



Council of the
European Union

019433/EU XXVI. GP
Eingelangt am 27/04/18

Brussels, 27 April 2018
(OR. en)

8466/18

PI 44
CULT 48

COVER NOTE

From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	26 April 2018
To:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union
No. Cion doc.:	SWD(2018) 146 final
Subject:	COMMISSION STAFF WORKING DOCUMENT Evaluation of Directive 96/9/EC on the legal protection of databases

Delegations will find attached document SWD(2018) 146 final.

Encl.: SWD(2018) 146 final



Brussels, 25.4.2018
SWD(2018) 146 final

COMMISSION STAFF WORKING DOCUMENT

Evaluation of Directive 96/9/EC on the legal protection of databases

{SWD(2018) 147 final}

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1. INTRODUCTION

1.1. Purpose of the evaluation

This Staff Working Document provides the results of the REFIT¹ evaluation of Directive 96/9/EC on the legal protection of databases ('the Database Directive')².

In line with the Better Regulation guidelines³, the evaluation assesses the effectiveness, efficiency, relevance, coherence and EU added value of the Database Directive, analysing whether it remains fit for purpose in the new legal, economic and technological environment.

The evaluation also arises from Article 16(3) of the Database Directive, which specifies that the Commission should in particular examine periodically whether the application of this *sui generis* right contained in the Database Directive, which protects 'non-original' *sui generis* databases, has led to significant interference with free competition.

The last evaluation report of the Database Directive, (hereinafter 'the 2005 Report') that took place in 2005⁴, concluded that, while the *sui generis* right had no proven positive or negative effects on the growth of the 'database industry', the Database Directive had largely achieved its harmonisation objectives. Therefore, despite the conceptual shortcomings of the right, no 'significant administrative or other regulatory burdens on the database industry or any other industries that depend on having access to data and information'⁵ had been detected, and so no intervention was deemed necessary.

An important factor highlighted by the 2005 Report was the limitation imposed by the seminal 2004 rulings from the Court of Justice of the European Union (CJEU)⁶. These, it concluded, significantly reduced the scope of the *sui generis* right to 'primary' producers of databases, which at that time were generally part of copyright industries (e.g. publishing companies). If database production was only secondary to the main activity of the entity, it was assumed that this entity would be left out of the scope of protection. This would avoid any significantly negative situations where data and information would be locked up to the detriment of overall social welfare (e.g. access for lawful competitors, research organisations).

The main purpose of this evaluation is to assess whether these conclusions are still valid. It conducts a more in-depth analysis of the potential legal causes behind the economic

¹ The Regulatory Fitness and Performance Programme, or REFIT, is the Commission's programme for ensuring that EU legislation remains fit for purpose and delivers the results intended by EU lawmakers.

² Directive 96/9/EC of the European Parliament and of the Council of March 1996 on the legal protection of databases.

³ European Commission, *Better Regulation: Guidelines and Toolbox*. https://ec.europa.eu/info/better-regulation-guidelines-and-toolbox_en.

⁴ European Commission, DG Internal Market, *First evaluation of the Directive 96/9/EC on the legal protection of databases* (2005).

⁵ *Ibid* p. 6.

⁶ *Fixtures Marketing Ltd v. Oy Veikkaus Ab* (C-46/02, 9/11/2004), *Fixtures Marketing Ltd v. Svenska Spel Ab* (C-338/02, 9/11/2004) *British Horseracing Board Ltd v. William Hill* (C-203/02, 9/11/2004) *Fixtures Marketing Ltd v. OPAP* (C-444/02, 9/11/2004).

performance of the *sui generis* right and places that analysis in the context of the data economy.

Indeed, in its 2017 communication, *Building a European Data Economy*⁷, the Commission, while acknowledging in principle the limited application of the *sui generis* right in the context of machine-generated data (crucial to the data economy), announced that an evaluation of the Database Directive was to be conducted to assess the instrument. This evaluation report also responds to this commitment.

1.2. Scope of the evaluation

The evaluation covers the overall functioning of the two parts of the Database Directive, copyright and *sui generis* right protection of databases. Yet, as prescribed in the legislation itself, the evaluation puts special emphasis on assessing the *sui generis* right (Articles 7 to 11 of the Directive). Related provisions, such as Article 1 (and in particular the definition of a database) and Article 15, are assessed together with the provisions on the copyright and the *sui generis* protections.

This report covers the period after 2005, when the previous Commission evaluation report was published, until March 2018. The evaluation covers all EU Member States (MS), although in some instances information and data gathering refers only to a limited sample. These instances are indicated in the text.

2. BACKGROUND TO THE INTERVENTION

This section describes the original EU intervention context (2.1), the Database Directive's objectives and the intervention's logic (2.2). Finally, it provides an overview of the Database Directive's key provisions (2.3).

2.1 Context of the EU intervention

Before the adoption of the Database Directive in 1996, databases in all MS were protected by copyright using the Berne Convention for the Protection of Literary and Artistic Works. However, a wide and varied range of national laws existed among MS. The starkest variation was between countries with a common law tradition (mainly the UK) and civil law countries, and related to the standard of protection. The common law countries set the threshold at a considerably lower level by applying the 'sweat of the brow' standard, which in essence focused on the labour, effort and resources allocated for the creation of databases. In contrast, *droit d'auteur* continental European countries required the traditional originality or

⁷ European Commission Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Building a European Data Economy* (2017), <https://ec.europa.eu/digital-single-market/en/news/communication-building-european-data-economy>

‘intellectual creation’ standard, effectively setting the threshold higher. Moreover, some Nordic countries extended their traditional protection of certain ‘catalogues’ to database protection⁸. As a result of this overall situation, non-original but resource-intensive databases enjoyed greater protection only in a limited part of the then European Community. Moreover, at the time of drafting the Directive, empirical evidence suggested that the UK, which had a strong non-original standard, enjoyed a significant competitive advantage in database production over other MS.

