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**TRAINING ACADEMY**

**Beginner 2**

**Course 2**

STANDARDISATION  
TRAINING ACADEMY

Topic:

**COMPANY  
STANDARDISATION**

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## Module Objectives

After completing this module, you should be able to:

1. understand motives that companies may have to develop company standards;
2. understand different forms that company standards may have;
3. determine if company standardisation has been successful;
4. explain why companies may develop standards to be used only internally;
5. explain why companies may develop standards to be used only externally;
6. explain why companies may develop standards with the main goal to impose these standards on the global market while achieving network effects/market dominance; and
7. understand benefits that companies may have from developing company standards.

## Key Terms

company standardisation, cooperation-based standardisation



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# 1 COMPANY STANDARDISATION: INTRODUCTION

Company standardisation is standardisation within a company, including positioning towards external standardisation.<sup>1</sup> Company standardisation mainly covers three aspects - developing standards to be used only internally (within the company), developing standards to be used externally and developing standards to become sectoral or industrial standards.<sup>2</sup> The interplay of companies and standardisation can be various. Companies can be direct users of standards; they can passively or actively participate in standards development using different mechanisms of standardisation or doing both.

In formal organisations for standardisation, companies can decide their level of involvement - to be represented by experts in NSBs and European or international organisations for standardisation: to comment and vote on national, European or international draft standards; to actively participate in shaping national, European and international standards; to actively develop national, European and international standards; to chair a technical committee (with the support of secretarial management of SDOs) or working groups (WGs) and coordinate the work of TCs with their respective subordinate TCs or WGs, and propose new standardisation projects.<sup>3</sup> The level of involvement in standardisation is a strategic decision of the company. Some consortia or alliances do not accept observers or passive participants who do not contribute to the development or agreements about a solution or agree to use a solution.

## 1.1 How do companies get the standard(s) they need?

Standardisation can take place within one company, be based on the cooperation of several companies, on the collaboration of professional or industrial associations, business associations, consortia, and fora, or within national, regional, or international standardisation organisations. Let's assume that the organisation has a **matching problem** or a problem of interrelated entities that are not harmonised with each other, whereas solutions to a matching problem are expected to be used repeatedly or continuously during a specific period by a substantial number of the parties for whom they are meant.<sup>4</sup> To solve such a problem, the organisation shall consider the need for the standard(s) (see Figure 2).

**External standards.** Solutions for many problems are already in standards so companies may use external standards. External standards are developed outside the company. There are many active standards organisations with thousands of members who develop tens of thousands of standards every year that

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<sup>1</sup> Simons, C. A. J., & de Vries, H. (2002). Standaardisatie en Normalisatie. Deel 3: Innovatie en bedrijfsnormalisatie. Ten Hagen & Stam b.v., pp. 54.

<sup>2</sup> de Vries, H. J. (1999). Standardisation: A Business Approach to the Role of National Standardisation Organisations. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 231.

<sup>3</sup> SNV. (2022). When you create standards, you drive market. Accessed on October 27, 2022. Retrieved from: [www.snv.ch/en/information](http://www.snv.ch/en/information)

<sup>4</sup> de Vries, H. J. (1999). Standardisation: A Business Approach to the Role of National Standardisation Organisations. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 31.



interact with the innovative decisions of most manufacturers.<sup>5</sup> Finding the right standard might not be an easy task. Most standards-developing and standards-setting organisations maintain standards catalogues on their websites with descriptions of current versions of standards. External standards are a valuable source for acquiring knowledge, and knowing what new developments are in a specific sector of standardisation can be highly important for the business. First of all, it can prevent reinventing the wheel.

**Internal standards.** If the external standard does not exist or the external standard exists but fails to meet the company's needs, the company may decide to develop the standard independently.<sup>6</sup> In this case, the company develops standards that will be used within it, where the motives may differ. These standards are usually called internal standards. A company develops internal standards to establish rules and guidelines, manage operations, and harmonise them with good industrial practices. Companies might set and maintain internal standards to deploy specific working procedures throughout their branches or franchises.<sup>7, 8</sup>

Many global companies develop standards to ensure quality, manage relations with their suppliers, customers, or business partners, assure quality, and achieve corporate social responsibility. Generally, the company may adopt one or more external standards as a whole and declare them as internal standards (e.g. standards related to the creation of technical drawings) or create its own combination of standards. For example, the IKEA company's IWAY (IKEA WAY) standards are based on the International Labor Organisation (ILO) conventions and standards. Also, a company may accept the quality standards of another company and deliver products to its customers following those standards. Accordingly, many internal procedures, instructions, and codes of conduct are seldom called standards.<sup>9</sup>

**Cooperation-based standardisation.** Companies have different motives and interests. A company may develop standards to enhance the relationship with suppliers and business partners in cooperation with suppliers and business partners. Additionally, a company may create a solution to a matching problem to impose the solution (in the form of a standard) on their counterparts in the global market while achieving network effects and market dominance. Additionally, organisations may decide to develop standards with other organisations by excluding other interested parties, such as users' advocates and environment protectors. This type of standardisation is called **cooperation-based standardisation**. In cooperation-based standardisation, reaching an agreement on a solution means the existence of an initial group of users of the new standard that will eventually lead to a more extensive installed base than in a situation where the organisation develops the solution itself. Furthermore, in addition to using common knowledge and sharing

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<sup>5</sup> Baron, J., & Spulber, D. F. (2018). Technology Standards and Standard Setting Organisations: Introduction to the Searle Center Database. *Journal of Economics and Management Strategy*, 27(3), pp. 462–503.  
<https://doi.org/10.1111/jems.12257>

<sup>6</sup> de Vries, H. J. (1999). *Standardisation: A Business Approach to the Role of National Standardisation Organisations*. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 15.

