ISO Strategic Plan set out ISO's view that support for developing countries is essential to realizing its global vision of contributing to a more efficient and sustainable world economy.

The first five-year ISO Action Plan for developing countries was in place from 2006 to 2010. Subsequently, a new Action Plan came into force every five years. These Action Plans are designed in consultation with ISO members from developing countries, to ensure the relevance and alignment of its programs with their needs.<sup>41</sup> DEVCO monitors the Action Plan's implementation. DEVCO's terms of reference were reviewed to include this monitoring function, and ISO created the DEVCO Chair's Advisory Group (CAG) to assist DEVCO in fulfilling this function.<sup>42</sup> A key focus of the latest ISO Action Plan for developing countries (2021–2025) is the UN 2030 Agenda and the seventeen SDGs. ISO's strategic plan for 2030 aligns ISO's ambitions for 2030 with the SDGs, viewing standards as instruments, and their development as an opportunity for ISO, to contribute to their delivery and achieve a sustainable future. The Strategy is meant to ensure ISO's position within a rapidly changing global context and the potential of standard-setting in realizing ISO's vision for 2030, that is "making lives easier, safer and better."<sup>43</sup>

### 13.4 ISO'S KEY TRAITS OF RESILIENCE

Section 13.3 provided an illustrative example of how a crisis episode created a need and incentives for ISO to respond and adapt in order to ensure the responsiveness of its International Standards to the needs of developing countries, their global relevance and uptake, and ISO's continued relevance as an organization. ISO's creation of DEVCO and other subsequent organizational changes strengthened ISO's capacity and its position as a standard-setting organization in the face of future crisis events. As will be further illustrated, the adoption of the TBT Agreement, and its interpretation by the WTO Appellate Body, was a change in ISO's (regulatory) context that had a significant impact on ISO. This event created opportunities for

<sup>39</sup> ISO Council Resolution 27/2003.

<sup>40</sup> See WTO, Committee on Trade and Development, Special and Differential Treatment Provisions in WTO Agreements and Decisions, March 2, 2021, WT/COMTD/W/258, at 47, <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:WT/COMTD/W/258.pdf&Open=True>.

<sup>41</sup> ISO, ISO Action Plan for Developing Countries 2011–2015, [www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/iso\\_action\\_plan\\_developingcountries-2011-2015.pdf](http://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/iso_action_plan_developingcountries-2011-2015.pdf).

<sup>42</sup> ISO Council Resolution 26/2003.

<sup>43</sup> ISO, Strategy 2030, [www.iso.org/strategy2030.html](http://www.iso.org/strategy2030.html).

ISO to assert its competence and legitimacy as a developer of “relevant” international standards in contribution to the realization of the objectives of the WTO agreement, for its International Standards to obtain relevance and a legal status within the WTO regime, and to consolidate ISO’s (dominant) position in the standard-setting community.<sup>44</sup>

The empirical research points to ISO having witnessed various such crisis moments throughout its history and related challenges driving transformative change within its system. Such crisis moments seem to have never affected ISO to such a problematic degree that the organization’s continued survival was truly at stake:

ISO has not had a significant institutional crisis, I’m happy to say, in the sense that over the years, internationally, ISO has been recognized as a very useful organization and has managed to adjust to the evolution of the international scene. Of course, there have been some adjustments and tensions.<sup>45</sup>

The findings suggest that ISO successfully recovered and reorganized after experiencing a crisis moment. ISO’s ability to realize such internal organizational change attests to its resilience. As Section 13.3 showed, ISO has retained and acquired new capacities in face of crises that have rendered ISO stronger in the face of future threats, though issues remain.<sup>46</sup> This section identifies key strengths of ISO, draws linkages to crisis moments during which ISO acquired or built these capacities, and reflects on their cultivation over time.

#### 13.4.1 *Standard-Setting Capacity and Flexibility*

The research provides empirical evidence for the claim that ISO’s core standard-setting activities and its flexibility are essential properties that have rendered ISO stronger in the face of adversity. ISO’s flexibility in the fulfillment of its standard-setting functions is apparent from certain shifts in ISO’s work over the years. The change in ISO’s approach to standard-setting from the harmonization of national standards to the development of International Standards in the late 1960s is a case in point.<sup>47</sup> ISO has also demonstrated an ability to enter into new domains of standard-setting by promulgating voluntary standards rapidly and to interpret its standard-setting procedures flexibly in face of changing stakeholder expectations about the ISO system. As will be illustrated, this evolution of topics has followed wider trends

<sup>44</sup> According to Wood, competence can be understood as a jurisdictional attribute, meaning “an actor’s authority to declare and apply norms for particular actors or activities in a particular arena.” S. Wood, *Exploring the Relationship between Administrative Norms and Competence in Transnational Governance: ISO, ISEAL and Sustainability Standards* (2016) 21 *Tilburg Law Review* 193, at 215, 197, 206.

<sup>45</sup> Interviewee.

<sup>46</sup> See Section 13.4.4.

<sup>47</sup> See Section 13.2.

in society.<sup>48</sup> ISO's ability to develop standards rapidly<sup>49</sup> was strengthened during an important episode in the 1980s when the organization was under pressure to self-organize to improve the efficiency of its standard development process.<sup>50</sup>

ISO's flexibility in standard-setting is evident from its shift in focus in the 1960s from technical standardization to the development of product standards, which relate to the performance, safety, and health aspects of products.<sup>51</sup> ISO's decision to promote consumer participation in its work was a consequence of its entry into this domain of standards.<sup>52</sup> The products that were covered by these product standards were used by consumers (not industry) and impacted on their welfare.<sup>53</sup> Impetus to reconsider ISO's structure to facilitate consumer participation came at a time when the consumer movement in the United States, under the leadership of Ralph Nader, had gained traction in the 1970s–1980s and demands increased for consumers to have a greater say in ISO's policymaking and its standard-setting work. Against this background, ISO made a proposal that led to the decision of the ISO in 1977 to establish the ISO Committee on Consumer Policy (COPOLCO), which held its first meeting in 1978.<sup>54</sup>

ISO's publication of its first quality management system standards in 1987 marked another shift, away from performance standards toward process standards. ISO 9001 was adopted against the background of a proliferation of quality standards and big purchasers, including government wanting “zero defects” in the manufacturing of weaponry or nuclear power plants, imposing many different quality standards to avoid quality problems.<sup>55</sup>

Rapid developments in the global high technology sector created opportunities for ISO to meet a demand for rapid standardization in the 1980s. ISO experienced competitive pressure from a proliferation of consortia and other types of standard-setting organizations developing “open standards” and “proprietary standards” for a

<sup>48</sup> According to an interviewee, ISO's evolution of topics is reflected in the numbering of the list of ISO technical committees, which represents the chronology of the creation of these committees. See ISO, Who Develops Standards: Technical Committees, [www.iso.org/technical-committees.html](http://www.iso.org/technical-committees.html).