2.2 Intervention’s objectives and logic

The Commission considered these differences in legal protection between MS to adversely hinder the free movement of ‘database products’ and the provision of information services. It found that database producers in countries with a higher level of database protection seemed to be in a more favourable position than in other countries⁹. To remedy these shortcomings the Commission proposal laid down the following objectives.

First, the legislative proposal for the Database Directive sought to remove existing differences in the legal protection of databases by **harmonising the rules on database protection**¹⁰. Regarding copyright protection, the aim was to establish a uniform threshold of ‘originality’ for copyright-protected databases, while for non-original databases the Commission proposed introducing a new ‘*sui generis*’ right.

Second, the Directive aimed to **stimulate investment in databases within the EU**. This was deemed necessary to improve the global competitiveness of the European database industry, in particular to close the gap in database production between the EU and the US. It was expected to stem mainly from the introduction of the *sui generis* right as a new intellectual property right.

Finally, it sought to **safeguard the balance between the interests of database producers and users**. A central concern was facilitating access and re-use of information within the parameters of the Directive, which was clearly perceived as creating an extra layer of property that could generate excessive data lock-ups¹¹. The two main mechanisms for guaranteeing a balanced outcome were the exception regimes (Article 6 for the copyright database, Article 9 for the *sui generis* right) and the rights of lawful users (Article 5(1) for the copyright database, Article 8 for the *sui generis* right).

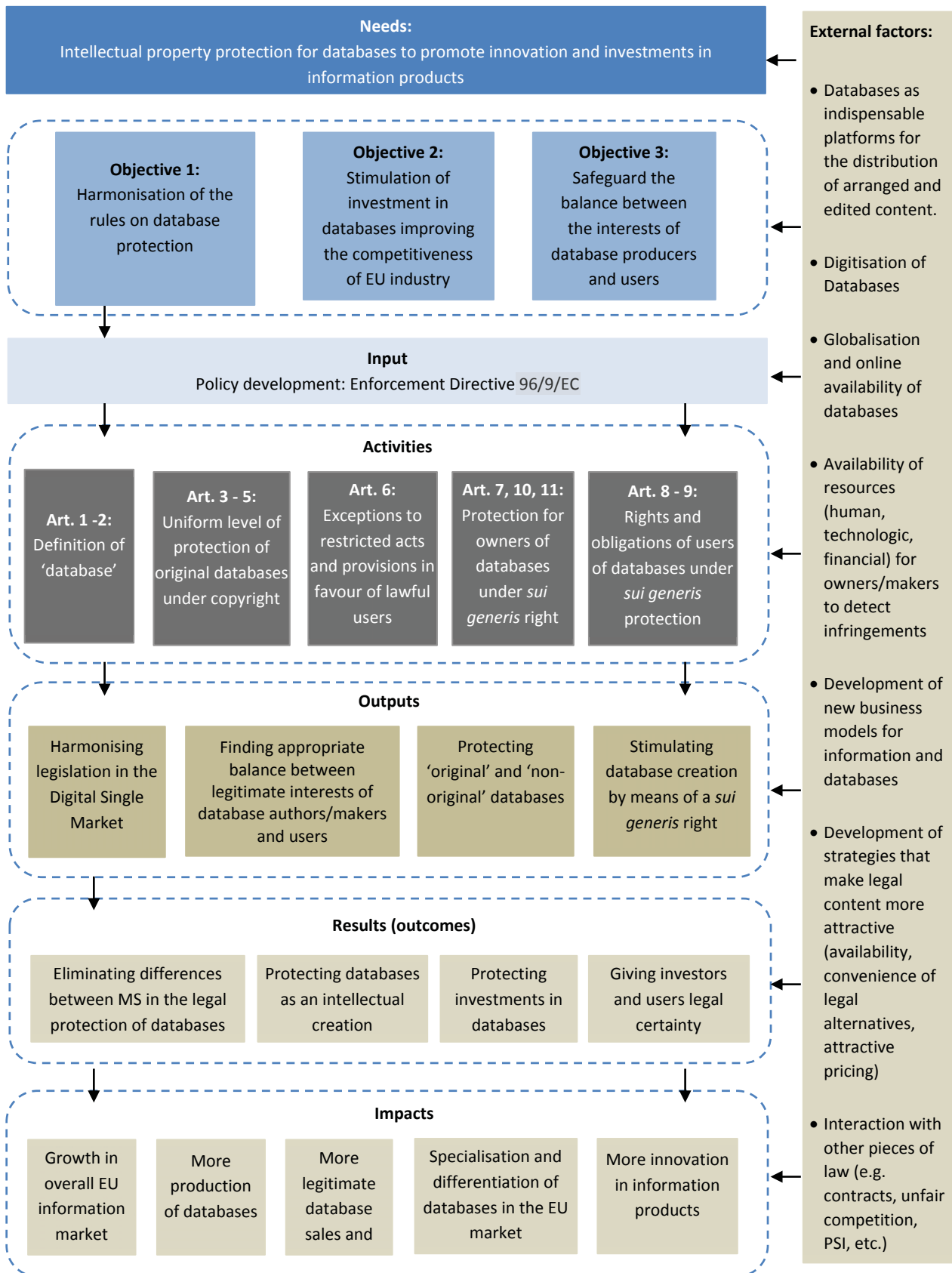
⁸ On the ‘catalogue rule’ see the 2005 Report p. 8.

⁹ *Ibid* p. 8.

¹⁰ Proposal for a Council Directive on the legal protection of databases COM(92)24 final — SYN 393, OJ C 156, 23.6.1992, p. 4, Amended Proposal for a Council Directive on the legal protection of databases COM(93)464 final — SYN 393, OJ C 308, 15.11.1993.