<sup>7</sup> Beshel, B. (2010). *An Introduction to Franchising*. The IFA Educational Foundation. <https://doi.org/10.1201/b17544-7>.

<sup>8</sup> According to Beshel (2010), a franchise can be defined as "an agreement or license between two legally independent parties which gives: the franchisee the right to market a product or service using the trademark, trade name, or operating methods of the franchisor; the franchisee the obligation to pay the franchisor fees for these rights; and the franchisor the obligation to provide rights and support to franchisees".

<sup>9</sup> de Vries, H. J. (1999). *Standardisation: A Business Approach to the Role of National Standardisation Organisations*. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 17.

costs of research and development, cooperation-based standardisation can be starting point for proposing the solution to existing consortia or formal organisations for standardisation.

Suppose cooperation-based standardisation is not an adequate solution. In that case, organisations may decide to propose standards development to professional or industrial associations, business associations, consortia, or fora (if they exist) or to a formal organisation for standardisation. Offering a solution (new work item) to existing formal or informal organisations for standardisation means that a company have agreed to the involvement of other stakeholders and interested parties in standards development.

If organisations choose to develop a standard with the professional/industrial association, business associations, consortia, or fora (if they exist), this standardisation is called **de facto standardisation**. Finally, suppose the professional or industrial association, business associations, consortia, or fora does not exist (or is not interested in standards development). In that case, a company may establish an association aimed only at developing standards. De facto standardisation without the involvement of any organisation for standardisation (e.g. business associations, consortia, or fora) is called **ad hoc de facto standardisation**.<sup>10</sup> If formal organisations for standardisation accept the offer, the next step is to form a working group (by a specific technical committee) that shall write a draft standard. This type of standardisation is known as **formal standardisation**.<sup>11</sup>

However, company standards might become de facto standards, and de facto standards might become formal standards. Microsoft has developed the OOXML standard and offered it to the ECMA consortium, by which it became the ISO/IEC 29500 standard.<sup>12</sup>

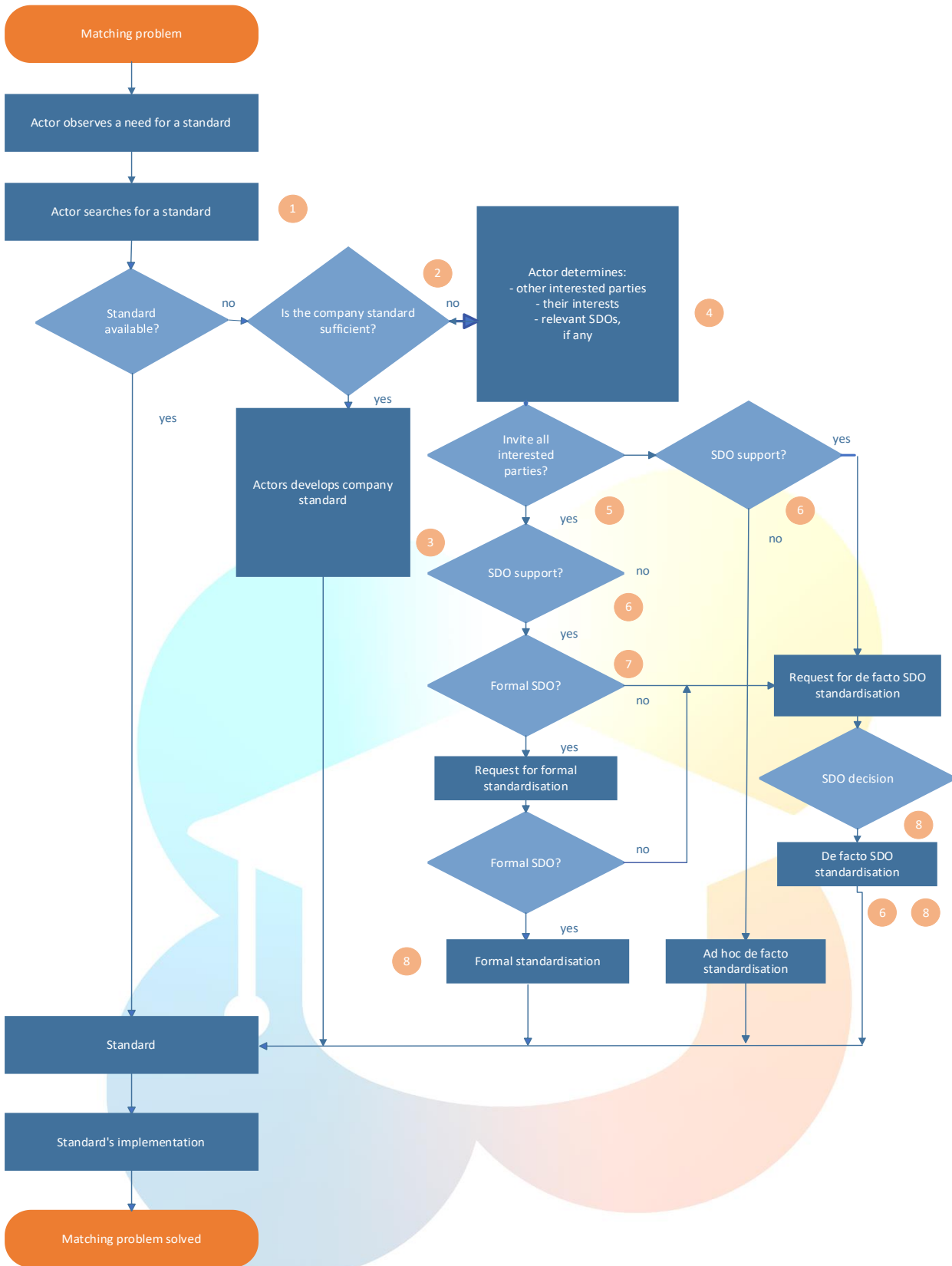
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<sup>10</sup> de Vries, H. J. (1999). Standardisation: A Business Approach to the Role of National Standardisation Organisations. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 17.