<sup>49</sup> Also see, OECD/ISO, *supra* note 3, at 45–46.

<sup>50</sup> Interviewee.

<sup>51</sup> ISO, *supra* note 17, at 46.

<sup>52</sup> B. J. Farquhar, Draft Report of Background Research on ISO and IEC for Consumers International Project “Decision-making in the Global Market,” March 13, 2004, at 7, [https://docbox.etsi.org/STF/Archive/STF285\\_HF\\_MobileEservices/STF285%20Work%20area/UG/Inputs%20to%20consider/ConsumerDecisionMaking\\_ISO\\_IEC\\_31052004.pdf](https://docbox.etsi.org/STF/Archive/STF285_HF_MobileEservices/STF285%20Work%20area/UG/Inputs%20to%20consider/ConsumerDecisionMaking_ISO_IEC_31052004.pdf).

<sup>53</sup> For instance, “food products, sports and recreation equipment, the sizing of clothes and shoes, and the care-labelling of textiles.” See ISO, *supra* note 17, at 46.

<sup>54</sup> D. Kissinger, A Journey through COPOLCO's First 25 years, ISO Bulletin, August 2003.

<sup>55</sup> ISO adopted its first quality management system standard in 1987, titled ISO 9000: 1987, *Quality Management and Quality Assurance*. This standard was renamed ISO 9001 after an update and sequentially complemented by a number of standards with numbers above 9001 (ISO 9000 series). J. Yates and C. Murphy, *Engineering Rules: Global Standard Setting Since 1880* (2019), at 294.

global high-tech sector. ISO was criticized for its process of developing ISO standards being “too bureaucratic and slow”<sup>56</sup> and not responding to market needs. There were concerns that unless ISO improved its performance, international standards would be developed through other organizations, especially in these industry consortia, which could develop standards “in a faster and cheaper way.”<sup>57</sup> ISO standards could become less relevant to the need of industry and the world economy in general.<sup>58</sup>

According to an interviewee, there were around 7,300 projects running in 1996. Many of these projects had been registered twenty, fifteen, or twelve years before. There were three projects with a lifespan of thirty years in the work programs of ISO committees. ISO had introduced a harmonized stage code system in 1993 for use to describe the process and indicate where in the process an item had reached. “I saw that there were projects that stayed for 5, 6, 7, 10, 15 years in the same stage. So, there was absolutely, in my opinion, no management of the technical program.” Addressing these problems posed challenges for the ISO; the experts participating in its technical work are volunteers, and ISO could not “dictate the speed of development or the making available of resources for ISO work.” “There was also no higher-level monitoring system across all the committees, the technical fields and so on to see all these problems.”<sup>59</sup>

ISO created the Technical Management Board (TMB) in 1986, which after its first meeting in 1994, systematically addressed ISO’s problems. ISO put in place a new management structure to speed up the process for the preparation of standards. It stressed the need, in a decentralized organization like ISO, to strengthen the self-responsibility of the committee.<sup>60</sup> ISO introduced certain disciplines for project management: work programs of ten years and older were cancelled, unless a plan was developed to produce a Draft International Standard (DIS) within one year. ISO introduced clear rules for standard development, such as that requiring a work-item to reach a certain stage by a declared target date. When a committee failed to meet this target date, and could not justify this delay, the respective work-item would be cancelled.<sup>61</sup>

<sup>56</sup> Murphy and Yates, *supra* note 16, at 101.

<sup>57</sup> Ruwet, *supra* note 1.

<sup>58</sup> Interviewee. An additional impulse for change came from the European Commission; while having adopted international standardization as the primary aim of European standardization, it threatened to defect from ISO standards in case ISO would not develop an important standard quickly and legislate an alternative standard, which many were likely to follow. Murphy and Yates, *supra* note 16, at 97.

<sup>59</sup> Interviewee.

<sup>60</sup> ISO, Confirmed Minutes of the First Meeting of the Technical Management Board, Geneva, April 18–19, 1994, ISO/TMB 24, June 1994, [https://isotc.iso.org/livelink/livelink/fetch/-15620806/15620808/15623592/15768435/15849525/TMB\\_24\\_-\\_Confirmed\\_minutes\\_of\\_the\\_1st\\_meeting\\_of\\_the\\_Technical\\_Management\\_Board%2C\\_18-19\\_April\\_1994.pdf?nodeid=15768968&vernum=-2](https://isotc.iso.org/livelink/livelink/fetch/-15620806/15620808/15623592/15768435/15849525/TMB_24_-_Confirmed_minutes_of_the_1st_meeting_of_the_Technical_Management_Board%2C_18-19_April_1994.pdf?nodeid=15768968&vernum=-2).

<sup>61</sup> TMB Communiqué, March 1997, No. 1. Also see, ISO Bulletin, November 1998. See, ISO/IEC Directives Part 1, Clause 2.1.6.

The adoption of ISO 14000 Environmental Management System (EMS) was another important milestone in ISO's history. Various trends coalesced that pushed this project onto ISO's agenda in advance of the UN's 1992 Earth Summit.<sup>62</sup> According to an interviewee, "environmental issues were becoming important to the point that there was a need to have a reference document internationally recognized to deal with how a company may be organized to achieve and demonstrate that it is working properly in relation to the environment."<sup>63</sup> An important driver behind the development of the ISO 14000 series was the interests and need of industry, ISO's traditional constituency, for a common international EMS standard and their preference for ISO to take a lead in its development, owing to their influence in ISO.<sup>64</sup> Importantly, developments in the General Agreement on Tariffs and Trade (GATT) negotiations indicated that States, which were unable to monitor and enforce compliance with the many environmental regulations, were willing to accept an approach of compliance with an EMS.<sup>65</sup> Industry believed that having a common international EMS standard could justify such an approach to legislation, which would bring "regulatory relief" to companies.<sup>66</sup>

Around the turn of the century, ISO reoriented the strategic goals behind its standard-setting toward addressing the complex challenges posed by globalization and sustainable development.<sup>67</sup> ISO viewed global relevance for its voluntary standards as tools in supporting societal actors in meeting these challenges.<sup>68</sup> ISO 14000 was one of the first standards that marked ISO's entry into the public policy arena. ISO further broadened the scope of its work from 2000 onwards, entering many other new areas of standard-setting, including "tourism, water distribution and sewage, financial services, IT services or health services."<sup>69</sup> This expansion in ISO's work program was a response "to current and new stakeholder needs" and was seen as essential for ISO "to maintain itself as a highly relevant international standards developer."<sup>70</sup> Further institutional changes followed this shift in support of the

<sup>62</sup> V. Haufler, *Negotiating International Standards for Environmental Management System: The ISO 14000 Standards* (1999), [www.researchgate.net/publication/237466208\\_Negotiating\\_International\\_Standards\\_for\\_Environmental\\_Management\\_Systems\\_The\\_ISO\\_14000\\_Standards](http://www.researchgate.net/publication/237466208_Negotiating_International_Standards_for_Environmental_Management_Systems_The_ISO_14000_Standards).