¹¹ See the 2005 Report p. 9-10. See discussion during the legislative process of the compulsory licensing scheme to remedy potential informational monopolies. Moreover, the explicit mandate in Article 16 for the Commission to investigate the *sui generis* rights’ impact ‘on abuses of a dominant position or other interference with free competition which would justify appropriate measures taken’.

Figure 1: Intervention logic



2.3 Overview of the Database Directive's provisions

The Directive applies to databases which are defined as a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means¹².

2.3.1 Copyright protection of original databases

The Berne Convention acknowledges the copyright protection of databases in Article 2(5)¹³. In full compliance with international obligations, the Database Directive states that databases which, by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation are protected by copyright¹⁴. The copyright protection does not extend to content of databases¹⁵, meaning that 'copyright protection of the database does not affect any pre-existing rights in the contents of the database'¹⁶. Under Article 4, the natural or legal persons who create databases are regarded as the authors.

The Directive lists the restricted acts that are protected under copyright. These cover the temporary or permanent reproduction of the whole or part of a database; translation, adaptation, arrangement and any other alteration; any form of distribution to the public; and any communication, display or performance to the public¹⁷.

Article 6(1) includes one mandatory exception for acts by a lawful user necessary for the purposes of access and normal use of the contents of a copyright-protected database. This exception cannot be overridden by contract¹⁸. Furthermore, MS may adopt the following optional exceptions: reproduction for private purposes of non-electronic databases; use for the sole purpose of illustration for teaching and scientific research; and use for the purposes of public security or of an administrative or judicial procedure. Finally, the Directive allows MS other exceptions which are 'traditionally authorised under national law'¹⁹.

2.3.2 *Sui generis* protection of non-original databases

Databases for which there has been qualitatively or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents receive protection under the

¹² Article 1(2).

¹³ Article 2(5) of the Berne Convention: 'Collections of literary or artistic works such as encyclopaedias and anthologies which, by reason of the selection and arrangement of their contents, constitute intellectual creations shall be protected as such, without prejudice to the copyright in each of the works forming part of such collections'.

¹⁴ Article 3(1).

¹⁵ Article 3(2) and Recital 27.

¹⁶ Cristina Angelopoulos, 'Database Directive' in Hugenholtz, Bernt P. and Dreier, Thomas (eds), *Concise European Copyright Law* (Kluwer, Second Edition, 2016.) The author then gives the example of a database containing phonograms or works where copyright protection of the database must remain independent from copyright protection on works contained in it. The author then explains that 'a database producer cannot invoke copyright or *sui generis* database right to prevent the author of a work that was licensed'. — Study Annex (legal analysis), 3. Concerning the *sui generis* right, such a provision was possibly not necessary because the subject-matter is limited to substantial parts of databases and not to individual content.

¹⁷ Article 5.

¹⁸ Article 15.

¹⁹ Article 6(2)(a)-(d).

sui generis right. The CJEU has regularly confirmed that, if financial and material investments qualify as quantitative, human investment constitutes qualitative investment²⁰. Under the *sui generis* right, the maker of a database may prevent extraction (akin to reproduction) and re-utilisation (akin to making available) of the whole or of a substantial part of the contents of that database²¹. The *sui generis* protection extends to the contents of the database — in contrast to the copyright protection²².

The *sui generis* right is limited to the substantial part of the database. Moreover, under the Directive the lawful user may be authorised to extract and re-utilise insubstantial parts of the database's contents as long as these acts do not conflict with the normal exploitation or do not unreasonably prejudice the legitimate interests of the database makers. The lawful user's right cannot be overridden by contract²³.

The Directive does not contain mandatory exceptions to the *sui generis* right. The optional exceptions are identical with the copyright protection exceptions. However, the illustration for teaching and scientific purposes is limited to extraction²⁴. In contrast to the copyright part, there is no provision allowing further exceptions to the *sui generis* right.

The term of protection for the *sui generis* right is 15 years. Any substantial change to the contents of a database that is considered a substantial investment extends the term of protection²⁵.

Finally, the *sui generis* right is limited territorially to the EU. Only makers or right-holders from an MS that are nationals or have their habitual residence in the territory of the EU (including companies) can benefit from *sui generis* protection²⁶.

3. IMPLEMENTATION/STATE OF PLAY

According to Article 16(1) of the Directive, MS were required to transpose the Directive at national level before 1 January 1998. All the MS that had joined the EU prior to 2004 had transposed it by 2001. The 2005 Report already confirmed that all 25 MS, along with the EEA countries (Iceland, Liechtenstein and Norway) had communicated full transposition of the Database Directive on time²⁷.

The countries that joined the EU in 2004 had transposed the Directive by 2003. Since then three other countries have joined the EU: Romania and Bulgaria in 2007, and Croatia in 2013. All three have transposed the Database Directive.

²⁰ *Fixtures Marketing Ltd v AB Svenska Spel* (fn 6) para 28; *Fixtures Marketing Ltd v. OPAP* (fn 6) para 43; *Fixtures Marketing Ltd v Oy Veikkaus AB* (fn 6) para 38. See the Study 8.

²¹ Article 7(1): the substantial part is evaluated qualitatively and/ or quantitatively.

²² In contrast to Article 3(2), the *sui generis* right does not exclude that the protection extends to the contents of the databases.

²³ Article 15.

²⁴ Article 9.

²⁵ Article 10.

²⁶ Article 11.

²⁷ See the 2005 Report p. 4.

The Commission received a single complaint in 2005, which was later closed. No infringements have been registered since 1996.

