

# Corporate digitalization in the European context: going one step further

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## SUMARIO:

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## RESUMEN:

The digitalization of corporations is on the right path; however, the advantages sought by that process could be overshadowed by the disadvantages that come with any technological process. The aim of this work is to make a careful analysis of the framework set out by the lawmakers through Directive (EU) 2019/1151 of the European Parliament and of the Council, of 20 June 2019, amending Directive (EU) 2017/1132 as regards the use of digital tools and processes in company law, and, based on the principles governing corporate digitalization, take the analysis one step further, indicating where this issue should go in the future. Although technology helps corporations, its indiscriminate use in the corporate sphere could lead us to a European model of capital company that bears no resemblance to the one we have now. It is a process in which more advanced technology should be introduced progressively, in order to discover gradually how appropriate or not its adaptation is. This opens up a huge potential for modernizing corporate law that we should take advantage of – with caution and security – but to the fullest.

**Palabras clave:** Digitalization, blockchain, voting agreements, corporate law.

## ABSTRACT:

La digitalización de las corporaciones supone el camino correcto; sin embargo, los beneficios que este proceso otorgaría se podrían ver eclipsados por las desventajas inherentes a cualquier proceso de reforma tecnológica. El propósito de este trabajo es el de analizar la Directiva (EU) 2019/1151, promulgada el 20 de Junio de 2019 por el Parlamento Europeo, en modificatoria de la Directiva (EU) 2017/1132, referente al uso de herramientas y procesos digitales en el Derecho Corporativo; basándose en los principios que rigen a la digitalización de la corporación, lleva el análisis un paso adelante e indica a donde debería apuntarse en un futuro. Aunque la tecnología pueda ayudar a las corporaciones, su uso indiscriminado puede llevarnos a una sociedad de capitales del modelo Europeo, que no guarda parecido alguno con nuestra regulación. Se trata de un proceso que se debe introducir de manera progresiva, con el fin de descubrir gradualmente si es lo apropiado el adaptar estos procesos. Esto sostiene un gran potencial para la modernización corporativa de la que deberíamos tomar ventaja, con la debida diligencia.

**Keywords:** Digitalización, blockchain, acuerdo de votación mancomunada, derecho corporativo.

## I. CORPORATE DIGITALIZATION IN THE EUROPEAN SPHERE

The European Commission has long been aware of the importance of creating a unified and modern corporate law that is adapted to the digital world.<sup>1</sup> Although the Commission has been one of the forerunners, other European institutions have also made efforts to foment

the digitalization of corporate law. This is reflected in the communication which the European Commission presented to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions called “A Digital Single Market Strategy for Europe”.<sup>2</sup> Subsequently, in 2012, it created the Business Registers Interconnection System — BRIS.<sup>3</sup>

1. In 2012, the European Commission published the *Action Plan of 2012*, where it presented a communication to the Council, the European Economic and Social Committee and the Committee of the Regions entitled *European company law and corporate governance - a modern legal framework for more engaged shareholders and sustainable companies*. On that basis, in 2018, in execution of the Action Plan of 2012, the European Commission published the “*EU Company Law Package*”, with two important proposals: the initiative for the use of digital tools in the formation and registration of companies, and the proposed reform of consolidated company law – Directive (EU) (UE) 2017/1132 – as regards cross-border conversions, mergers and divisions.
2. In this regard, the definition of “Digital Single Market” is particularly relevant: it is one in which the free movement of goods, persons, services and capital is ensured and where individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and with a high level of consumer and personal data protection, irrespective of their nationality or place of residence.
3. Directive (EU) 2012/17 of 13 June 2012 and Commission Implementing Regulation (EU) 2015/884, of 8 June 2015, regulating and executing it. See *The Roadmap of the European Commission, Inception impact assessment–Ares 468*, (2021).

However, it was Directive (EU) 2017/1132, of the European Parliament and of the Council, relating to certain aspects of company law (OJEU L169), that established the need for Member States to make information available online regarding limited liability companies registered in central, commercial and companies' registers. It also shone the light on the absence of national laws and the disparate situation in different Member States. All of this led to another Directive – Directive (EU) 2019/1151 (OJEU L186), amending the foregoing one.

Globalization and digitalization are the two main phenomena that have pushed the European *institutions* to become aware of the importance of having a framework for legal certainty suitable to the challenge being faced and which enables and promotes economic growth in all the Member States. However, it is an enormously complex challenge, since the national legislations of the Member States differ, as does the status of their technological development.

Directive 2019/1151 — the “Digitalization Directive” —, which we are analyzing here, starts off from the importance of digitalization as re-

gards the cost and time involved in setting up a company or opening a branch in another Member State. It also refers to the importance of providing comprehensive and accessible information for the correct functioning of companies and of the market.

Cost, time and accessible information appear as the core pillars for achieving the modernization of companies in general, and their digitalization in particular.<sup>4</sup>

In order to achieve all of the foregoing, the Member States have been asked to permit electronic identification by authenticated means<sup>5</sup>, in accordance with Regulation (EU) No 910/2014 of the European Parliament and of the Council, on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.<sup>6</sup> It also highlights the importance of the single digital gateway<sup>7</sup> and the European e-Justice Portal.<sup>8</sup>

The Digitalization Directive is designed as a minimum directive, as it allows Member States to confine this online formation procedure to certain types of capital companies.<sup>9</sup> The Directive also makes reference to the need for online