<sup>11</sup> de Vries, H. J. (1999). Standardisation: A Business Approach to the Role of National Standardisation Organisations. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 17.

<sup>12</sup> ISO/IEC 29500-1:2008 Information technology — Document description and processing languages — Office Open XML File Formats — Part 1: Fundamentals and Markup Language Reference, defines a set of XML vocabularies for representing word-processing documents, spreadsheets and presentations, based on the Microsoft Office 2008 applications. It specifies requirements for Office Open XML consumers and producers that comply to the strict conformance category. Accessed on October 27, 2022. Retrieved from: <https://www.iso.org/standard/51463.html>





**Fig. 1.** How do organisations get the standard(s) they need? <sup>13</sup>

## 1.2 Developing Standards to become Sectoral or Industrial Standards

Standardisation is an activity that directly influences market advantages and business strategies. To expand the market for their products or services, some companies impose their solution to their counterparts in the global or regional markets and suggest it becomes standard. It might be a common technological platform or solution with a higher level of generality, which enables the interoperability of different devices and software modules and enhances the compatibility of products and their components. At the same time, core technologies or other functionalities might be kept as a business secret. For some companies, it is “a nonmarket strategy, in which a company creates a business environment that is advantageous to them by engaging other companies with a clear intention to convince them that the company’s technology has potential for the common good”. <sup>14</sup> Companies with a more considerable influence on standard setting can reduce the time needed to modify products and adjust to standard changes in advance, thus introducing new products to the market more quickly. <sup>15</sup>

**EXAMPLE.** A standardisation is a tool for corporate strategies, and it can influence the opening of markets. In the 1980s, major producers of PC processors realised that common communication protocols would benefit enlarging market, so they made communication protocols an open standard. This allowed anyone to develop products compatible with open standards, shift manufacturing to lower-cost regions, and lower the price of peripheral components while keeping the prices of processors stable. Manufacturers of PC processors had standardised the high-speed interface for connecting processors based on their own products, allowing them to control the processors’ ecosystem in the market. Open interfaces lowered the market threshold to other players, while the core technology was kept closed to others for protection. <sup>16</sup> There are plenty of similar examples, and they can be analysed from many different positions. Yes, some businesses have grown, but on the other side, PCs have become available to many people.

Standards can help companies open new markets for their innovative products, enter existing markets, and achieve positive network effects, product interoperability, and compatibility. Still, there are also certain risks of knowledge spillover, free riding (some invest in R&D, and some use the solution in publicly available standards) and the lack of control of the results of the standardisation process. Developed standards are worth little for companies who build solutions if they are not accepted widely - if other companies do not implement them. And for many companies, participation in standardisation is a “give and take” process in which many compromises often accompany reaching a common solution.







<sup>13</sup> de Vries, H. J. (1999). *Standardisation: A Business Approach to the Role of National Standardisation Organisations*. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 17.

<sup>14</sup> Standardization is the key to future business growth, allowing to seize the market advantage and providing a basis of decision-making for business strategies. <https://www.sony-semicon.com/en/feature/2022031801.html>

<sup>15</sup> Wen, J., Qualls, W. J., & Zeng D. (2020). Standardization Alliance Networks, Standard-Setting Influence, and New Product Outcomes, *J PROD INNOV MANAG* 2020. 37(2), pp. 138–157. <https://doi.org/10.1111/jpim.12520>

<sup>16</sup> Wen, J., Qualls, W. J. & Zeng D. (2020). Standardization Alliance Networks, Standard-Setting Influence, and New Product Outcomes, *J PROD INNOV MANAG* 2020. 37(2), pp. 138–157. <https://doi.org/10.1111/jpim.12520>

However, with many companies involved in agreeing on rules and standards, there are important behind-the-scenes communications and negotiations which may have a significant impact on the business and management strategies of a company.<sup>17</sup> Standardisation alliances and networks of companies might be highly complex and burdened with companies' strategies and IP issues and might have separate activities by forming new standardisation relationships with other companies separately.<sup>18</sup> Some skills needed to be successful in standardisation and expand the circle of like-minded collaborators and further strengthen proactive initiatives of international standardisation might be systemised as:<sup>19</sup>