4. METHOD

The evaluation took place between March 2017 and March 2018 and drew on the following main data sources:

4.1 Study to support the evaluation of the Database Directive

The Study²⁸ was commissioned from JIIP Consortium in June 2017 (hereinafter: "the Study"). The Study, aimed at sought to gather all available evidence that would help the Commission assess whether the Database Directive had fulfilled its policy goals and remained adapted to the new technological and regulatory environment. It is split into two parts. The first focuses on in-depth consultations with stakeholders. The second, which also draws on those consultations, provides legal and economic analyses of the Database Directive, based on available statistics, case-law and literature. The analysis covers all MS, with a particular emphasis on Germany, Spain, France, Italy, the United Kingdom, the Netherlands, Poland and Sweden.

4.2 Stakeholder consultations

- Online public consultation

A public consultation on the Database Directive was undertaken on the EU Survey website from 24 May 2017 until 30 August 2017. All interested parties, including public and private database owners and users, big data and digital economy stakeholders, government and public sector content holders, experts, academics and members of the public, were invited to contribute. The online questionnaire covered both the evaluation of the current Directive's implementation and problems, objectives and possible options for the future. The Commission used several targeted actions to raise awareness about the online public consultation among stakeholders. In accordance with the Better Regulation guidelines, the questionnaire was available in three EU languages and attracted 113 responses. An initial summary report of the findings was published on 6 October 2017²⁹, and the full report of all the stakeholder consultations undertaken for the evaluation is annexed hereto³⁰.

- Online survey

As part of the Study, to get a more in-depth knowledge and reach a wider variety of stakeholders who might presumably be less aware of the Database Directive, the contractor

²⁸JIIP (Joint Institute for Innovation Policy), Technopolis, *Study in Support of the Evaluation of Directive 96/9/EC on the Legal Protection of Databases* (2018). The Study can be consulted online at: <https://publications.europa.eu/en/web/general-publications/publications>.

²⁹Available at: <https://ec.europa.eu/digital-single-market/en/news/summary-report-public-consultation-legal-protection-databases>.

³⁰See Annex 2.

launched and promoted an online questionnaire on 29 September 2017³¹. In total, 171 responses to the survey were received: 105 from database users and makers, and 66 from experts.

- In-depth interviews with Database Directive Experts

The contractor also undertook a series of one hour- long, semi-structured, in-depth interviews to gain a deeper insight into the overall legal developments and opinions around the Database Directive. A total of 19 interviews were conducted between 13 November and 31 December 2017 with academics, legal experts and practitioners³².

- Stakeholder workshop

On 21 November 2017, the contractor organised a workshop in Brussels to collect further evidence on the Database Directive's impact on the database users and/or makers, and to discuss the preliminary analysis based on the evidence already collected³³. Twenty-five participants, mostly representing business, academic and civil associations, took part.

- Ad hoc meetings

Several ad hoc meetings took place with two stakeholder representatives from the publishing sector, one from the gambling industry and two public interest groups.

4.3 Literature review

Apart from all the available academic literature on the Database Directive, this evaluation has drawn on a series of documents previously produced or commissioned by the Commission as important sources of information and insight. These included:

- 'Evaluation of Directive 96/9/EC on the Legal Protection of Databases' European Commission, DG Internal Market (2005);
- 'Study on the Legal Framework of Text and Data Mining (TDM)' commissioned by EC, produced by De Wolf & Partners for the EC (2014);
- 'Legal Study on Ownership and Access to Data' commissioned by EC, produced by Osborne Clark (2016);
- 'Enter the Data Economy: EU Policies for the Thriving Data Ecosystem' European Political Strategy Centre, Enter the Data Economy — (Strategic Notes 2017);
- 'Building a European Data Economy' European Commission Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (2017);
- 'The Economics of Ownership, Access and Trade in Digital Data' EC, JRC Technical Reports (2017).

³¹ For a full analysis of the online survey see the Study Annex 3.

³² For the analysis of the interviews see Annex 3.

³³ For a full analysis of the workshop see *ibid*.

4.4 Limitations and robustness of the findings

The data collection and analysis carried out have a number of intrinsic limitations, whose impact has been mitigated to a maximum possible extent.

Several statistical sources used for the economic analysis of the impact of the Database Directive have limitations that have been highlighted in each specific section. In particular, the Gale Directory of Databases³⁴, prominent in the 2005 Report, should be mentioned, as it has also been used in this report to assess the changes in database production during the evaluation period. Despite its limits and the ample consultation with stakeholders in seeking alternatives, the contractor for the Study confirmed that the Gale Directory of Databases remained the best statistical tool to assess this important aspect of the evaluation.

In general, whenever quantitative data are lacking, this is indicated as appropriate and counter-balanced or complemented with qualitative analysis and considerations. This is the case, for example, with the cost-benefit analysis in section 5.3.1.

The evaluation has taken into account the inherent limitations of the findings of public consultations. First, as in all surveys, the answers received reflect the views of a sample of relevant stakeholders and not those of the entire population that may have a stake in this domain. Secondly, stakeholder views offer an individual view rather than looking at the whole picture.

³⁴ See 5.2.2.

5. ANALYSIS AND ANSWERS TO THE EVALUATION QUESTIONS

The Directive is evaluated using five criteria³⁵. After a section describing the current situation, the section on effectiveness looks at whether the policy goals were achieved; the next part analyses how efficient the Directive was in this regard. The Directive's relevance in the data economy, its coherence with other EU policies and the EU added value of the intervention are also scrutinised.

5.1 Current situation

This section provides an overview of the situation since 2005, when the Database Directive was last evaluated³⁶. The Directive is made up of a section on copyright, which has broad support, and a section on the *sui generis* right, which is still rather contentious. However, in general, the *sui generis* right remains a relatively low-profile legal instrument that generates limited interest among stakeholders³⁷.