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4. Regarding these principles, see Lina Mikalonienė, *Having Company Law Fit More for a Digital Age*, 19 EUROPEAN COMPANY LAW, 4-5, (2022).
  5. Worth noting is the Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 910/2014 as regards establishing a framework for a European Digital Identity.
  6. Following the basic principles of company digitalization but in a more current scenario, see, among others, Carsten Schmidt & Robert Krimmer, *How to implement the European digital single market: identifying the catalyst for digital transformation*, 44 JOURNAL OF EUROPEAN INTEGRATION, 59-80, (2022).
  7. Article 13f) is added to Directive (EU) 2017/1132, according to which, “Member States shall ensure that concise and user-friendly information, provided free of charge and at least in a language broadly understood by the largest possible number of cross-border users, is made available on registration portals or websites that are accessible by means of the Single Digital Gateway to assist in the formation of companies and the registration of branches.”
  8. Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures.
  9. Herein lies the complexity of this Digitalization Directive, given that the substantive and procedural requirements of each legal system must continue to be met.

templates which can be used to set up limited liability companies.<sup>10</sup>

The speed sought through digital progress is counteracted by the control systems<sup>11</sup> that must necessarily regulate all these processes involving digital tools.<sup>12</sup> For example, the need to verify the identity and legal capacity of the persons wishing to set up a company, register a branch or file certain documents or information. In this regard, the Member States can establish a national control system that includes other requirements, if justified for reasons of public interest, to prevent the inappropriate use or alteration of identity, or to ensure compliance with the laws on legal capacity and on the power of representation of the company. Such requirements could make it necessary, according to national law, for the applicant or any other authority or authorized person to perform certain formalities in person. Nonetheless, that is an exceptional circumstance where there are justified reasons in order to prevent the falsification of identity or the breach of the provisions on legal capacity or the power of representation, but the Member States must ensure that the rest of phases of the online formation process can continue to be carried out online.

Also worth noting is that the Directive establishes a very important delimitation: it does not

provide for mixed procedures, that is, procedures carried out partially in person and partially online; rather, if a citizen chooses to use the online procedure, the process must be completed entirely online, although this does not prevent the involvement of notaries and/or lawyers throughout the digital process.<sup>13</sup>

Herein lies the complexity of the Digitalization Directive: the substantive and procedural requirements of each legal system must continue to be met while enabling companies to choose the online formation, filing of documents regarding their lifecycle and opening of branches in any other Member State.

A key principle of this Directive is included in the form of a mandate: Member States must ensure that the entire online formation process is fast and, where that is not possible, that the applicant is informed of any delays.

Regarding the company formation process, the Directive says that Member States can refuse the appointment of any person as a director of a company not only on the basis of the person's previous conduct in their own territory but also, where so provided under national law, based on information provided by other Member States. We already see an effect of this provision on companies under the system of intercon-

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10. Here, again, the European lawmaker alludes to the applicants' freedom of choice, as they can elect to use the templates or a traditional instrument of constitution, always from the perspective of flexibility that should govern the entire process, including the function of the notaries and lawyers involved in any phase of those online procedures.
  11. The national control system, which can be altered where justified by reasons of public interest, to prevent the inappropriate use or manipulation of the identity, or to ensure compliance with the laws on legal capacity and on the power of representation of the company; this alteration can require, according to national law, the physical presence of the applicant or any other authority or person authorized to handle any aspect of the matter.
  12. See Campuzano Laguillo, A. B., *La transposición de la directiva de digitalización y el otorgamiento de documentos notariales a distancia*, a paper that originated in the speech given on 28 October 2021 at the Conference organized by the Chair for Legal Certainty in the Digital Society, Fundación del Notariado-Universidad Pontificia Comillas ICADE. The speech and the paper were prepared in the context of the Research Project entitled *Estructuras societarias y financiación empresarial. Internacionalización y políticas de empresa*, RTI2018-099471-B-I00 (MCIU/AEI/FEDER, UE).
  13. *Id* note 3. Josefina Boquera, *La digitalización de las sociedades de capital españolas tras las Directivas europeas sobre la utilización de herramientas y procesos digitales en el ámbito del Derecho de sociedades*, 320 REVISTA DE DERECHO MERCANTIL, 11-61 (2021).

nection of registers, which is the ultimate aim of this provision.

Although the Directive seems to focus solely on the three aspects mentioned – online formation of companies, online registration of branches and the exchange of certain information – it actually goes one step further, establishing that throughout a company's lifecycle, it should be allowed to file certain documents and information with the national registries entirely online. This last point can be linked to the corporate information disclosure systems whereby Member States are given the option to publish all or some corporate information in a national journal, while ensuring that the registrar provides the information to that national journal electronically.<sup>14</sup> In this connection, the Directive follows the “once only” principle<sup>15</sup>, which prevents companies from having to submit certain information more than once.<sup>16</sup>

This, along with the possibility attributed to the Commission of establishing additional access points<sup>17</sup> to the system of interconnection of registers (for which the Member States can already establish certain optional access points)<sup>18</sup>, is the basis for enhancing the legal certainty

that must govern all company digitalization systems.

In this regard, in order to achieve the desired transparency and increase trust between companies and the authorities, it is particularly important to facilitate access to corporate information and specifically to information on the status of a company and any branches it may have in other Member States. For that purpose, the Commission must be able to establish additional access points to the system of interconnection of registers, to which the Member States can already establish certain optional access points.

Lastly, Directive (EU) 2019/1151 reiterates that nothing established in it implies that the Member States cannot exercise their powers in case of fraud, abuse, etc. in relation to the formation of companies, the opening of branches and whatever else is regulated in it. Also, the Directive does not affect other obligations under national law in relation to personal data protection and anti-money laundering.