<sup>63</sup> Interviewee.

<sup>64</sup> Haufler, *supra* note 62.

<sup>65</sup> Murphy and Yates, *supra* note 16, at 78.

<sup>66</sup> J. Clapp, *The Privatization of Global Environmental Governance* (1998) 4 *Global Governance*, 304, [www.jstor-org.tilburguniversity.idm.oclc.org/stable/27800201?seq=1#metadata\\_info\\_tab\\_contents](http://www.jstor-org.tilburguniversity.idm.oclc.org/stable/27800201?seq=1#metadata_info_tab_contents).

<sup>67</sup> ISO Strategic Plan 2005–2010.

<sup>68</sup> ISO, *Annual Report: Platform for Performance* (2014), [www.iso.org/files/live/sites/isoorg/files/about%20ISO/annual\\_reports/en/annual\\_report\\_2004.pdf](http://www.iso.org/files/live/sites/isoorg/files/about%20ISO/annual_reports/en/annual_report_2004.pdf).

<sup>69</sup> Bryden, *supra* note 2.

<sup>70</sup> ISO, *Additional Guidance from the TMB on Stakeholder Engagement* (2008), <https://studylib.net/doc/h8738260/additional-guidance-from-the-tmb-on-stakeholder-engagement>.

delivery of these standards and to ensure the protection of public interests within the ISO system.<sup>71</sup>

With ISO's decision to develop standards in support of sustainable development, whose content is of public interest, also came changing expectations about the ISO system and quests to legitimize its authority by ensuring the involvement of a broader group of stakeholders in its standard development procedures. This trend already took off with ISO's development of the ISO 14000 standards series.<sup>72</sup> The potential policy implications of ISO 14001, addressing environmental aspects of organizations' activities, raised its importance to NGOs. ISO was criticized for the underrepresentation of environmental NGOs in the TC 207 process, especially in the early stages.<sup>73</sup> This resulted in varying and increasing efforts by NSBs to engage environmental NGOs at the national level.<sup>74</sup> ISO approved "ISO Long-Range Strategies 1999-2001," expressing its commitment to "balanced representation," including to ensuring "more effective representation of consumers and of other social forces", and its concern about the 'transparency of [ISO] activities.'<sup>75</sup>

ISO experimented with a novel construct and an approach to direct stakeholder involvement in its technical work at the ISO level in its development of ISO 26000.<sup>76</sup> This out of the box project demonstrated ISO's ability to interpret and apply its ISO/IEC Directives and rules for standard development flexibly; ISO 26000 was developed within a Working Group (not a technical committee), through an intense multi-stakeholder process that engaged subject matter experts from six

<sup>71</sup> ISO's formal status under Swiss law changed to "quasi-governmental international organization" in 2006, defined as "in-between an intergovernmental organization and a classic NGO." Also see OECD/ISO, *supra* note 3, at 67. The adoption of the ISO code of ethics can be viewed as a response to ISO's transition into this domain of sustainable development. See Section 13.4.3.

<sup>72</sup> Discussion Paper ISO/TC 207 NGO Contact Group, Ecologia, June 17, 2000, [www.ecologia.org/ems/iso14000/ngoinvolve/st\\_n418.html](http://www.ecologia.org/ems/iso14000/ngoinvolve/st_n418.html)

<sup>73</sup> Clapp, *supra* note 66.

<sup>74</sup> For instance, in 1994, the United States invited NGOs to participate in the US Technical Advisory Group (TAG), which subsequently cooperated with the NGO network and the NGO Initiative Working Group to enhance their capacity and representation in TC 207 meetings. *Ibid.*, at 9

<sup>75</sup> ISO, ISO's Long-Range Strategies 1999-2001 – Raising Standards of the World, [www.jtc1sc34.org/repository/0032T.pdf](http://www.jtc1sc34.org/repository/0032T.pdf).

<sup>76</sup> Wood, *supra* note 44, at 215. ISO's involvement in this field of social responsibility was questioned from the start. ISO created a multi-stakeholder Strategic Advisory Group (SAG) to decide whether ISO should proceed with an ISO initiative on CSR, and if so, the type of deliverable ISO should develop. This SAG recommended the development of a non-certifiable "guidance standard" type deliverable and for ISO to not get involved in SR standardization unless it could ensure the meaningful participation of the full range of interested parties. See ISO, ISO Strategic Advisory Group on Social Responsibility, Recommendations to the ISO Technical Management Board, at 1, ISO/TMB AG CSR N32, (April 30, 2004), [http://isotc.iso.org/livelink/livelink/fetch/8929321/8929339/8929348/3935837/3974906/ISOSRAdvisoryGroup\\_-\\_Recommendations%20to%20the%20ISO%20TechnicalManagementBoard.pdf?nodeid=4274012&vemum=-2](http://isotc.iso.org/livelink/livelink/fetch/8929321/8929339/8929348/3935837/3974906/ISOSRAdvisoryGroup_-_Recommendations%20to%20the%20ISO%20TechnicalManagementBoard.pdf?nodeid=4274012&vemum=-2).

stakeholder groups, acting in their own capacity (not as representatives of their NSBs or governments). ISO also signed Memoranda of Understanding with the ILO, GRI, and SAI to coordinate its work with these organizations and to facilitate their participation and expert input into the process.<sup>77</sup> ISO opening up its standard-setting process to include a broader range of stakeholders can be viewed as a resilience strategy. ISO has not applied a similar process and multi-stakeholder approach in its standard-setting work since. This was despite NGOs considering this approach a “major improvement”<sup>78</sup> and calling for ISO to broaden it to cover all ISO TC work in similar areas of fundamental interest.<sup>79</sup>

In 2008, that is, before the publication of ISO 26000 in November 2010, the TMB decided to form a mechanism in the form of a Process Evaluation Group (PEG) to investigate the responsiveness of ISO’s standard development processes to changing dynamics. The experience of ISO 26000 informed this investigation.<sup>80</sup> The PEG’s investigations resulted in the publication of two ISO brochures: *Guidance for Liaisons*<sup>81</sup> and *Guidance for NSBs*.<sup>82</sup> These brochures confirm and uphold the commitment of the ISO system “to participation via national standards bodies, as well as through the consideration of the input received from liaison organizations.” ISO sought to “safeguard the outcomes of the ISO system and to promote the existing value, strength and authority of International Standards and the processes by which they are produced.” ISO also alleged that “the existing ISO model works well, is well defined and is accepted by stakeholders.”