Since the CJEU narrowly interpreted the scope of the *sui generis* right in 2004, no later judgment has shaped the Directive as significantly³⁸. Furthermore, the case-law concerning the *sui generis* right is peculiarly limited on both the CJEU and at the MS level³⁹.

Another characteristic of the *sui generis* right is its predominantly *ex post* (as opposed to *ex ante*) use by database owners. Even though many owners expressed the view that the *sui generis* right is instrumental for them, this appears to mostly concern the protection against third parties, and not the stimulation of investment per se⁴⁰, which was an important policy objective of the EU intervention.

Currently there is no evidence that the *sui generis* right interferes with free competition in any significant way.

The framers of the Directive took into account the economic and technical reality of the early 1990s, when copyright industries such as publishers were the main marketers of databases. The typical database of the time was static and offline⁴¹. Scientific and legal databases or company catalogues on CD-ROMs are good cases in point.

Since 2005 there has been a shift in the economic and technological use and value of data. While, as a consequence of the CJEU rulings, the *sui generis* right, does not generally apply

³⁵ See 1.1 and fn 3.

³⁶ See 1.1.

³⁷ The number of responses to the public consultation was rather low (113 replies) and the respondents came from a limited range of sectors. Respondents who indicated their sector of activities mainly came from the publishing sector (20.5 %, or 17 respondents), the research, scientific and education sector (10.8 %, or 9 respondents), IT services sector (8.4 %, or 7 respondents), and the transport sector (7.2 %, or 6 respondents). Only three respondents stated that they were from the public sector.

³⁸ See fn 6.

³⁹ See Annex 5 on case-law. The argument about the paucity of cases was made by various experts (see Study Annex 4).

⁴⁰ See Study Annex 5 (workshop) and Annex 4 (interviews).

⁴¹ E.g. Recital 22.

to data economy situations⁴², increasingly more datasets may come to be considered databases⁴³. It is therefore necessary to assess whether the *sui generis* protection might extend to cases for which the right had not been originally designed⁴⁴.

5.2 Effectiveness

This section aims at assessing whether or not the Directive's goals were achieved without analysing *how* they were achieved. Therefore, this section is descriptive in nature. By contrast, the next section (5.3 Efficiency) seeks to analyse precisely the functioning and the regulatory costs and benefits of the Directive in a thoroughly analytical manner.

5.2.1 Has the Database Directive eliminated the differences between Member States in the legal protection of databases?

The Database Directive has been transposed in all MS⁴⁵, progressively eliminating the diverging national protection regimes that had exemplified a strongly fragmented landscape⁴⁶.

A different question is whether the particular provisions of the copyright and the *sui generis* right sections have been interpreted and applied consistently in each MS, a situation that seemed to be rather clear before 2005⁴⁷, but that needs to be reassessed for each relevant issue.

Copyright

As investigated in the Study, the harmonisation of the copyright aspects of databases is one of the main achievements of the Database Directive.⁴⁸

Before the adoption of the Database Directive, the 'originality' criterion applied to databases varied considerably among MS. For instance, some legal systems took into account labour, skill and effort⁴⁹, while others required an 'imprint of personality'⁵⁰. In fact, it was these

⁴² See 5.4. See also the analysis of substantial investment in 5.2.1 and 5.3.1.

⁴³ In the current situation a database of court cases, a search engine for second-hand cars may be regarded as protected databases as much as geographical maps (*Freistaat Bayern v. Verlag Esterbauer GmbH* (C-490/14, 2015) and traffic data (*Autobahnmaut*, BGH I ZR 47/08 (25 March 2010)).

⁴⁴ See 5.3.1.

⁴⁵ See 3.

⁴⁶ See also the Study 6.1.2. This conclusion is also supported notably by P.B. Hugenholtz, 'Something Completely Different: Europe's Sui Generis Database Right' in S. Frankel and D. Gervais (eds.), *The Internet and the Emerging Importance of New Forms of Intellectual Property* (Information Law Series, Vol. 37, Kluwer Law International 2016), pp. 205-222. He explains that the national regimes such as 'skill and labour' copyright, the Nordic catalogue rule or Dutch *geschriftenbescherming* (copyright protection for non-original writings) progressively disappeared.

⁴⁷ See the 2005 Report p. 11-15.

⁴⁸ See the Study 3.3.1 and also the Annex 1 (legal analysis), 2. — Specifically, most database makers and user-makers who participated in the questionnaire are familiar with the copyright (75 % of them are highly or moderately familiar with it) and approximately 42 % of the participating database user-makers and 54 % of the makers rely on it as a means of protection.

⁴⁹ United Kingdom, Ireland and Cyprus.

⁵⁰ France, Netherlands.

different standards that led the Commission to harmonise database protection in the first place.

The Database Directive establishes that databases can be protected by copyright if, ‘by reason of the selection or arrangement of their contents’, they ‘constitute the author’s own intellectual creation’⁵¹. This originality standard has been implemented in national laws⁵², and can be considered one of the major contributions of the Database Directive⁵³.

The CJEU has contributed to the harmonisation of the copyright protection. In *Football Dataco v Yahoo* it specified that the selection or arrangement of data in a database should amount to an ‘original expression of the creative freedom of its authors’⁵⁴. The originality standard is set as the expression of creative ability through free and creative choices or ‘intellectual creation.’ It follows that whenever no room is left for creative choices, typically when data are arranged mechanically (e.g. in alphabetical order), copyright protection will not arise⁵⁵. Moreover, the CJEU also clarified that creating data for a database, in the case of the pairing of football teams, does not count as ‘intellectual creation’ for the sake of copyright protection. The considerable harmonisation of the originality standard⁵⁶ is undeniable, even if national courts’ interpretations of ‘creative choice’ may continue to differ⁵⁷. This heterogeneity is, however, not unknown in other parts of the copyright *acquis* where the originality standard is concerned⁵⁸.