Due to the complexity involved in achieving all of the foregoing, the Member States were given the option of requesting an extension of

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14. *Id* note 4. Álvarez Royo-Villanova, S., *Propuesta de adaptación de la Directiva de Digitalización 2019/1151 a la vista del Derecho comparado*, 18 REVISTA LEX MERCATORIA, 106-111, (2021) and Lucini Mateo, A., *El documento público notarial en la perspectiva del proyecto de digitalización del Derecho europeo de sociedades*, 58 ANALES DE LA ACADEMIA MATRITENSE DEL NOTARIADO, 193-237, (2018).
  15. The “once-only” principle has been mentioned and used at other times in Regulation (EU) 2018/1724 and in the Commission’s Action Plan on Electronic Administration, among others.
  16. For an in-depth study of this “once-only principle”, see Wimmer, M.A., (2021). *Once-Only Principle Good Practices in Europe* in THE ONCE-ONLY PRINCIPLE. LECTURE NOTES IN COMPUTER SCIENCE, (Krimmer, R., Prentza, A., Mamrot, S., Springer eds, 2021 [https://doi.org/10.1007/978-3-030-79851-2\\_4](https://doi.org/10.1007/978-3-030-79851-2_4)) and Cave, J., Botterman, M., Cavallini, S., Volpe, M.: *EU-wide digital Once-Only Principle for citizens and businesses. Study for the European Commission* (2017), [https://ec.europa.eu/esf/transnationality/filedepot\\_download/1671/1692](https://ec.europa.eu/esf/transnationality/filedepot_download/1671/1692).
  17. The Digitalization Directive itself establishes that the systems will be developed and managed by the Commission or other Union *institutions*, bodies, offices or agencies in order to perform their administrative functions or to comply with provisions of Union law.
  18. The European authorities are aware of the importance of enabling companies to operate in the internal market, so they have provided the possibility for companies to open branches in any Member State. Due to that, the same system applies for online establishment or registration and also for online filing of their documentation.

the deadline for transposing and implementing this Directive<sup>19</sup>, and it is in that extension period where some Member States are at present, as we shall see.<sup>20</sup>

## II. ONLINE FORMATION OF A COMPANY: THE CHALLENGE OF DIGITALIZING ITS LIFECYCLE

Focusing specifically on the online formation of a company, the Digitalization Directive establishes that Member States must ensure some minimum requirements through their national laws<sup>21</sup>; it also states that they can establish requirements for the legality of the instrument of constitution.<sup>22</sup> In this regard, Member States must also allow the online contribution of share capital, in the same online procedure, by means

of the payment into a bank account operating in the Union.<sup>23</sup> Therefore, companies whose shareholders subscribe the share capital through contributions in kind are excluded from this procedure.

With respect to the speed which the Directive attempts to infuse in the online procedure<sup>24</sup>, it establishes that the process should be completed within five business days when the templates are used and the company is being formed by individuals, or ten business days in other cases.<sup>25</sup>

It also emphasizes the idea that there should be templates for the online formation of companies on bespoke websites that can be accessed through the single gateway mentioned abo-

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19. This extension has been requested by some Member States including Spain. However, the Member States must enact the laws, regulations and administrative provisions necessary to comply with point (5) of Article 1 of the Directive, as regards Article 13i and to Article 13j (2) of Directive (EU) 2017/1132, and point (6) of Article 1 of this Directive, as regards Article 16(6) of Directive (EU) 2017/1132, by no later than 1 August 2023. By way of derogation from the foregoing, Member States, which encounter particular difficulties in transposing this Directive, are entitled to benefit from an extension of the period provided for in paragraph 1, of up to one year, providing objective reasons for the need for such extension. Given that the first of the periods has elapsed, based on an analysis of the status of the different Member States, there are a number of them which requested that extension and are performing the necessary process to approve and amend national provisions that comply with the Digitalization Directive and, in short, that pave the way to authentic digitalization of corporate law.

20. See *infra* at 3.

21. Procedures to ensure that applicants have the necessary legal capacity and authority to represent the company; the means to verify the identity of applicants; the requirements for applicants to use the trust services referred to in Regulation (EU) No 910/2014 of the European Parliament and of the Council, on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC; procedures to verify the legality of the object and name of the company, insofar as such checks are provided for under national law; and procedures to verify the appointment of directors.

22. As regards the templates to be used, the consequences of the disqualification of a director by the competent authority in any Member State; the role of a notary or any other person or body mandated under national law to deal with any aspect of the online formation of a company; and, very importantly, the exclusion of online formation in cases where the share capital of the company is paid by way of contributions in kind.

23. Article 13e of the Digitalization Directive establishes the obligation for Member States to make online payment services available which permit cross-border payments, and which permit identifying the person who made the payment, and which are provided by a financial institution or payment service provider established in a Member State.

24. See *supra* note 10.

25. If these deadlines cannot be met, the applicant must be notified of the reasons for the delay.

ve.<sup>26</sup> Measures shall be established to ensure control online or digitally.<sup>27</sup>

For the purposes of this work, what is most important is that the Digitalization Directive seeks the digitalization of any act of the company's lifecycle, i.e., the amendment of bylaws, the appointment and removal of directors, etc.<sup>28</sup>, establishing that national laws must ensure that such documents can be filed online without the necessity for an applicant to appear in person before any authority or person or body mandated under national law. However, this does not prevent continuing to use any other forms of filing, such as by electronic or paper means.

Also, the Directive requires Member States to have rules on the disqualification of directors that take into account any disqualification that is in force in another Member State. Regarding the rules that each national law should have, the Directive establishes that information on disqualifications in the different Member States should be available free of charge and in an official language of the Union that is broadly understood by the largest possible number of users, and it should be accessible by any citizen by means of the Single Digital Gateway. What is most important in this respect is that Member States may refuse the appointment of a person

as a director of a company where that person is currently disqualified from acting as a director in another Member State.