-  **Art of argumentation.** A person working on a common solution needs substantial communication skills to adequately verbalise the ideas which wants to promote and negotiate with the industry stakeholders.
-  **Long-term commitment.** Those who are not committed are rarely successful in negotiations with industry stakeholders.
-  **A broader perspective.** It is not sufficient just to describe the solution. A person needs to elaborate an in-depth view and consider the significance and value of the proposed solution, the standards, social and industrial challenges, and even implications to the business management. Furthermore, standardisation needs to be explained to and understood by colleagues in the company, e.g. that standardisation has benefits to improve corporate value and technical advantages.
-  **Capacity to build alliances.** Building good relationships with industry stakeholders is important, but it is also essential to develop a win-win relationship. Standardisation is something no one company can achieve by itself. It is a team effort. Ideally, everyone should have their share of it. Behind the representative in standardisation alliances, there is a vast amount of time and an incredible number of people involved in the technology development (from engineers, the intellectual properties IP department, and the patent office). That is why it is essential to respect other members' stances and find a compromise sometimes.
-  **Expert knowledge and preparedness.** Being loud does not get you very far. You have to be able to offer technically correct answers and be recognised to be an expert in the field. There will be opinions offered by competitors, so it is important to be prepared and respond quickly. The expert should have precise information to what extent the company's information can be made accessible to others.
-  **Recognising the different interests and tactics,** and tactical to use the power of the majority. Do not try to win on everything. Standardisation is a time-consuming activity. The crucial part is a give-and-take attitude - to give way to others where you can, but ensure that critical things are achieved.

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<sup>17</sup> Standardisation is the key to future business growth, allowing to seize the market advantage and providing a basis of decision-making for business strategies. <https://www.sony-semicon.com/en/feature/2022031801.html>

<sup>18</sup> Wen, J., Qualls, W. J., & Zeng D. (2020). Standardization Alliance Networks, Standard-Setting Influence, and New Product Outcomes, J PROD INNOV MANAG 2020. 37(2), pp. 138–157. <https://doi.org/10.1111/jpim.12520>

<sup>19</sup> Standardisation is the key to future business growth, allowing to seize the market advantage and providing a basis of decision-making for business strategies. <https://www.sony-semicon.com/en/feature/2022031801.html>

## 2 COMPANY STANDARDISATION: TASKS

Companies constantly face demands to conform their processes, services or products to various standards. Companies demand their suppliers meet their specific standards. Consulting agencies and conformity assessment bodies are interested in developing various services and promoting various standards and certification schemes. Nowadays, the market is flooded with new standards and private certification schemes. In all this, the management has a problem managing and understanding the possibilities and limitations. To solve these problems day, companies have employees or offices entrusted with leading company standardisation activities. Different terms are being used to describe job descriptions of company standardisation:<sup>20</sup>

-  **standard managers** are technical specialists capable of creating and implementing the company standardisation strategy to be used by top managers and employees;
-  **standard engineers** whose activities vary from merely conducting technical tasks to representing the company throughout various external meetings and committees;
-  **standard generalists** deal with managing and administering standards, buying (external) standards, maintaining (company) standards & leading standard training;
-  **standard specialists** are technical experts with strong technical backgrounds, who represent the company in technical committees, advise technical departments, and review customer specifications concerning normative requirements and references;
-  **standard developers** who represent the company in technical committees and are able to conduct various consensus-based negotiations (by listening and observing).

Until the mid-1990s, large companies established organisational units and departments to administer standardisation work. The tasks of employees in these units and departments were to ensure that product specifications are in accordance with company standards, to track changes throughout the standards requirements of different customers or markets as well as to track changes throughout the international, regional, and national standards. This was adopted as a common company standardisation practice around the globe until the British standards users' organisation stopped mentioning standardisation departments and vaguely recommended employing standards specialists.<sup>21</sup> The key task of standards specialists was to promote standardisation benefits through rationalisation of the business, better collaboration, and enhanced communication, but also the consolidation of the results of such a collaboration to achieve economic effects as well as continuous improvements due to the use of standards.<sup>22</sup>

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<sup>20</sup> Blind, K., & Dreschler, S. (2017). European Market Needs for Education in Standardisation: Standardisation-related Competence.

<sup>21</sup> de Vries, H. J. (1999). Standardisation: A Business Approach to the Role of National Standardisation Organisations. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 231.

<sup>22</sup> de Vries, H. J. (1999). Standardisation: A Business Approach to the Role of National Standardisation Organisations. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 232.

### 3 COMPANY STANDARDISATION: STRATEGIES

Understanding the standardisation and defining appropriate standardisation strategies is a prerequisite for any company's international operations. In many companies, standards are usually seen as a limitation and obstacle rather than an opportunity or convenience. Standardisation can be an effective instrument for increasing a company's competitiveness. To do so, the company must define its standardisation strategy. Although business management literature offers different views, strategies are usually classified as follows:

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- 🔄 **the industrial policies** are established by professional and industrial associations and the government. The European Union (EU) standardisation strategy proposes a series of actions aimed at ensuring European leadership in global standards, making standardisation a driver of European competitiveness and resilience, ensuring standards support our investments in the green and digital transitions and embedding democratic values in technology applications;<sup>24</sup>
- 🔄 **the corporate strategy** sets out a general orientation of the company, such as target export markets, company organisation, and strategic business units or departments. Industrial policies can significantly determine key elements of corporate strategies;
- 🔄 **the competitive strategy** addresses the target market of the specific product(s); the competitive strategy aims at ensuring long-term success and the target market; and
- 🔄 **the functional strategy** aims at implementing the chosen competitive strategy while creating, advertising, distributing, and selling successful products or services.