There is little practical interest in or litigation on copyright database protection in comparison to the *sui generis* right. The handful of relevant national cases have concerned rather particular examples: an anthology of ‘the most important’ poems⁵⁹ or a selection of websites for children⁶⁰. As one expert explained, a selection of the best restaurants or tourist venues according to an author’s taste is the type of intellectual creation that a copyright database aspires to protect⁶¹.

***Sui generis* right**

The harmonisation of the *sui generis* right has been achieved to a large extent⁶². Key concepts of the *sui generis* right, such as the substantial investment threshold, the definition of a database, lawful user’s rights or exceptions, were effectively harmonised by the Directive⁶³. In the next section each of these concepts will be analysed in depth.

⁵¹ Article 3 and recital 16.

⁵² See Study 6.1.2.

⁵³ See 6.1.2. and 4.1.3.

⁵⁴ *Football Dataco v. Yahoo* (C-604/10, 2012) para 53.

⁵⁵ Recital 19 gives the example of a compilation of several recordings of musical performances on a CD which will not fall within the scope of the copyright protection of the directive because, as a compilation, it does not meet the criteria of originality (the same for *sui generis* protection, because the investment is not deemed to be substantial enough).

⁵⁶ See the Study 6.1.2.

⁵⁷ See the Study 6.1.2.

⁵⁸ Cf. *Infopaq International A/S v Danske Dagblades Forening* (C-5/08, 2009).

⁵⁹ *Bundsgerechtshof* 13 August 2009 — I ZR 130/04 (on 1 000 poems that everyone should read).

⁶⁰ Cour de Cassation (civ. I) 13 May 2014, R.I.D.A. 2015, No 244.

⁶¹ *Ibid* (fn 16) 392.

⁶² See Study 6.1.3-6.1.4.

⁶³ See 5.3.1.

It is particularly interesting to look at the harmonisation of the scope of the *sui generis* right, as it affects the level of protection⁶⁴ and the extent of its access regime⁶⁴, together with the potential applicability of the *sui generis* right in the data economy context.

In its 2004 rulings the CJEU noted that ‘the resources used to draw up a list of horses in a race and to carry out checks in that connection *do not* constitute investment in the obtaining and verification of the contents of the database in which that list appears’⁶⁵.

Therefore, databases which are the by-products of the main activities of an economic undertaking (‘spin-off’ databases) are in principle not protected by the *sui generis* right, as they would not fulfil the ‘substantial investment’ threshold. This could apply, for example, in many situations involving the automated creation of machine-generated data (e.g. Internet of Things data)⁶⁶. However, in the context of automated data collection by sensor-equipped, connected ‘Internet of Things’ objects it becomes increasingly difficult to distinguish between data creation and obtaining of data when there is systematic categorisation of data already by the data-collecting object (e.g. industrial robots).

Since 2004, national case-law appears to have widely followed the CJEU rulings⁶⁷, with the consequence that the scope of the *sui generis* right remains significantly circumscribed in all MS⁶⁸. However, as the analysis in section 5.3.1 shows, the overall scope of the *sui generis* right needs to be carefully assessed.

The Database Directive has to a large extent harmonised the existing national protection regimes which had created strong fragmentation. Several decisions by the CJEU have helped eliminate the relevant implementation issue.

5.2.2 Has the Database Directive stimulated the investments into the creation of databases?

The copyright section of the Database Directive has helped harmonise the different standards of ‘originality’ in each MS, thus facilitating the free movement of original ‘database products’ across the Union⁶⁹.

However, the 2005 Report concluded that the *sui generis* right had ‘no proven impact in the production of databases’⁷⁰. Have the beneficiaries of the *sui generis* right produced more databases than they would have produced in the absence of the right? This section re-evaluates this issue, using the available evidence⁷¹.

⁶⁴ The 2005 Report p. 13-15.

⁶⁵ *British Horseracing Board* paras 37-41 (emphases added).

⁶⁶ See further discussion under 5.3.1 and 5.4.1.

⁶⁷ For example, in France *Précom, Ouest France Multimedia v Direct Annonces*, Court of Cassation (Cass.), 1st civ., 5 March 2009; in Spain *Ryanair v Atrapalo* Case STS 572/2012 (9 October 2012); in Germany *Zweite Zahnarztmeinung II* BGH (2011) GRUR 724.

⁶⁸ *Fixtures Marketing Ltd v. Svenska Spel Ab* (fn 6) paras 29-30; *Fixtures Marketing Ltd v. OPAP* (fn 6) paras 45-6. See also the Study 6.1.8.

⁶⁹ See 5.2.1.

⁷⁰ The 2005 Report p. 20.

⁷¹ See Study Annex 2.