Again, both legal certainty and speed are the drivers of the desired corporate digitalization, the key being the exchange of information between Member States, with the evident risks which that entails.<sup>29</sup> In our opinion, the fact that Community legislation has highlighted this issue as a priority in the area of digitalization makes sense. Moreover, we conclude from the Directive that, although Member States can obtain information from each other, they are not obliged to do so, nor are they obliged to recognize disqualifications of directors in force in other Member States, despite having that information at their disposal.<sup>30</sup> However, what *is* guaranteed by national laws is that if information is requested regarding the disqualification of directors, it can be obtained quickly through the exchange of information system. All the foregoing, while complying with national legislation for the prevention of fraud and abuse and safeguarding the protection of the personal data of the people involved.

If the exchange of information is the key to achieving corporate digitalization, it is logical that the coordination between the different national registries, the interconnection system<sup>31</sup>, the single

26. See *supra* note 7.

27. This is established in the Spanish case, as seen in the transposition of the Digitalization Directive, which has given rise to the Preliminary Draft of Law on Digital Efficiency Measures of the Public Administration of Justice, with respect to the use of tools and digital processes in the area of Corporate Law, [https://www.mjusticia.gob.es/es/AreaTematica/ActividadLegislativa/Documents/APLEficienciaDigitalAudPubeinformes\\_actual.pdf](https://www.mjusticia.gob.es/es/AreaTematica/ActividadLegislativa/Documents/APLEficienciaDigitalAudPubeinformes_actual.pdf).

28. See the reference made by article 13j of Directive (EU) 2019/1151 to article 14 of Directive (EU) 2017/1132.

29. See *note* 11.

30. *Id.*

31. Regarding the system of interconnection of registers, article 22, paragraph 4 of Directive (EU) 2017/1132 is amended, establishing that *"The Commission may also establish optional access points to the system of interconnection of registers. Such access points shall consist of systems developed and operated by the Commission or other Union institutions, bodies, offices or agencies in order to perform their administrative functions or to comply with provisions of Union law. The Commission shall notify the Member States without undue delay of the establishment of such access points and of any significant changes to their operation."* Along with the optional access points to be established by the Commission, it also states that the Member States may establish their own optional access points, with the aim of ensuring the disclosure and access to online information on certain aspects of corporate life.

digital gateway, and the disclosure of corporate acts, are essential elements. In this context, the first step is the assignment of a European unique identifier ("EUID")<sup>32</sup>, which identifies companies in the system of interconnection of registers and facilitates access to information relating to corporate acts. This system ensures that all documents are accessible in the register of each Member State, although it is left up to the States to require that such information be published in their national journals and to ensure that discrepancies between the two resources are prevented.

Inherent in the registry system is the access to information published by any interested party. For that purpose, Member States must ensure that copies can be obtained of all or any part of the documents and information.<sup>33</sup> Those copies, whether by paper or electronic means, shall always be certified, unless the interested party dispenses with the certification.<sup>34</sup>

What we see is that, in matters of digitalization, the aim is not only to obtain digital support of data but also for there to be global and immediate access to such information. Due to that, the purpose of the system of interconnection

of registers is to ensure that all changes made in relation to companies are communicated to the Member State where the branch is located. Specifically, the information in question relates to the company's name, registered office, identification number in the register, legal form and the documents relating the appointment, identity, and removal of directors, as well as accounting documents.<sup>35</sup>

### III. IMPLEMENTATION OF THE DIGITALIZATION DIRECTIVE: THE GERMAN, ITALIAN, AND SPANISH CASES

The Digitalization Directive envisages certain deadlines for transposing it, as we have seen above<sup>36</sup>, and some countries have made more progress than others. What is most important is the measures that the different Member States have established to contribute to competitiveness and to streamlining the processes of small and medium-sized enterprises, entrepreneurs, etc.<sup>37</sup> Reducing the cost and time involved in these company formation procedures seems to be the key to achieving the desired competitiveness and sustainability of the European business structure.

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- 32. According to Commission Implementing Regulation (EU) 2015/884, of 8 June 2015, establishing technical specifications and procedures required for the system of interconnection of registers established by Directive 2009/101/EC of the European Parliament and of the Council (OJEU L 144 of 10 June 2015).
  - 33. The Directive also specifies a date, 31 December 2006, indicating that any paper documents filed prior to that date cannot be obtained by electronic means once ten years or more have elapsed between the filing date and the date of the application.
  - 34. Logically, and similar to what is established for companies, the Digitalization Directive also promotes the online opening of branches of a company in any Member State, the online communication of information about them and their potential closure.
  - 35. The accounting documents are those for each financial year which must be published according to Council Directives 86/635/EEC (1) (OJ L 372) and 91/674/EEC (2) (OJ L 374) and Directive 2013/34/EU of the European Parliament and of the Council (OJ L 182).
  - 36. See *supra* note 19.
  - 37. See, in this regard, Audretsch D.B., Belitski M., Chowdhury F., Desai, S., *Necessity or opportunity? Government size, tax policy, corruption, and implications for entrepreneurship*, SMALL BUSINESS ECONOMY, 2025-2042, (2022) and Corredor Jimenez, J., *Sustainability Orientation of German Digital Entrepreneurs: Is More Regulation Necessary?*, SSRN, <https://ssrn.com/abstract=4074698> or <http://dx.doi.org/10.2139/ssrn.4074698>, (2022).