The company standardisation strategy can be set at each of the aforementioned levels.<sup>25</sup> Within the company, the company standardisation strategies are set at the level of the competitive strategies and must be aligned with the corporate strategies. A company may base its strategic policy concerning standardisation on the development of company standards or the use of external standards already developed by other organisations. If the strategic policy is based on the company standards development, the company should:

- 🔄 define the strategic goals that it wants to achieve by developing its own standards;
- 🔄 decide whether to develop the standard(s) alone or to cooperate with others, offer the standard(s) to formal or informal organisations, or combine these approaches;
- 🔄 define strategies for offering the standard(s) to the market through cooperation with other organisations, proprietary rights, and licenses, as an open standard, etc.
- 🔄 define other strategies to ensure its success when offering standards to the market.

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<sup>23</sup> Hesser, W. (2010). Standardisation within a Company: Strategic Perspective. In W. Hesser, A. Feilzer, & H. de Vries (Eds.), *Standardisation in Companies and Markets* (3rd ed., p. 569). Druckerei Helmut Schmidt University., pp. 219.

<sup>24</sup> EC. (2022). Standardisation Strategy. Accessed on October 27, 2022. Retrieved from: [https://single-market-economy.ec.europa.eu/single-market/european-standards/standardisation-policy/standardisation-strategy\\_en](https://single-market-economy.ec.europa.eu/single-market/european-standards/standardisation-policy/standardisation-strategy_en)

<sup>25</sup> Hesser, W. (2010). Standardisation within a Company: Strategic Perspective. In W. Hesser, A. Feilzer, & H. de Vries (Eds.), *Standardisation in Companies and Markets* (3rd ed., p. 569). Druckerei Helmut Schmidt University., pp. 221.



Key standardisation strategies can be classified as:<sup>26</sup>

-  **Positioning strategies.** Company standardisation strategies can be based on the strategic goals of market positioning, e.g. a company expect standardisation activities to maintain or improve the current position in the market. To do so, companies can choose to develop a competitive standard, invest in new technologies and develop a standard for their commercialisation, or accept an already developed standard that allows them to survive or enter the market. Companies can accept a common standard with their counterparties and thus gain a larger market, but at the same time, greater competition. For example, TOSHIBA could have developed its own digital versatile disk standard but chose to offer its solution to the DVD consortium (see the case of the HD - DVD vs Blu - Ray standards). Thus, it gained a larger market and accepted greater competition for its products.
-  **Maximising profits strategies,** given that company standardisation strategies imply a profit orientation. To survive, companies, unlike other organisations, must make a profit. Although standardisation implies investments, the company expects (from the development or acceptance of standards) a profit. Companies can consider maximising profits strategies, regardless of whether they develop a standard or adopt an already developed standard. By adopting a common standard, companies can enable access to larger markets but, at the same time, greater competition. Whether a larger market with greater competition will bring them larger profits is crucial for the company to accept this strategy. The strategy of maximising profit is critical for deciding if such a standard will eventually become proprietary or open;
-  **competitive strategies.** Work is not finished when a company develops a standard independently, in cooperation, or in a consortium and offers it to the market. Companies should develop a whole series of decisions and activities to ensure the competitive advantage of standards on the market through increasing or reducing ownership of standards, maintaining the compatibility of standards with other standards, developing new versions of standards following the latest developments;
-  **acceptance and learning strategies,** as many organisations cannot impose themselves in the standardisation process, and their standardisation strategy is based on accepting standards and improving their performance. We can see how successful these strategies can be from the example of companies from Asian countries.

## 4 CASE STUDY: THE HD-DVD VS. BLU-RAY STANDARDS

The need to expand the market of new technologies has led to the need for an increasing number of standards and new types of standardisation. The entertainment industry has influenced the need for a new medium that enables larger storage capacities than the compact disc CD and the digital multipurpose disc DVD. When, in 2000, SONY released the PlayStation 2 game console, which used CD and DVD as media and

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<sup>26</sup> Hesser, W. (2010). Standardisation within a Company: Strategic Perspective. In W. Hesser, A. Feilzer, & H. de Vries (Eds.), *Standardisation in Companies and Markets* (3rd ed., p. 569). Druckerei Helmut Schmidt University., pp. 221.



offered DVD movie playback as an option, it became clear that the time of multipurpose discs was yet to come. It seemed that solution of the DVD forum has every chance to dominate the market.

Already at the beginning of the 2000s, large companies began to announce breakthroughs in this area. On August 29, 2002, Toshiba and Nec proposed the next generation of optical discs to the DVD forum named HD DVD (High Definition DVD). In the same year, SONY and nine leading companies revealed plans to develop Blu-Ray Disc.<sup>27</sup> Toshiba's HD-DVDs use red and near-infrared light lasers with wavelengths of 705 nm and 780 nm. The development of the blue laser diode, used for the Blu-Ray disc, has made it possible to fit more information on a disc the same size as a DVD. Blu-ray disc was a storage medium with 5 to 10 times the capacity of DVD and CD if they were the same size.<sup>28</sup> The Blu-ray Disc Founders forum was soon established. As other companies joined in 2004, Blu-ray Disc Founders changed its name to Blu-ray Disc Association (BDA). By 2007, the BD-ROM specifications were finalised, and the first Blu-ray players appeared on the market.<sup>29</sup>

In the beginning, HD-DVD had a leading role in the high-definition media market, and sales of Blu-ray discs were poor, and the first Blu-ray players were expensive and rarely available on the market. Blu-Ray was represented by SONY, Panasonic, Philips, Pioneer, Dell and Apple, while on the side of the HD DVD standard were Toshiba, Nec, Microsoft and Intel.