ISO’s approach to stakeholder involvement in its standard-setting work has thus remained unchanged in essence; ISO ensures stakeholder representation via two streams, that is, through NSBs and organizations in liaison with ISO committees.<sup>83</sup> “ISO/IEC Directives are reviewed each year and small incremental changes have been made to the standard-setting process to improve stakeholder engagement and

<sup>77</sup> ISO’s efforts to meet certain standards of transparency and inclusiveness in this process also enhanced ISO’s competitive position vis-à-vis both public and private standard developers in the field of social responsibility. Ruwet, *supra* note 1.

<sup>78</sup> ANEC, ECOS, Pacific Institute, ISO TC 207 “Environmental Management” Gives NGOs the Cold Shoulder: NGO Proposals for Improved Procedures Slammed Down after Five Years of Negotiations, [www.ecostandard.org/wp-content/uploads/anec\\_ecos\\_pacific\\_institute\\_communique\\_on\\_iso\\_tc\\_207.pdf](http://www.ecostandard.org/wp-content/uploads/anec_ecos_pacific_institute_communique_on_iso_tc_207.pdf).

<sup>79</sup> ISO did draw lessons from this experience, however. According to an interviewee, “ISO 26000 has resulted in a much more careful set up of different stakeholders, looking at the balance between stakeholders, also looking at developed/developing countries, and gender issues.” Also see OECD/ISO, *supra* note 3, at 47.

<sup>80</sup> ISO acknowledged that it had not succeeded in ensuring a “full and equitable balance” of stakeholder participation in the development process of ISO 26000. See, ISO 26000: 2010 V.

<sup>81</sup> ISO, *Guidance for ISO Liaison Organizations: Engaging Stakeholders and Building Consensus* (2010), [www.iso.org/iso/guidance\\_liaison-organizations.pdf](http://www.iso.org/iso/guidance_liaison-organizations.pdf).

<sup>82</sup> ISO, *Guidance for ISO National Standards Bodies, Engaging Stakeholders and Building Consensus* (2019), [www.iso.org/files/live/sites/isoorg/files/store/en/PUB100269.pdf](http://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100269.pdf).

<sup>83</sup> Individual liaisons between NGOs and committees are approved on a case-by-case basis, and certain qualification criteria apply. See ISO/IEC Directive part 1, Clause 1.17.

to ensure that the process keeps meeting the needs of those involved.”<sup>84</sup> ISO’s standard development relies on the input from these stakeholders that view ISO as carriers through which they can influence how industry operates and bring in their own competence and experience. The involvement of diverse stakeholder interests also creates conditions of legitimacy,<sup>85</sup> enables ISO to foster acceptance, and facilitates the widespread diffusion of its standards and deliverables.

#### 13.4.2 Coordination of Activities through Partnerships

ISO has demonstrated an ability to establish connections and coordinate its work with other organizations in support of the realization of its goals. ISO’s recognition of having consultative status in the UN, and its cultivation of this recognition since the 1970s, is said to have been key to ISO’s strong position in international standardization. “As early as the 1970s, the ISO Council decided ‘that ISO should continue to overcome problems of conflict of competence with other international organizations through direct contacts with the latter.’”<sup>86</sup> Over time, ISO has sought to partner as much as possible, which is reflected by the different types of relationships ISO has entered into with other organizations.<sup>87</sup> ISO’s involvement in the SDGs resulted in ISO renewing existing and creating new partnerships, including with the UN.<sup>88</sup>

An illustrative example of a crisis moment that ISO managed through cooperation was the EU’s adoption of a “new approach” to EU legislation in 1985.<sup>89</sup> This new approach meant that EU Directives would set essential requirements that products and services placed on the community market must meet and rely on voluntary, consensus-based European standards to provide the technical specifications to implement and verify conformity with these requirements. Products manufactured in compliance with these standards are presumed to be in conformity with essential requirements of EU legislation. European standards are defined as technical specifications adopted by a European Standards Organization (ESOs).<sup>90</sup> This approach recognized the role of European standardization in supporting public policy objectives and, in particular, the creation of the Single European Market. It

<sup>84</sup> Interviewee.

<sup>85</sup> See J. Wouters, “Corporations and the Making of Public Standards in International Law: The Case of China in the ITU” in this volume (Chapter 3).

<sup>86</sup> OECD/ISO, *supra* note 3.

<sup>87</sup> See ISO, Structure and Governance, [www.iso.org/structure.html](http://www.iso.org/structure.html).

<sup>88</sup> See ISO, Our Common Roadmap, [www.iso.org/news/ref2325.html](http://www.iso.org/news/ref2325.html).

<sup>89</sup> The New Approach was updated and refined in the “New Legislative Framework” from 2008.

<sup>90</sup> European Committee for Standardization (CEN), European Committee for Electrotechnical Standardization (CENELEC), European Telecommunication Standards Institute (ETSI). European Commission, Directorate-General for Enterprise (Brussels), *Guide to the Implementation of Directives Based on the New Approach and the Global Approach*(2000), at 27.



called for “a considerable expansion of European standardization activities, diverting a significant amount of interest and resources away from international standardization work.”<sup>91</sup> This posed challenges to ISO in that the key European players in ISO at that time (Germany, France, the United Kingdom, and Italy) withdrew their resources and focused on European standardization instead. This gave rise to the question of how ISO could continue to be relevant while at the same time being so dependent on key standard-setting bodies from Europe.<sup>92</sup>

ISO responded by signing the Vienna Agreement with the European Committee for Standardization (CEN), its European equivalent, which was formally approved in 1991 (and revised in 2001) and issuing common guidelines for its implementation.<sup>93</sup> The Vienna Agreement governs technical cooperation between ISO and CEN, with the aim to avoid duplication and increase the efficiency of standardization at the international and European level. It recognizes the primacy of international standards and offers the opportunity for a joint development of standards, the exchange of information and mutual representation at meetings, and the recognition of the same standard as an ISO and European standard. Either CEN or ISO can take the lead in developing a standard, which will then be presented for approval by both organizations. A Joint ISO-CEN Coordinating Group of the Technical Boards consisting of representatives of both organizations was created to monitor application of the Agreement and to advise the boards of both ISO and CEN on issues relating to the agreement.<sup>94</sup>

### 13.4.3 *Alignment of Principles with Strategic Goals*

ISO has demonstrated an ability to align its principles of governance<sup>95</sup> with the strategic goals and priorities of the organization, which ISO has adjusted over the

<sup>91</sup> These ESOs could develop and adopt European standards, referred to as “harmonized standards,” at the request of the European Commission. EU members must transpose the European standard into a national law and withdraw conflicting national standards. ISO, International Standards and “Private Standards” (2010), at 3, [https://web.archive.org/web/201210111235if\\_/http://www.iso.org/iso/private\\_standards.pdf](https://web.archive.org/web/201210111235if_/http://www.iso.org/iso/private_standards.pdf).

<sup>92</sup> Interviewee.

<sup>93</sup> These guidelines were revised in 1996 and 1998 to incorporate improvements.