However, here we must distinguish between two types of legal systems.<sup>38</sup> One type is the kind found in Spain, Germany, Italy, Belgium, etc., where a company formation requires the physical presence of certain individuals such as a notary public<sup>39</sup>, and where the appointment of the managing body, the amendment of bylaws, etc. must be formalized in a public deed. In such legal systems, in order to attain legal certainty, the process must be carried out in the presence of a notary.<sup>40</sup> The other type of legal system is one where that requirement does not apply. The challenge faced by countries with the first type of legal system is how to reconcile the legal certainty provided by the notary's intervention, with the competitiveness sought through the reduction of the cost and time attained through online procedures. The Directive integrates this, but we shall see to what extent the Member States that require a notary's intervention can achieve that competitiveness in cost and time. We will now look at the cases of Germany, Italy, and Spain, as examples of countries that are in the group where digitalization may be more complex.

Germany is one of the first Member States to

have taken steps to carry out the transposition.<sup>41</sup> Video conferencing is established as the means to ensure the involvement of a notary, and this can only be done through the Federal Chamber of Notaries, thus ensuring legal certainty. This legal certainty is enhanced by the process of identification of the parties involved<sup>42</sup>: by electronic means and by the notary's verification of all persons in appearance with a photograph by means of which the passport or identity card chip can be read. The result will not be a traditional public deed, but rather a public deed signed telematically with the electronic certificate of the Federal Chamber of Notaries. The companies that can be formed online in Germany are limited liability companies —GmbHG.<sup>43</sup>

Regarding means of identification, Germany accepts the following: the German national identity card, the German electronic residency permit, the new electronic identity card for EU and EEA nationals with the online identification function activated and personal PIN integrated, or any other means of electronic identification that meets the requirements of high-level security, according to the European Electronic Iden-

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38. For a comparative study of the adaptation of the Digitalization Directive, see Álvarez Royo-Villanova, S., note 14.
  39. The Directive even speaks of the notary's presence in the online formation of companies in national systems that envisage that possibility, and also in other corporate acts in a company's lifecycle.
  40. The notary's involvement is necessary to certify the identity of the appearing parties, their capacity and the giving of free and informed consent. In contrast to these countries, there are others where the absence of a notary is balanced out by careful research into the company, its shareholders, etc., for any corporate act formalized subsequently.
  41. For an analysis of digitalization in German corporate law, see, among others, Spindler, G., *Digitalization and Corporate Law – A View from Germany*, 16 EUROPEAN COMPANY AND FINANCIAL LAW REVIEW, 106-148, (2019), <https://doi.org/10.1515/ecfr-2019-0009>.
  42. The physical presence of the granters can only be required, where they are entitled to request the online procedure, if it is necessary to verify their identity, capacity, etc. for serious reasons. In short, exceptions must meet the conditions established in articles 13b.4 and 13g.8 of Directive 2019/1151.
  43. In Germany, following the provisions of the Digitalization Directive, this procedure may not be used by companies created with contributions in kind. The procedure can also be used for other corporate acts and for the exchange of information on disqualified directors. The traditional procedure (i.e., not online) is still in force and may be used at the election of the interested parties.

tification Regulation.<sup>44</sup> The German legislation also establishes the maximum periods for the online formation of companies specified by the Directive, which are five days if the founders are natural persons using model documents, or no longer than ten days if they are legal entities or do not use the model documents. As we can see, Germany has implemented a system which has barely amended its national law, and which refers to the provisions regulating notaries and the Companies Register in order to comply with the Digitalization Directive.<sup>45</sup>

Italy's transposition of the Digitalization Directive has been similar to Germany's.<sup>46</sup> Italy only allows the online formation for limited liability companies and those formed through cash contributions. It also provides the possibility of opening branches in other Member States through online procedures, and permits access to certain information and, in general, adopts the minimum requirements established in the Directive.

The novelty in the Italian case derives from the notaries' attempt<sup>47</sup> to have the online proce-

dures include other typical corporate acts, such as the holding of Shareholders' Meetings. Although it is only a recommendation by the notaries' council, it shows an increased awareness of the need to achieve total digitalization of corporate law.

As we shall see below<sup>48</sup>, the Shareholders' Meeting is the key to promoting the digitalization of the lifecycle of capital companies. The case of Spain is similar. In Spain, it was already possible to set up a company online.<sup>49</sup> However, as established in the new legislation transposing the Directive<sup>50</sup>, the online process needs to be modified to apply it to limited liability companies formed by means of cash contributions, the opening of branches in other Member States, and certain other aspects of the corporate lifecycle.<sup>51</sup>

In view of the provisions of the Digitalization Directive and the direction being taken in its adaptation by the Member States, we can affirm that, although the envisaged leap towards corporate digitalization is huge, the result is that it will mainly affect small and medium-sized en-

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- 44. In this regard, we should highlight the Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 910/2014 as regards establishing a framework for a European Digital Identity.
  - 45. Lucini Mateo, A., *Transposición de la Directiva societaria digital: Alemania da el primer paso*, EL NOTARIO, (2022) <https://www.elnotario.es/opinion/opinion/10626-transposicion-de-la-directiva-societaria-digital-alemania-da-el-primer-paso>.
  - 46. Legislative Decree No 83 of 2021, which took effect on 14 December 2021
  - 47. Recommendation made by the Milan Notarial Council. Although its opinion is very important, other suggestions have been required in order to adopt definitive measures by December 2022.
  - 48. See *infra* note 65.
  - 49. Either from an Entrepreneur Attention Service (*Punto de Atención al Emprendedor*, PAE), through the online processing system of the Information Centre and Business Creation Network (*Centro de Información y Red de Creación de Empresa*, CIRCE) based on the Single Electronic Document (*Documento Único Electrónico*, DUE), or through physical presence before a notary.
  - 50. See *Anteproyecto de Ley de Medidas de Eficiencia Digital del Servicio Público de Justicia* [Preliminary Draft of Law on Digital Efficiency Measures of the Public Administration of Justice], as regards the use of digital tools and processes in the area of corporate law, [https://www.mjusticia.gob.es/es/AreaTematica/ActividadLegislativa/Documentos/APLEficienciaDigitalAudPubeinformes\\_actual.pdf](https://www.mjusticia.gob.es/es/AreaTematica/ActividadLegislativa/Documentos/APLEficienciaDigitalAudPubeinformes_actual.pdf)
  - 51. In the case of Spain, *supra* note 10.