5.2.2.1 Database production: available statistical evidence

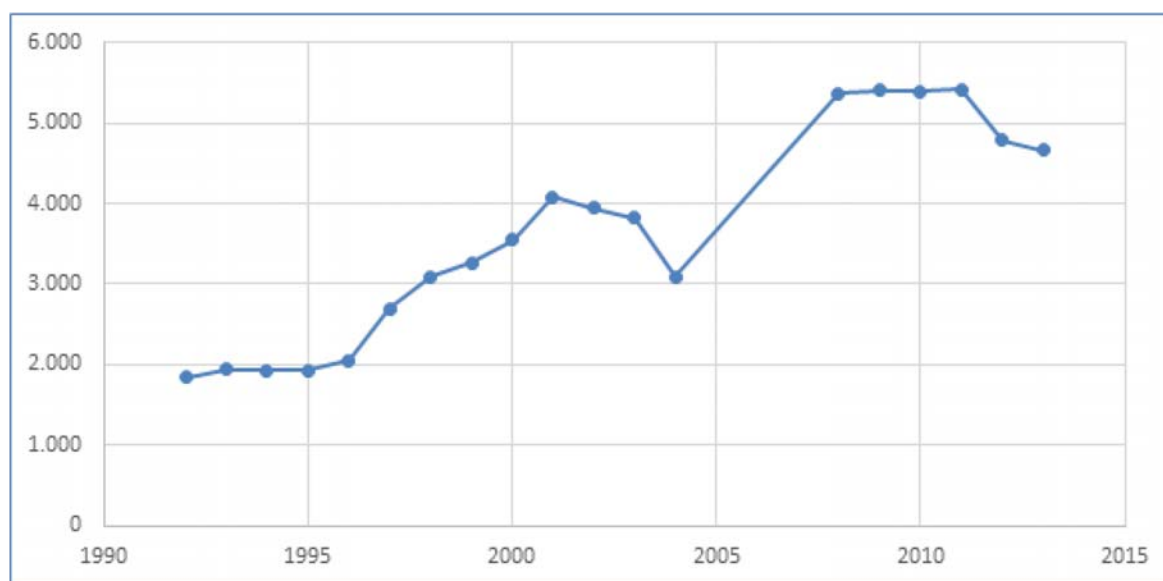
The higher level of protection provided by the *sui generis* right is economically justified only if it creates additional incentives in the production of databases⁷².

To assess this, it is necessary to look into the actual trends in the production of databases since the entry into force of the Database Directive. Yet measuring such trends is a difficult task, not only because of the relatively uncertain scope of the Database Directive⁷³, but also because databases need not be registered to be protected⁷⁴.

The Gale Directory of Databases (GDD) used in the previous evaluation report still provides the best evidence. Although the probative value of these statistics is limited, neither the stakeholders nor the contractor of the supporting study could find more conclusive statistics⁷⁵.

Moreover, the databases registered in the GDD seem to fit, conceptually, the narrow scope of the *sui generis* right, which in principle would extend only to those databases owned by organisations whose primary aim is to obtain and commercialise external data (i.e. publishing industries). The broader landscape of the data economy is in principle not covered by either the GDD data or the Database Directive.

Figure 2: Databases created in the EU-15 from 1990 to 2013



Source: Contractor's graph, based on Gale Directory of Databases 30th to 36th Edition; First evaluation of Directive 96/9/EC on the legal protection of databases.

⁷² The economic case of the *sui generis* right is that the stronger IP rights on databases can only increase welfare in a dynamic setting, when the static welfare losses (i.e. restricted access to data) are offset by dynamic welfare gains. In this situation monopolistic rents give producers an incentive to produce more, offering consumers and access-seekers more databases in return.

⁷³ See 5.3.1.

⁷⁴ E.g. this is in contrast with the economic research on patents, where statistics are much more easily available thanks to the need for registration.

⁷⁵ See the Study for full analysis of resources and the caveats in using GDD data. The GDD is currently the most comprehensive source of information on databases, database products, online services and database vendors and distributors. Both the Commission and the contractor requested stakeholders to provide alternative statistics if available.

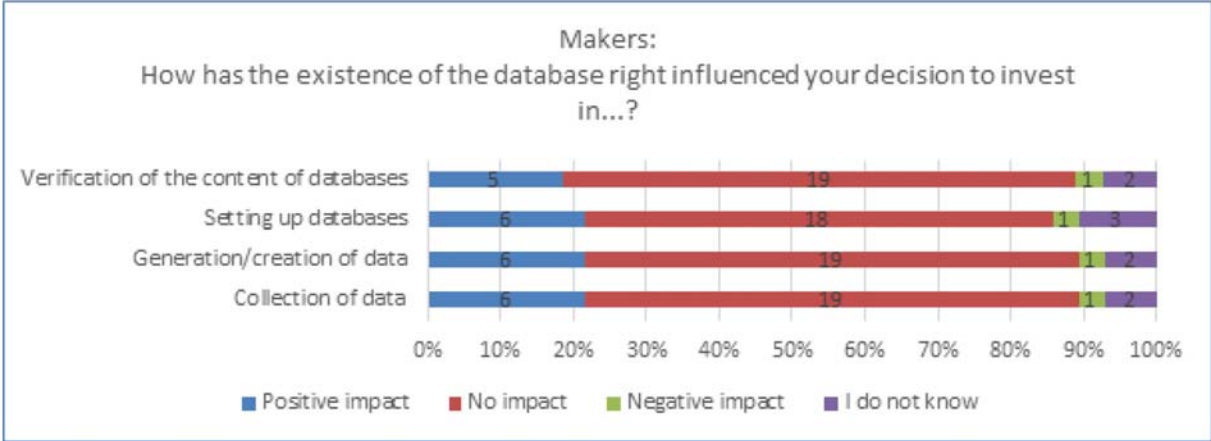
As shown in Figure 2, for the period 1990-2013 the number of registered databases produced in Europe shows two periods of overall decline (2001-2004 and 2011-2013) with sharp increase in database entries in between, from 2004 to 2008. The latter points to a period of greater digitisation of traditional databases (i.e. increased availability of online database), followed by a decline in database entries. As the first evaluation report noted, the number of database entries dropped just as most of the EU-15 had implemented the Directive into national law in 2001.

5.2.2.2 Investment in databases: the opinion of stakeholders

Half of the database owners who responded the public consultation (50.8 %) considered that the *sui generis* right encouraged investments in advanced information processing systems (e.g. algorithmic processing) or stimulated the production of databases⁷⁶. A minority of both owners and users who responded to the consultation considered that the *sui generis* right had a positive impact on innovation (35.9 %) and on the development of the data market (39.6 %).

This mixed perception about the economic effectiveness of the *sui generis* right seems to be confirmed by the online survey. According to the contractor’s survey, the majority of database owners responded that the Directive had not influenced their decision to invest in collecting and generating data, in setting up the database or in verifying its content (Figure 3).