<sup>94</sup> In a parallel development, CENELEC signed an agreement with the IEC, the Dresden Agreement (revised by the Frankfurt Agreement in 2016), which establishes that new electrical standards projects should be planned jointly and conducted by the IEC at the international level, if possible, and the parallel voting on international standards in order to achieve one standard that is valid for Europe and internationally.

<sup>95</sup> ISO embodies certain principles of governance (inter alia, to ensure a degree of openness and transparency in the ISO system) ISO, Directives and Policies, [www.iso.org/directives-and-policies.html](http://www.iso.org/directives-and-policies.html).

years in response to changes in its external environment.<sup>96,97</sup> This alignment has affected the evolution and resilience of the organisation, as the following crisis moment illuminates.

ISO's adoption of the TBT Agreement in 1994 created both risks and opportunities for ISO to grow in strength and influence. More specifically, it created opportunities for ISO to demonstrate its relevance (and legitimacy) in contributing to freer trade by reducing barriers to trade and realizing the goals of the WTO. The TBT Agreement did not expressly recognize ISO, or any other standard-setting organization, as a developer of "relevant international standards" for the purpose of Article 2(4). Amidst debate about whose standards could be utilized for this purpose, ISO was among the organizations most likely to qualify.<sup>98</sup> ISO had risen to authority and acquired credibility and a dominant position in standardization at the time of the TBT Agreement's adoption.<sup>99</sup> Also, there was synergy between ISO's governance model and the terms in the TBT Agreement, which had adopted these terms from ISO/IEC Guide 2: 1991,<sup>100</sup> with some modification (Annex 1).<sup>101</sup> Moreover, the purpose of ISO standards to facilitate international trade aligns with that of the TBT Agreement.<sup>102</sup>

The adoption of the TBT Agreement created incentives on the part of ISO to respond and adapt to ensure its continued relevance and to build and maintain its legitimacy within the WTO regime.<sup>103</sup> This meant meeting the evolving requirements of the TBT Agreement, as interpreted by the WTO Appellate Body. ISO confirming adherence of its standard development process with the six WTO principles, shortly after the TBT Committee's adoption of these principles in 2002,

<sup>96</sup> ISO adopts strategic goals and priorities in order to realize its mission and vision. While ISO's mission remains the same at its core, that is, to develop standards in support of global trade, it has expanded in scope over the years. According to ISO's strategy for 2030, ISO develops standards to "drive inclusive and equitable economic growth, advance innovation and promote health and safety to achieve a sustainable future." ISO, Strategy 2030, [www.iso.org/publication/PUB100364.html](http://www.iso.org/publication/PUB100364.html).

<sup>97</sup> ISO, Drivers of Change, [www.iso.org/strategy2030/drivers-of-change.html](http://www.iso.org/strategy2030/drivers-of-change.html).

<sup>98</sup> See Farquhar, *supra* note 52, at 5-7.

<sup>99</sup> Wood, *supra* note 44. F. Fontanelli, ISO and CODEX Standards and International Trade Law: What Gets Said Is Not What's Heard (2011) 60:4 *The International and Comparative Law Quarterly* 908.

<sup>100</sup> The TBT Agreement indicates that the terms used in its texts have the same meaning as the terms given in ISO/IEC Guide 2: 1991. This Guide 2 was replaced by a new version in 1996 and revised and updated once more in 2004.

<sup>101</sup> The TBT Agreement does not apply to services, and it covers documents that are not based on a consensus, unlike is the case for ISO/IEC Guide 2: 1991. Moreover, the TBT Agreement defines standards as voluntary and technical regulations as mandatory documents. TBT Agreement, Annex 1.2, explanatory note.

<sup>102</sup> Fontanelli, *supra* note 100, 909.

<sup>103</sup> For ISO, as a private standard-setting organization, building and maintaining its legitimacy is important in the pursuit of its goals. See Section 9.2 in this volume. Also see P. Delimatsis, Global Standard-Setting 2.0: How the WTO Spotlights ISO and Impacts the Transnational Standard-Setting Process (2018) 28:2 *Duke Journal of Comparative and International Law* 273.

was an important response. ISO also claimed that ISO and its NSB members adhered to the disciplines of the TBT Standards Code.<sup>104</sup> ISO has taken various reform initiatives in response to developments in the WTO, which have enabled the further recognition and implementation of the WTO principles in its governance structure and technical standard-setting work, with a special focus on enhancing the effective participation by developing countries and engaging a broad range of stakeholder interests.<sup>105</sup>

ISO further aligning its governance principles with the WTO principles and disciplines, for the purpose of facilitating international trade, can be interpreted as a resilience strategy.<sup>106</sup> For instance, in 2003, ISO approved a definition of global relevance and a set of principles and implementing guidance to ensure the global relevance of its technical work and publications.<sup>107</sup> This was in response to the TBT Committee's decision that an international standard should meet a set of seven criteria in order to meet the WTO principle of "relevance."

ISO's alignment of its own principles of governance with the WTO principles has affected stakeholder perceptions of ISO and has led to increased social sensitivity and scrutiny of ISO's performance against these principles. As illustrated above, ISO standards are influential in shaping economic activity and take on de facto or de jure binding effects when referenced, and rendered mandatory, under national regulation and international regulation.<sup>108</sup> This increasing influence of ISO standards, also in relation to the state, has raised concerns among NGOs. According to an interviewee, critical studies by NGOs and academics scrutinizing ISO procedures against its standards<sup>109</sup> have caused ISO to reflect and "to become more principle oriented,

<sup>104</sup> Since this code was modeled after ISO/IEC Guide 59:1994 (revised in 2019) on recommended practices for standardization by national bodies, ISO's adherence to this code did not come as a surprise. See TBT Committee, Factual Comparison between the Annex 3 of the WTO/TBT Agreement – Code of Good Practice for the Preparation, Adoption and Application of Standards and the ISO/IEC Guide 59 – Code of Good Practice for Standardization, G/TBT/W/132, 29 March 2000, <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/G/TBT/W132.pdf&Open=True>.

<sup>105</sup> Farquhar, *supra* note 52. For a detailed analyses of ISO's responses to the TBT Agreement, see P. Delimatsis and S. Bijlmakers, How Standard Setting Bodies Have Grown Resilient by Overcoming Adversity in Times of Crisis: A Theoretical Perspective (on file with the author).

<sup>106</sup> ISO Council Resolution 9/2001. Also see ISO, Foreword – Supplementary Information, [www.iso.org/foreword-supplementary-information.html](http://www.iso.org/foreword-supplementary-information.html).