terprises — SMEs—and microenterprises.<sup>52</sup> Although that outcome seems limited, the bases are set for the digitalization of all kinds of companies, without having to confine ourselves to SMEs. Likewise, although the model documents help speed up the processes, they also impose greater restrictions, for example, as regards the way of organizing the company. Also, online procedures require all Member States to have electronic resources to ensure the identity of the parties involved, the transfer and disclosure of information and, in many of the systems, the required participation of a notary to certify the entire process.

#### IV. INNOVATION, TRUST AND LEGAL CERTAINTY: THE NEXT STEPS IN CORPORATE DIGITALIZATION

The question that we should ask ourselves, in light of the foregoing reflections, is whether great strides have been made in the digitalization of companies based on everything we have seen so far. The answer to that question is undoubtedly no.<sup>53</sup> Much more can be done, but what is important is that we are working on it. The challenge is huge, and the solutions and the regulations will take time. Nonetheless, we

can point to the direction that Europe should go in with this digitization process.<sup>54</sup>

Although in the contractual and commercial context, innovation<sup>55</sup>, trust and legal certainty are vital, so is speed in performing transactions and immediacy in the access to information, which permit any citizen to perform secure transactions from any location within the Union. This is the desired scenario. Reality is much less advanced, but the bases analyzed in the Digitalization Directive led us to go a step further and link the principles that have inspired the European lawmaker to the current corporate framework. For that purpose, a good approach is to consider the potential provided by blockchain technology<sup>56</sup> and the possibility of using the so-called “smart contracts”.<sup>57</sup> This technology could potentially enable the digitalization of other capital enterprises, those of medium and large size. Although they may not have been formed in an online procedure, we could still attain the digitalization of their lifecycle.

Blockchain technology is said to provide trust through a computer code; we do not wholly agree with that statement. Blockchain technology provides verification, but verification is not trust<sup>58</sup>,

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52. See *supra* note 34.

53. See *supra* note 34.

54. *Id.*

55. For applied research of the matter of innovation in the European scenario, see Marjosola H., *Shadow Rulemaking: Governing Regulatory Innovation in the EU Financial Markets*, GERMAN LAW JOURNAL 23, 186–203 (2022), <https://doi.org/10.1017/glj.2022.16>

56. In this regard, we should highlight the Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 910/2014 as regards establishing a framework for a European Digital Identity. In the near future, it appears that the whole proposal that we are making here will be much simpler to implement, to facilitate the more widespread application of blockchain technology.

57. For a general study on this issue, see Laptev, V.A.; Feyzrakhmanova, D.R., *Digitalization of Institutions of Corporate Law: Current Trends and Future Prospects*, 10, LAWS, (2021), 93, <https://doi.org/10.3390/laws10040093>

58. The following approach is interesting and would apply to the legal sphere: Viriyasitavat, W., Da Xu, L., Sapsomboon, A., Dihman, G., Hoonsopon, D., *Building trust of blockchain-based internet-of-thing services using public key infrastructure*, ENTERPRISE INFORMATION SYSTEMS, <https://doi.org/10.1080/17517575.2022.2037162>, (2022).

trust goes beyond that<sup>59</sup> and can only be provided by the legal system<sup>60</sup>. Our aim here is not to explain blockchain technology<sup>61</sup> but to try to use some of the applications or functionalities of this technology to make progress in corporate digitalization<sup>62</sup>; those applications are smart contracts<sup>63</sup> which a priori could be used not only with respect to the company's foundation agreement<sup>64</sup> but also to the agreements governing many of the company's day-to-day operations.<sup>65</sup>

Let us look at blockchain's potential use in the context of the Shareholders' Meeting where the means for adopting resolutions is by casting votes. With blockchain technology, digitalization would not be confined to the formation of limited liability companies through cash contributions, as is the case under the Digitalization Directive which, as we have seen, confines

its use to SMEs and microenterprises. The aim would be to transfer that digitalization potential to other kinds of capital companies.

The Shareholders' Meeting is an area where it makes the most sense to use that technology.<sup>66</sup> The Digitalization Directive states that its aim is also to promote the online procedure for bylaws amendments, which are typical in the corporate lifecycle. We know that bylaws amendments generally require a prior resolution by the shareholders who attend—in person or by proxy—the Shareholders' Meeting.<sup>67</sup>

We could consider either a more comprehensive or radical use of blockchain in the Shareholders' Meeting, or a more ancillary or residual use<sup>68</sup>. In the first case, we would be talking about a model that differs considerably from