Columnist John Dvorak pointed to the consumer position: "I'm not sure that everyone will trade in their DVD collection for HD DVD or Blu-Ray the way we've traded in long-play vinyl records will be realised."<sup>30</sup> A truce seemed possible when in 2005, SONY President Roji Tsubashi stated: "Listening to the voice of users, two rival formats are a disappointing solution, and we have not completely given up on the possibility of integration or compromise".<sup>31</sup>

Market dominance occurred when SONY launched its PlayStation 3 game console that uses Blu-ray discs. In January 2007, it was announced: "The DVD Promotion Group is proud to announce that 175,000 HD DVD players have been sold in the US as of January 5, 2007." This information was soon overshadowed by the new one, that the Play Station 3 game console, which uses games on the Blu-Ray format, sold 475,000 copies from November 17, 2007, when it came on the market, until Christmas."<sup>32</sup> From month to month, there was information about the decline in the sales of HD DVD products.

Influential audio and video content producers, Hollywood studios played an important role in the struggle for market supremacy. Five of the eight major Hollywood studios decided to support only the Blu-Ray

<sup>27</sup> NN. (2018). HD DVD vs. Blu-ray Disc: A History. Accessed on October 27, 2022. Retrieved from: [http://www.techhive.com/article/142584/hddvd\\_bluray.html](http://www.techhive.com/article/142584/hddvd_bluray.html)

<sup>28</sup> Blu-ray Disc Association (BDA). About Blu-ray Disc. (2022). Accessed on October 27, 2022. Retrieved from: <http://www.blu-raydisc.com/en/AboutBlu-ray/WhatisBlu-rayDisc/BDvs.DVD.aspx>

<sup>29</sup> Blu-ray Disc Association (BDA). About Blu-ray Disc. (2022). Accessed on October 27, 2022. Retrieved from: <http://www.blu-raydisc.com/en/AboutBlu-ray/WhatisBlu-rayDisc/BDvs.DVD.aspx>

<sup>30</sup> Dvorak, J., C. (2004). Inside Track, *PC Magazin*, 19.

<sup>31</sup> NN. (2018). HD DVD vs. Blu-ray Disc: A History. Accessed on October 27, 2022. Retrieved from: [http://www.techhive.com/article/142584/hddvd\\_bluray.html](http://www.techhive.com/article/142584/hddvd_bluray.html)

<sup>32</sup> Belleflamme P. & Peitz M. (2010). *Industrial Organization Markets and Startegies*, Cambridge University Press, pp. 600.

format, while only one remained on the side of HD DVD. The BBC reported: "Toshiba has announced that the final straw has come from Warner Bros deciding only to release its films on Blu-ray".<sup>33</sup>

In early 2008, Toshiba admitted defeat and took over the development and production of Blu-ray. The president of Toshiba, Atsutoshi Nishida, said on that occasion: "If we try to stay in the HD DVD business, it could harm our business as a whole. We have considered both competing standards in the market and their impact on consumers and have decided to stop producing HD DVD players".<sup>34</sup>

Many think that the case ended with the capitulation in 2008 and that HD DVD is the past, and they are probably right if they mean the North American and EU markets. In his PC Magazine column, John Dvorak stated: "Blu-Ray continues to struggle with HD DVD standards in Asia. The latest change to the HD DVD standard is being announced next week. Blu-Ray releases new versions. This process of constantly changing standards makes a mockery of the very concept of standardisation...".<sup>35</sup> Dvorak also states that the storage capacity of Blu-Ray is larger but that the solution is more expensive. HD DVD lost the battle in North America and Europe, but China decided to embrace HD DVD. Dvorak's explanation is "China is always looking for cheaper solutions... this seems like the only explanation that the DVD forum has approved the HD DVD initiative at all."<sup>36</sup> In the end, all members of the DVD Forum are members of the BDA simultaneously." On the other hand, Dvorak claims that Hollywood studios can benefit from the fact that the Blu-Ray format will dominate markets with relatively low piracy and HD DVD in the others. No one has mentioned the Internet yet.

In 2007, the European Commission investigated the case. The critical issue was whether the rival proponents of the two multipurpose disc standards (SONY for Blu-Ray and Toshiba for HD DVD) acted unfairly. Were contracts signed with Hollywood studios fair? The European Commission asked Hollywood studios to disclose all agreements with rival companies in the investigation. This investigation began immediately after the investigation that the European Commission conducted against Microsoft, accusing it of monopolistic behaviour for promoting its own media player in the Windows package.<sup>37</sup>

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<sup>33</sup> Belleflamme P. & Peitz M. (2010). *Industrial Organization Markets and Startegies*, Cambridge University Press, pp. 583.

<sup>34</sup> Тошиба окончала рат за превласт на тржишту DVD уређаја нове генерације. (2014). преузето са:<http://www.economy.rs/elektronsko-poslovanje/2867/it-vesti/Toshiba-okoncala-rat-za-prevlast-na-trzistu-DVD-uredjaja-nove-generacije.html>

<sup>35</sup> Dvorak, J., C. (2004). *Inside Track*, *PC Magazin*, 19.

<sup>36</sup> In Dvorak's column, Blu-Ray Group is mentioned, and BDA is meant.