<sup>107</sup> ISO defines global relevance as the "required characteristic of an International Standard that it can be used/implemented as broadly as possible by affected industries and other stakeholders in markets around the world." ISO/IEC Directives, Part 1, Consolidated ISO Supplement – Procedures Specific to ISO (Eleventh edition, 2020) Annex SM (normative) Global relevance of ISO technical work and publications. SM.3 Principles, [www.iso.org/sites/directives/current/consolidated/index.xhtml#\\_idTextAnchor004](http://www.iso.org/sites/directives/current/consolidated/index.xhtml#_idTextAnchor004). Also see ISO, ISO/TMB Implementation Guidance Global Relevance of ISO Technical Work and Publications (2004), [www.iso.org/files/live/sites/isoorg/files/developing\\_standards/docs/en/iso\\_tmb\\_implementation\\_guidance\\_global\\_relevance.pdf](http://www.iso.org/files/live/sites/isoorg/files/developing_standards/docs/en/iso_tmb_implementation_guidance_global_relevance.pdf).

<sup>108</sup> ISO/IEC, *supra* note 5.

<sup>109</sup> OECD/ISO, *supra* note 3, at 1. Delimatsis, *supra* note 103.

and to implement these principles in practice to the extent they can or are willing.”<sup>110</sup> Illustrative is ISO’s adoption of the ISO code of ethics in 2004. This code expresses the commitment of ISO members and each of ISO’s organizational entities to ensuring fair and responsive application of a set of principles (“due process, transparency, openness, impartiality and voluntary nature of standardization”), which mirror the WTO principles.<sup>111</sup>

ISO has relied on adherence to the WTO principles to instil confidence by public regulators that when using ISO International Standards in support of their policy decisions and actions,<sup>112</sup> they are not creating unnecessary barriers to trade.<sup>113</sup> ISO emphasizes in its communication to public regulators that they can be confident they meet their obligations under the TBT Agreement when using ISO standards as a basis for their technical regulation and that the standards they use are globally relevant.<sup>114</sup> The reliance by public regulators on ISO standards to avoid technical barriers to trade has further increased the significance of ISO’s work.<sup>115</sup>

Adherence to the WTO principles has enabled ISO to distinguish itself from other standard-setting organizations. It has aided ISO to consolidate its position as a dominant global standard-setter in areas of standardization in which it is the sole standardization body and to expand its influence in specific domains in which more organizations develop substitutive standards and are thus more competitive, such as sustainability standards. In 2014, ISO issued a brochure in which it differentiates its ISO International Standards from “private international standards” developed by other standard-setters.<sup>116</sup> ISO relies on the argument that ISO standards and those of its members are developed through processes that use the WTO principles and disciplines and therefore are “superior” to “private” standards by other organizations that are not developed according to these principles.<sup>117</sup>

<sup>110</sup> Interviewee.

<sup>111</sup> ISO, ISO Code of Ethics, [www.iso.org/publication/PUB100011.html](http://www.iso.org/publication/PUB100011.html).

<sup>112</sup> The ISO brochure, *Using and Referencing IOS and IEC Standards to Support Public Policy*, is an important tool aiding this effort. The brochure explains the advantages and benefits of using ISO standards, providing various reasons for why ISO believes that ISO standards have earned the public policy maker’s trust and reliance. ISO/IEC, *supra* note 5. Also see, OECD/ISO, *supra* note 3, at 15–16.

<sup>113</sup> Also see, ISO/IEC Directives, Part 1, Consolidated ISO Supplement – Procedures Specific to ISO (Eleventh edition, 2020) Annex SO (normative) Principles for developing ISO and IEC Standards related to or supporting public policy initiatives. SO.3 Implementation, [www.iso.org/sites/directives/current/consolidated/index.xhtml#\\_idTextAnchor004](http://www.iso.org/sites/directives/current/consolidated/index.xhtml#_idTextAnchor004)

<sup>114</sup> ISO/IEC, *supra* note 5, at 5.

<sup>115</sup> See Farquhar, *supra* note 52, at 3.

<sup>116</sup> According to Stepan Wood, the interactions between ISO and the ISEAL alliance are illustrative of how “organizations in regulatory regimes respond to multiple legitimacy claims and how they seek to build legitimacy and ‘regulatory share’ in complex and dynamic situations.” Wood, *supra* note 44, at 199.

<sup>117</sup> ISO, *supra* note 92.

#### 13.4.4 Institutional Setup, Complexity, and Governance Principles

ISO's institutional structure was established at its creation, and while it retains its core, it has grown more complex.<sup>118</sup> ISO has adapted its statutes in response to (geopolitical) changes and challenges in its environment.<sup>119</sup> ISO created policy committees to provide forums to include the perspectives of developing countries (DEVCO) and consumers (COPOLCO) into ISO's decision-making. ISO created CASCO to provide guidance on conformity assessment.<sup>120</sup> In addition, ISO created a President's Committee to advise the Council on matters decided by the Council, four Council standing committees, and Advisory Groups to advise ISO on matters relating to commercial policy and information technology. The mechanisms ISO built into the system in order to give application to its governance principles further adds to its complexity. ISO's institutional structure and its complexity is an important feature that ISO can harness in its crisis responses.<sup>121</sup>

ISO has never revisited the governance model that was chosen for the organization at its creation. ISO has continued to adhere to certain core governance principles founding its institution. Adherence to these governance principles is meant to ensure, inter alia, neutrality in ISO's institutional setting, thereby protecting against the risk of abuse of dominant positions.<sup>122</sup> More specifically, ISO's institutional structure, and in particular ISO's adherence to the national delegation principle and its one-country-one-vote modality, serves to protect against the risk of undue influence of individual NSBs within the organization and capture by certain country interests. Moreover, the requirement that ISO standards reflect a consensus between all parties affected by the standard, and that the standard development process seeks to balance the interests of these parties, serves to prevent a single interest from dominating the standardization process. It follows from ISO's definition of a consensus that its members can reach an agreement on standards despite opposition by a particular interest (e.g., dominant firms, leading states, or states acting together, like those belonging to the EU).<sup>123</sup> ISO's continued adherence to its

<sup>118</sup> ISO, About Us: Structure and Governance, [www.iso.org/structure.html](http://www.iso.org/structure.html).

<sup>119</sup> Also see, OECD/ISO, *supra* note 3, at 21.

<sup>120</sup> See Caltronix, The History of ANAB (ANSI-ASQ National Accreditation Board), [www.caltronixinc.com/article.cfm?ArticleNumber=3](http://www.caltronixinc.com/article.cfm?ArticleNumber=3).

<sup>121</sup> For instance, DEVCO played an important role in ISO's navigation through the recent COVID-19 pandemic as it provided solutions to develop standards in support of a COVID-19 response and recovery plan, thereby strengthening ISO's position in times of change, turning crisis into an opportunity. ISO notes how "the progress made in strengthening DEVCO's policy development role is key to accelerating that change and enhancing developing country participation in ISO governance and technical work." ISO, *supra* note 8.

<sup>122</sup> See J. Wouters, "Corporations and the Making of Public Standards in International Law: The Case of China in the ITU" in this volume (Chapter 3).