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59. A good approximation to this approach is found in Abdelsalam, O., Chantziaras, A., Batten, J. A., Ahmet Faruk Aysan, A., *Major shareholders' trust and market risk: Substituting weak institutions with trust*, 66 JOURNAL OF CORPORATE FINANCE, (2021), <https://doi.org/10.1016/j.jcorpfn.2020.101784>.
60. Werbach, K. D., *Trust, But Verify: Why the blockchain needs the Law*, BERKELEY TECHNOLOGY LAW JOURNAL, (2017), DOI: <https://doi.org/10.15779/Z38H41JM9N>, (2017).
61. An interesting approach is provided in Sharma, D., Sharma, V., y Yadav, A., *Interface of competition Law & Blockchain technology: a global perspective*, 25 JOURNAL OF LEGAL, ETHICAL AND REGULATORY ISSUES, 1-7, (2022).
62. *Id.*
63. "Smart contracts" can be defined as algorithms that perform the terms of a contract; see Savelyev, (2016) and Navarro, M. S., *El poder de decisión societaria y blockchain*, in Muñoz Pérez, A. F., (Dir.), De la Orden C., y Martínez Laburta, C., (Coord.), REVOLUCIÓN DIGITAL, DERECHO MERCANTIL Y TOKEN ECONOMÍA, Tecnos, (2019), 289-
64. *Id.*
65. *Id.*
66. *Id* at 321-335
67. In this regard, we can refer to the figure of the Decentralized Autonomous Organization (DAO), an organization which is included in blockchain whose bylaws are formalized and codified in that technology and which can only be altered by a certain number of shareholders of that organization, who receive the name of token holders and vote a certain way to carry out such change. See Buterin, V. *Engineering security through coordination problems*. Retrieved from coordination problems, <https://vitalik.ca/general/2017/05/08/>, (2017). A very interesting view is provided by Park, S. Y., Kim, M. S., Chun K., *Understanding Decentralized Autonomous Organizations (DAOs) as a Reaction to Corporate Governance Problem*, SMATOOS BUSINESS REVIEW, (2022).
68. *Id* supra note 63 at 326-327.

what a Shareholders' Meeting is today.<sup>69</sup> Following the spirit of the Digitalization Directive and, in general, the European model of modernization of corporate law, we think that it would be best to implement these technologies little by little.<sup>70</sup> Therefore, we favor an ancillary or residual use that permits companies, regulators, lawmakers and the like to gradually assess the advantages and disadvantages of the technology. Focusing on this, we wonder what aspects of the functioning and use of blockchain technology could provide the greatest advantages to the Shareholders' Meeting.<sup>71</sup>

One of the most important uses could be for giving instructions prior to the vote<sup>72</sup>. The aim of Directive 2017/828 on encouraging long-term shareholder engagement is, among others, to put an end to the opaqueness entailed by chains of intermediaries which make it difficult to identify the shareholder.<sup>73</sup> In such scenarios, which are often cross-border, this or other technology could be of great help. We can link this issue to others such as absenteeism or shareholder fatigue. Oftentimes, the shareholder's lack of trust that his voting instructions will be

conveyed when there are multiple intermediaries could be reduced considerably by using blockchain.

Another use of blockchain could be for holding Shareholders' Meetings without physical attendance by the shareholders as well as in relation to matters of shareholder activism.<sup>74</sup> Votes could be cast using vote coins, or even through normal electronic voting systems, provided that the voting shareholder's identity is ensured. Although blockchain technology enables the possibility of holding Shareholders' Meetings without in-person attendance, that is, entirely virtually, this raises problems under national legal systems.<sup>75</sup> At this point, we could wonder whether the usefulness of the traditional Shareholders' Meeting as such might be coming to an end, in the sense of it becoming a body that makes decisions that have actually already been made.<sup>76</sup>

Although we don't think that is the case, because certain decisions must be made by the Shareholders' Meeting as a sovereign body that represents the shareholders, we do question

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69. Bellavitis, C., Fisch, CHR., and Momtaz, P., *The Rise of Decentralized Autonomous Organizations (DAOs): A First Empirical Glimpse*, SSRN: <https://ssrn.com/abstract=4074833>, 8 (2022).

70. There is already some experience using blockchain in the Shareholders' Meeting. One example is in Delaware, through the Delaware Blockchain Initiative, 2016; also, in Tallinn, where a pilot initiative was launched so that the shareholders of companies listed on the Tallinn stock exchange could vote remotely through blockchain, as well as some others.

71. For a comprehensive study of this issue, *Id supra* note 63, 326-335.

72. We should link this issue to that of the agency costs; see in relation to China – but applicable to what we are discussing – Su, K., Jiang, H., Does social trust restrict dual agency costs? Evidence from China, *THE EUROPEAN JOURNAL FOR FINANCE*, (2022), <https://www.doi.org/10.1080/1351847X.2022.2040042>

73. Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement.

74. Lafarre, A., y Van Der Elst, Ch., *Blockchain Technology for Corporate Governance and Shareholder Activism*, 390 ECGI Working Paper, (2018) and *Id supra* note 63, 329-331.

75. *Id supra* note 63, 329

76. *Id.*

the way in which those decisions are made, since technology is proving that things could be done differently.<sup>77</sup>

In any case, although the usefulness of the Shareholders' Meeting could be questioned, what is more important is that its activity results in resolutions that can be contested, and that it is an essential disclosure and control body. In view of how Shareholders' Meetings have been held in the last years, it is worth noting that in the United States, since 2017, more and more Shareholders' Meetings are being held in person.<sup>78</sup> The view is that virtual-only Shareholders' Meetings, where permitted by national law, entail a regression in the role of this corporate decision-making body, because they mean that the shareholders do not have a physical venue where they can go to decide on certain matters and request information from the managing body, which is not physically present at a virtual meeting.<sup>79</sup>

In any case, we consider that one area where the technology could have the greatest potential to provide security, control, transparency, and speed is in relation to syndicated voting.<sup>80</sup> The fact that it foments the efficiency of these

voting agreements is a huge step forward in the protection which those agreements provide to minority shareholders.