<sup>37</sup> Belleflamme P. & Peitz M. (2010). *Industrial Organization Markets and Startegies*, Cambridge University Press, pp. 604.

## SUMMARY

Company standardisation is standardisation within a company, including positioning towards external standardisation.<sup>38</sup> Company standardisation mainly covers three aspects - developing standards to be used only internally (within the company), developing standards to be used externally and developing standards to become sectoral or industrial standards.<sup>39</sup> The interplay of companies and standardisation can be various. Companies can be direct users of standards; they can passively or actively participate in standards development using different mechanisms of standardisation or doing both. In formal organisations for standardisation, companies can decide their level of involvement - to be represented by experts in NSBs and European or international organisations for standardisation: to comment and vote on national, European or international draft standards; to actively participate in shaping national, European and international standards; to actively develop national, European and international standards; to chair a technical committee (with the support of secretarial management of SDOs) or working groups (WGs) and coordinate the work of TCs with their respective subordinate TCs or WGs, and propose new standardisation projects.<sup>40</sup> The level of involvement in standardisation is a strategic decision of the company. Some consortia or alliances do not accept observers or passive participants who do not contribute to the development or agreements about a solution or agree to use a solution. Standardisation is an activity that directly influences market advantages and business strategies. To expand the market for their products or services, some companies impose their solution to their counterparts in the global or regional markets and suggest it becomes standard. It might be a common technological platform or solution with a higher level of generality, which enables the interoperability of different devices and software modules and enhances the compatibility of products and their components. At the same time, core technologies or other functionalities might be kept as a business secret. For some companies, it is “a nonmarket strategy, in which a company creates a business environment that is advantageous to them by engaging other companies with a clear intention to convince them that the company’s technology has potential for the common good”.<sup>41</sup> Companies with a more considerable influence on standard setting can reduce the time needed to modify products and adjust to standard changes in advance, thus introducing new products to the market more quickly.<sup>42</sup>

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<sup>38</sup> Simons, C. A. J., & de Vries, H. (2002). *Standaardisatie en Normalisatie. Deel 3: Innovatie en bedrijfsnormalisatie*. Ten Hagen & Stam b.v., pp. 54.

<sup>39</sup> de Vries, H. J. (1999). *Standardisation: A Business Approach to the Role of National Standardisation Organisations*. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>, pp. 231.

<sup>40</sup> SNV. (2022). When you create standards, you drive market. Accessed on October 27, 2022. Retrieved from: [www.snv.ch/en/information](http://www.snv.ch/en/information)

<sup>41</sup> Standardization is the key to future business growth, allowing to seize the market advantage and providing a basis of decision-making for business strategies. <https://www.sony-semicon.com/en/feature/2022031801.html>

<sup>42</sup> Wen, J., Qualls, W. J., & Zeng D. (2020). Standardization Alliance Networks, Standard-Setting Influence, and New Product Outcomes, *J PROD INNOV MANAG* 2020. 37(2), pp. 138–157. <https://doi.org/10.1111/jpim.12520>