<sup>123</sup> ISO defines a consensus as a "general agreement, characterized by the absence of *sustained opposition to substantial issues by any important part of the concerned interests* and by a process that involves seeking to take into account the views of all parties concerned and to recognize

governance model and its underlying principles is an important strength, and ISO derives legitimacy from it.<sup>124</sup>

Whether ISO achieves neutrality in its decision-making and standard-setting work in practice is subject of discussion. ISO was and still is perceived as a business-driven organization.<sup>125</sup> The degree of influence of NSBs in standard development varies depending on their membership rights, roles, capabilities, and preferences. The barriers facing developing countries to effective representation and participation in ISO's technical standard work, and to influencing the content of ISO standards, are well documented.<sup>126</sup> NGOs have criticized how decision-making in ISO is unbalanced in practice and dominated by private industry interests (especially in industrialized countries). As illustrated above in connection to the development of ISO 14000 and ISO 26000, ISO has adapted to internal dynamics and pressures, inter alia, by creating multi-stakeholder committees to advise on ISO's involvement in new areas of standard-setting, by interpreting ISO standard-setting rules flexibly and investing resources to create opportunities for more balanced stakeholder representation and participation. Nonetheless, issues of (un)equal access and influence remain and result in NGOs and other stakeholders to deny ISO legitimacy.<sup>127</sup>

ISO's ability to withstand pressure from within its membership to make changes to its institutional setup and governance principles attests to its resilience. An illustrative example is how ISO has resisted challenges by the United States, an influential member with a long tradition in standardization, at several occasions, in what can be interpreted as attempts by the United States to exert a dominant

any conflicting arguments." See ISO/IEC Directives (ISO/IEC Dir 1), Part, Edition 10.0, 2013-10, clause 2.5.6.

ISO's definition of "sustained opposition" entails views "maintained by *an important part of the concerned interest* and which are incompatible with the committee consensus." See ISO/IEC Directives, Part 1, Consolidated ISO Supplement – Procedures Specific to ISO, 4th ed., 2013, clause 2.5.6.

<sup>124</sup> Yates and Murphy, *supra* note 55, at 299.

<sup>125</sup> M. Morikawa and J. Morrison, Who Develops ISO Standards? A Survey of Participation in ISO's International Standards Development Process, Pacific Institute (2004), [https://pacinst.org/wp-content/uploads/2013/02/iso\\_participation\\_study2.pdf](https://pacinst.org/wp-content/uploads/2013/02/iso_participation_study2.pdf).

<sup>126</sup> For instance, developing countries could not effectively participate in the TC 207 committee process "due to their limited membership role, their small delegate representations at negotiation meetings, and their failure to provide secretariat support to the ISO." Also the lack of access to information on the ISO 14000 series was identified as a problem especially for these stakeholders. "Developing countries were neither adequately represented in the negotiations of the ISO 14000 series, nor were they key players in the administrative bodies of ISO that ultimately decided what standards to finalize and promulgate. The negotiation process was dominated by countries of the developed world, principally the United States. U.S. revisions to the standards diluted any impact that the standards could have on environmental protection." A. Mikulich, ISO 14000-14001, The Developing World's Perspective (2003) 17:1 *Tulane Environmental Law Journal* 120.

<sup>127</sup> ISO's competence is taken for granted by other stakeholders, which confer (cognitive) legitimacy onto the organization despite its procedural shortcomings. According to Wood, this is because of ISO's "pervasiveness and accumulated social capital." Wood, *supra* note 44, at 228.

influence within ISO.<sup>128</sup> For instance, the United States has challenged the representation of EU countries within ISO. A concern by the United States has been that the EU countries benefit from the one-country-one-vote modality, and that the EU has gained economic advantage by dominating the ISO process. According to an interviewee, after the creation of the EU internal market in 1993, the EU was perceived as an economic block. Since the EU had been formed as such, with its ESOs – CEN was viewed as a counterpart of ISO in terms of scope – the United States argued that the EU should be represented as such, that is, through CEN, and not the individual member countries. This attempt failed “because of the realization that the individual EU members were an asset for the organization.” The one-country-one-vote modality and the representation of EU countries within ISO remain unchanged.

It seems that giving into these pressures and departing from its governance model can pose a risk (of capture) to the organization and have implications for ISO’s attractiveness as a forum for standard development, especially in the view of NSBs and governments.<sup>129</sup>

#### 13.4.5 *Business Model*

Another key property that aids ISO in its navigation through crisis episodes is its business model, which ensures that the ISO system can access and leverage resources to achieve its objectives and recover its costs. ISO International Standards are not available for free in the public domain and ISO asserts and maintains copyright in International Standards.<sup>130</sup> It follows from ISO’s business model that the activities of the ISO secretariat are funded through the membership fees paid by NSBs (“which give them the right to participate in the International Standardization process, to use, nationally adopt and sell the International Standards produced”) and the sale of International Standards. ISO members bear the costs of running the secretariats of the technical committees. The expenses of experts working on the technical committees are borne by their employers or themselves. ISO views the financing of its system through the sale of its standards as fair: “the user who wants to benefit from a standard pays to use it.” ISO also claims to be

<sup>128</sup> According to an interviewee, the United States tabled a proposal to change the official languages of the organization – English, French, and Russian. The proposal was to adopt English as a single official language or to opt for English, Spanish, and Chinese as the official languages for ISO. This proposal received pushback from the French-speaking countries and was rejected eventually. Another United States proposal to change the headquarters of the organization suffered a similar faith. ISO’s language policy has not been revisited; ISO’s official languages remain English, French, and Russian.

<sup>129</sup> See O. Kanevskaia and J. Baron, “Global Rivalry over Leadership in ICT Standardization: SDO Governance amid Changing Patterns of Participation” in this volume (Chapter 14).

<sup>130</sup> ISO/IEC, *supra* note 5.

“constantly looking for new ways to improve access to standards, while ensuring that the costs of developing them can be recovered.”<sup>131</sup>

An event within ISO’s history that implicated ISO’s business model and strengthened its resources (and its authority) was the adoption of ISO 9001. The publication of ISO 9001, and especially the opportunities that the extra source of revenues from the sale of this standard created, resulted in ISO reflecting on how to further finance standardization and expand the scope of the organization. ISO came to rely more on the sale of standards and less on membership fees to generate an income for the organization. The sale of this standard also supported further evolutions within both ISO and its NSB members. According to an interviewee, the publication of the ISO 9000 series resulted in NSBs expanding their activities “both in terms of standards development, because this was bringing additional resources to support finance, and then expand also the scope of the activities, going into at some point training activities, training, consulting services. Some became actually fully independent organizations, which was quite an interesting evolution.”<sup>132</sup>

ISO’s model of financing has created both challenges and opportunities for ISO. According to ISO, it keeps participation costs down and allows for the broadest possible stakeholder participation. As is well known, however, developing countries have fewer resources and technical capabilities than developed countries to exert influence, especially at the technical standard-setting level. In fact, developed countries remain most active in leading technical committees and subcommittees in practice. Chairpersons and secretaries may be required to act in a “purely international capacity,” and experts participating in standard-setting, at least at working group level, in a personal capacity.<sup>133</sup> However, in practice, these individuals have had difficulty making decisions independently from the interests of their employer (who funds their participation in the process) or the NSB (who appoints them).<sup>134</sup> ISO’s claim that, because of its financing model, its International Standards are developed in a neutral environment without undue influence from individual sponsors<sup>135</sup> is debatable.