There are two main concerns in this area where blockchain technology could be advantageous: (i) whether the syndicated shareholders' instructions are actually conveyed to the voting proxy; and (ii) the efficiency of the voting system<sup>81</sup> as regards whether the syndicated shareholders can easily breach their agreement, and the consequences of that. Although, depending on the national law, there has been a great deal of progress made in this area, no solution is as efficient as blockchain technology. The idea would be to set up a voting syndicate as a "smart contract", that is, a contract that uses blockchain technology which, by its very nature, removes the first problem mentioned and, a priori, removes the second problem as well. If, moreover, the company in question has the capacity to cast the vote through blockchain technology, the legal certainty that is sought with this system seems to be achieved, or at least considerably improved.

The procedure could be as follows: the representative of the syndicated shareholders<sup>82</sup>,

77. New technologies have shown that Shareholders' Meetings can be held in real time with virtual attendance and the vote can be cast through electronic systems in real time, rather than prior to the meeting. However, although blockchain technology enables holding virtual Shareholders' Meetings, it is difficult to determine how this fits in national legal systems. In this regard, reforms would have to be far-reaching and would tend towards a model of Shareholders' Meeting that has little to do with what we have at present. At this respect, a distinction could be made between listed companies, where the aforementioned would apply, and small, unlisted companies, where the use of blockchain technology could favor the use of different kinds of decision-making mechanisms.

78. See *supra* note 63, 334

79. Also, fully virtual Shareholders' Meetings can have an enormous impact on minority shareholders. See, among others, Schwartz-Ziv, M., *How Shifting from In-Person to Virtual Shareholder Meetings Affects Shareholders' Voice*, WORKING PAPER, [https://new.huji.ac.il/sites/default/files/mainsite/files/virtual\\_shareholder\\_meetings\\_schwartz-ziv\\_24-02-2020.pdf](https://new.huji.ac.il/sites/default/files/mainsite/files/virtual_shareholder_meetings_schwartz-ziv_24-02-2020.pdf), 2021.

80. "Voting syndicate" means an agreement whereby some or all the shareholders of a Company agree not to vote or to vote in a certain way agreed upon by the syndicated shareholders. See, among others, Oppo, G., *Contratti parasociali*, (1942); GALEOTE, P., *Sindicatos de voto. El control en una sociedad conjunta*, (Tirant lo Blanch, ed., 2008); Zweigert, K., Von Hoffmann, B., *Zur internationalen Joint Venture*, FESTSCHRIFT FÜR MARTIN LUTHER, 203, (1976).

81. GALEOTE, P., at 202-204.

82. *Id* at 211-218.

through a voting syndicate structured through smart contracts, calls a meeting of all of the syndicated shareholders because, in turn, a Shareholders' Meeting would have been called for those shareholders to vote on a matter in which they must express an opinion that complies with the terms of the syndicate agreement.

As already stated herein<sup>83</sup>, blockchain technology makes perfect sense since, given that a voting syndicate is not a company<sup>84</sup> in itself, that meeting of syndicated shareholders can be held entirely virtually, taking advantage of all the benefits of technology without any disadvantages whatsoever.<sup>85</sup> The result of that meeting would be the instructions for the proxy on how to vote at the Shareholders' Meeting.

Having arrived at this point, we recommend that this Shareholders' Meeting – i.e., that of the capital company whose shareholders are bound by the voting agreement – should not be virtual only, due to the problems that could arise under the different national laws of the Member States<sup>86</sup>; however, the voting system could benefit from the technology, so we advise using an online platform for the deliberations that may take place, whether in real time or remotely. We think that blockchain technology would be extremely useful for overcoming problems of efficiency of voting syndicates and thus, largely, of shareholder activism.<sup>87</sup>

## V. CONCLUSIONS

In this article, we have analyzed the status of digitalization of capital companies in Europe. Based on an in-depth analysis of the Digitalization Directive, we observe that the European lawmaker's intentions are appropriate and promising, but the progress achieved through it is minimal<sup>88</sup>: to enable the online formation of limited liability companies, i.e., small capital companies (small and medium-sized enterprises and microenterprises), to promote the digitalization of other corporate acts, and to allow the online opening of branches of capital companies in any Member State.

On that basis, it is necessary to face the challenge of digitalizing the rest of capital companies and of corporate acts that go beyond those of the company's instrument of constitution. To do so, we should use technology that creates an advantageous environment of innovation<sup>89</sup>, security<sup>90</sup>, transparency and speed, which is none other than blockchain.<sup>91</sup>

Due to the blockchain's uniqueness, we support the initiatives for applying it in the context of Shareholders' Meetings and in those where voting is required. Most of the acts of a company's lifecycle must be approved by the Shareholders' Meeting. In this regard, we see how the instructions issued prior to the Shareholders'

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83. See *supra* note 57.

84. See *supra* note 80, Galeote, P., 309-318

85. See *supra* note 77.

86. *Id.*

87. See *supra* note 74.

88. See *supra* note 34.

89. See *supra* note 55.

90. See *supra* note 11.

91. See *supra* notes 56 and 57.

Meeting or the holding of virtual meetings can benefit from it.

However, the aim is to go a step further and be able to apply all these advantages to other more sophisticated processes, such as the voting syndicate. We propose a technological

and innovative configuration of those processes. If we manage to offer this possibility and bearing in mind that this concept reflects shareholders' freedom of choice, we will have managed to pave the way for the full integration of digitalization in the sphere of capital companies.