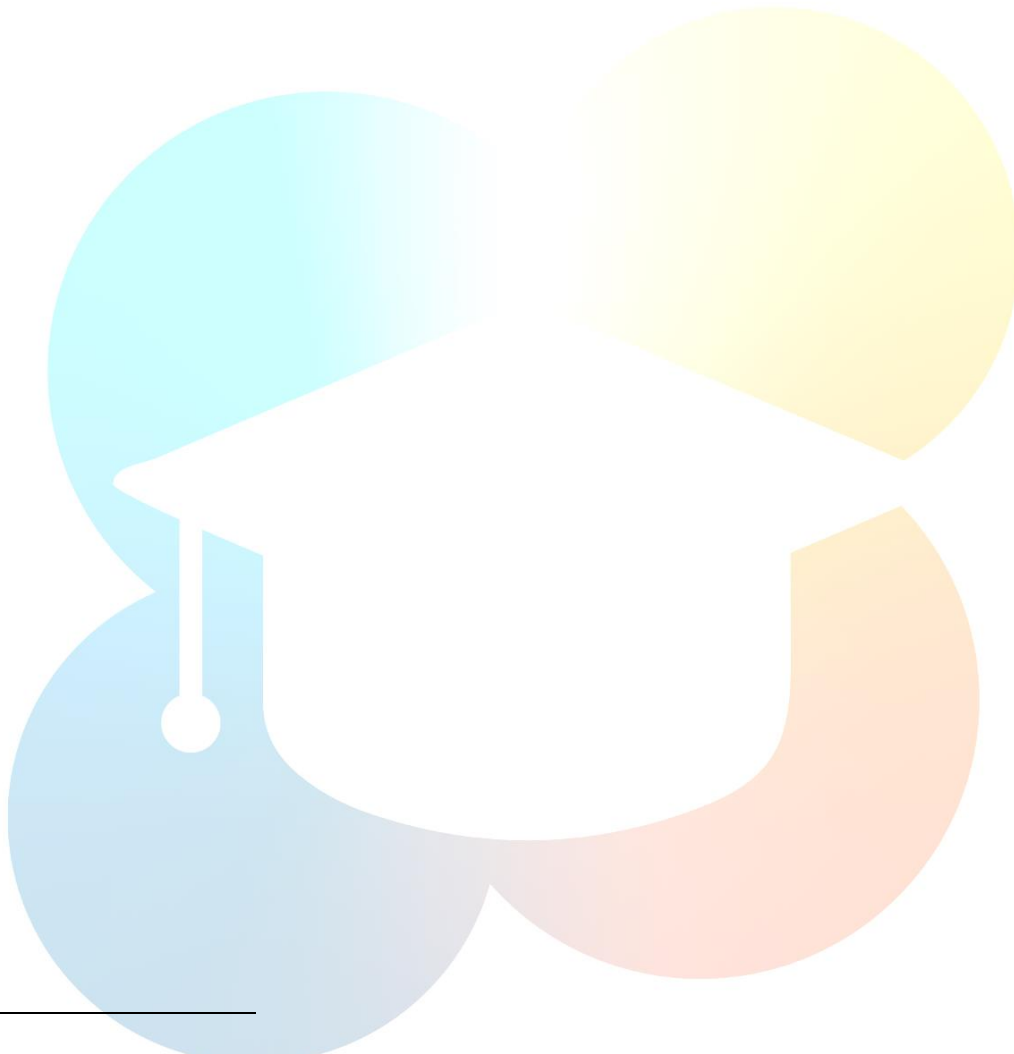
## GLOSSARY

### **company standardisation**

standardisation within a company, including positioning towards external standardisation <sup>43</sup>

### **cooperation-based standardisation**

organisations may decide to develop standards with other organisations, by excluding some other interested parties, as user advocates, local communities, and the government <sup>44</sup>



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<sup>43</sup> Simons, C. A. J., & de Vries, H. (2002). Standaardisatie en Normalisatie. Deel 3: Innovatie en bedrijfsnormalisatie. Ten Hagen & Stam b.v., pp. 54.

<sup>44</sup> de Vries, H. J. (1999). Standardisation: A Business Approach to the Role of National Standardisation Organisations. Springer Science+Business Media, LLC. <https://www.springer.com/gp/book/9780792386384>

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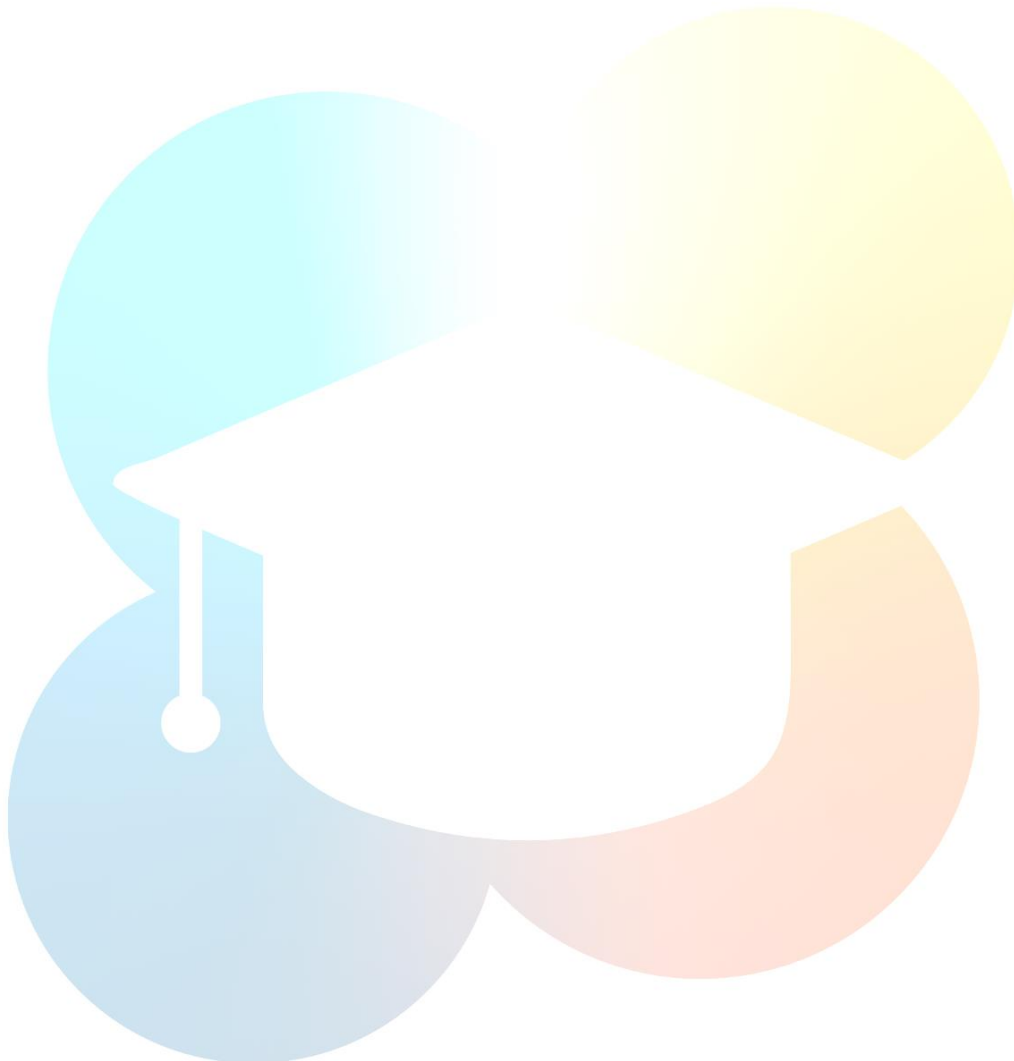
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