According to an interviewee, the revenues obtained from the sale of standards enables ISO to develop standards, to better promote ISO’s work, and have a broader scope. ISO’s pricing policy has had implications for the relevance of its standards

<sup>131</sup> *Ibid.*, at 34–35.

<sup>132</sup> Interviewee. Also see, Yates and Murphy, *supra* note 55, at 298–300.

<sup>133</sup> ISO Directive Part 1, clause 1.12.1.

<sup>134</sup> E. Shamir-Borer, *The Evolution of Administrative Law-Type Principles, Mechanisms and Practices in the International Organization for Standardization (ISO)*, at 66–67, [www.iilj.org/wp-content/uploads/2016/11/Shamir-Borer-The-Evolution-of-Administrative-Law-Type-Principles-Mechanisms-and-Practices-in-the-International-Organization-for-Standardization.pdf](http://www.iilj.org/wp-content/uploads/2016/11/Shamir-Borer-The-Evolution-of-Administrative-Law-Type-Principles-Mechanisms-and-Practices-in-the-International-Organization-for-Standardization.pdf).

<sup>135</sup> ISO/IEC, *supra* note 5, at 34.



(and its claim for authority), especially in the ICT domain.<sup>136</sup> Upon its entry into the domain of sustainability, ISO has been challenged by criticism that charging money for ISO standards whose content is of public interest is inappropriate and creates barriers to acquisition, and pressure to make them available in the public domain, free of charge.<sup>137</sup> ISO's pricing policy can be a particular concern to States that reference International Standards in their legislation. ISO's adjustments to its pricing policy in relation to certain standards in specific contexts, to the extent needed to ensure stakeholder support and realize its mission, demonstrate its flexibility. More generally, however, ISO has demonstrated resistance to pressure to adjust its financing model.<sup>138</sup> ISO's responses and ability to retain its business model despite these pressures attests to its resilience.

### 13.5 CONCLUSION

This chapter examined how ISO has evolved and grown more resilient, and influential, over the course of its seventy-five-year existence, in relation to crisis. An assumption is that ISO's evolution and resilience can be explained in relation to the continuously evolving environment in which it operates. It finds that the ISO system is flexible and adaptable to account for changes and to meet related challenges within its environment, in order to ensure its continued relevance. This chapter focused on ISO's responses and adaptation during crisis moments when its resilience was put to the test. It finds that ISO has experienced multiple and different types of crisis events; however, developments have never cumulated to a point where ISO was subject to an (institutional) crisis of such problematic scale that its continued existence was truly in jeopardy.

The chapter provides empirical evidence for the theoretical proposition that ISO's core standard-setting activities and its flexibility are key dynamic properties that render ISO stronger in the face of crisis. ISO has demonstrated a capacity to expand quickly to include new members from across the world, and in doing so, also the potential global reach and use of its standards. It has also demonstrated an ability to identify and enter into new areas of standardization and to rapidly promulgate and

<sup>136</sup> Why Should ISO Make All Standards Publicly Available, see <https://docs.google.com/document/d/12Gmy2s4Nmkw6VDv2B6b5K1DLYhPrTUqSntrlmYzJpNw/edit#>.

<sup>137</sup> For instance, discussion about ISO's pricing policy arose in the context of ISO 26000. Some argued that charging for ISO 26000 is ill-suited because it uses and copyrights the content of authoritative intergovernmental documents that are publicly available. See G. Guertler, Best Prices for ISO 26000, ISO 26000, An Estimation (December 2011), [www.26k-estimation.com/html/best\\_prices\\_for\\_iso\\_26000.html](http://www.26k-estimation.com/html/best_prices_for_iso_26000.html).

<sup>138</sup> While the ISO Council agreed to make ISO/DIS 26000 freely available on the ISO website, for ISO 26000 it decided that "the current pricing policy should be applied with no deviation." ISO, ISO Council Resolution – No Free Availability of ISO 26000, September 25, 2009, ISO/TMB/WG SR, [https://isotc.iso.org/livelink/livelink/fetch/-8929321/8929339/8929348/3935837/3974906/4034859/8680335/2009-09-25\\_Cover\\_letter%2C\\_ISO\\_Council\\_Resolution\\_-\\_No\\_free\\_availability\\_of\\_ISO\\_26000.pdf?nodeid=8419078&vernum=-2](https://isotc.iso.org/livelink/livelink/fetch/-8929321/8929339/8929348/3935837/3974906/4034859/8680335/2009-09-25_Cover_letter%2C_ISO_Council_Resolution_-_No_free_availability_of_ISO_26000.pdf?nodeid=8419078&vernum=-2).

disseminate voluntary standards while ensuring their underlying potential and quality. ISO's ability to align its principles of governance and the value and impact of its standards with the strategic objectives behind its standard-setting work, and trade facilitation in particular, is an important trait. ISO has proven able to interpret its rules and procedures flexibly to meet changing expectations in stakeholder involvement and to experiment and draw lessons from previous experiences. ISO's institutional structure in conjunction with its complexity, and its continued adherence to the governance principles founding it, confers strength onto ISO. ISO's ability to safeguard these principles, and its continuing adherence to its business model, despite and because of criticism and pressure, attests to its resilience. Most importantly, this study showed how ISO has built these qualities by overcoming adversity during crisis moments, and how these qualities shape ISO as an organization and its resilience today.

Overall, the interviewees point to the aforementioned qualities of ISO as strengths, giving optimism for ISO's future. These qualities render it stronger and more influential today, as it seeks to ensure its continued relevance in contributing to the delivery of the UN 2030 global agenda for sustainable development and meeting the many global challenges that appear in the seventeen SDGs as part of this agenda. The interviewees highlighted opportunities offered by the SDGs to promote ISO's existing portfolio and to expand into new domains of standard development to resolve these global challenges, which facilitates further growth. New challenges abound as ISO might lose in influence to other organizations that, mainly because of their specialized expertise, can act more efficiently and swiftly in identifying and responding to the needs of users in the domain of sustainability standards. In this light, future research could examine how ISO has grown resilient through competition with other actors, claiming authority through its standard-setting activities, and offering the most attractive institutional setting for the development of standards.