Figure 3: Influence of the database right on database makers’ decision to invest



Source: Survey conducted for the Study on the Database Directive.

In relation to these results, the expert consultation suggests that the *sui generis* right is generally ignored in contractual frameworks. In other words, the *sui generis* right does not seem to be widely used as a licensing tool. This would indicate that, rather than playing a strong investment incentive role, the *sui generis* right is mostly seen as an *ex-post* legal instrument when parties disagree, notably in litigation.

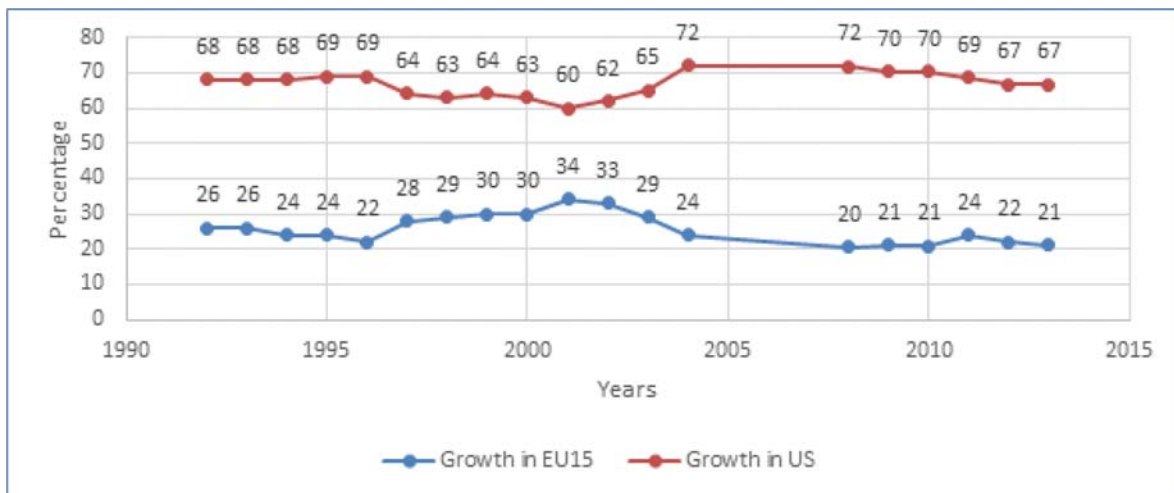
⁷⁶ In general, 41.3 % of respondents agree with that statement while 45.2 % disagree.

5.2.2.3 EU database production in comparison to the US

The Database Directive aimed to close the gap between the EU and the United States in terms of database production⁷⁷. Even though several proposals to introduce similar legislation have been discussed in Congress, there is no *sui generis* right in the United States⁷⁸. This should in theory have provided a competitive advantage to the EU database industry and to the EU economy in general, which do have the *sui generis* right.

The 2005 Report concluded that the aim of improving the global competitive advantage for the EU data industry had not succeeded: ‘There has been a considerable growth in database production in the US, whereas, in the EU, the introduction of *sui generis* protection appears to have had the opposite effect.’⁷⁹ The contractor of the supporting study carried out an update of this analysis using GDD.

Figure 4: Database production in the EU-15 and the United States from 1992-2004 and 2008-2013



Source: Gale Directory of Databases 30th to 36th Edition; First evaluation of Directive 96/9/EC on the legal protection of databases.

As identified in the 2005 Report, while the initial impact of the Directive was positive, between 2002 and 2004 the European share decreased from 33 % to 24 %, while the US share increased from 62 % to 72 %⁸⁰. After this, however, there followed a period of relative stability in the ratio of European/US database production. This data suggests that while the economic gap was not closed, it also was not negatively impacted by the Directive.

⁷⁷ See 2.2.

⁷⁸ Several bills proposing analogous protection were introduced into the Congress in the past but failed to be enacted. In not enacting the right, US lawmakers considered the risks of creating an indirect property right over data and considered that the existing means of legal protection were sufficient for databases. The most recent is the Database and Collections of Information Misappropriation Act, H.R. 3261, was a proposed (and never passed) bill in the United States House of Representatives during the 108th United States Congress.

⁷⁹ See the 2005 Report p. 24.

⁸⁰ *Ibid* 22.

The total number of databases published in Europe in 2013 and registered by the GDD (see limitations above) was 4 684; in the US the figure was 14 604. The US and Europe have by far the highest number of database entries in the world.

In conclusion, as in the 2005 Report, despite the many information requests from the Commission to the study contractor and various stakeholders, there is no available evidence to conclude that the *sui generis* right, as designed in the Database Directive, has significantly contributed to the competitiveness of the EU in the database industry market as considered in its narrow sense.

As in 2005, the *sui generis* right continues to have no proven impact on the production of databases, but a note of caution on this conclusion is needed, given the limited available evidence.

5.2.3 Has the balance between the legitimate interests of database makers and users been safeguarded?

The 2005 Report concluded that, while concerns existed that the *sui generis* regime might be restricting access to information beyond its optimal level, the 2004 CJEU interpretation of the scope had reduced the risks that the Database Directive would lock up data important for competition and innovation (i.e. a sole-source database that would be necessary for downstream markets to emerge).

Concerns about the balance persisted after 2005. According to the Commission's public consultation, 54.4 % of respondents thought that the Directive did not achieve a balanced outcome. The most critical sector was academia and research, where three quarters of the respondents had a negative opinion about the balance of interests enshrined in the Directive. The most supportive responses came from database producers, especially from the publishing sector.

According to the online survey, when users consider using a database (for instance, when a climate research institute considers using a private database commercialised by a firm that obtains data from multiple hydroelectric companies⁸¹), they mostly worry about database prices and contractual terms and conditions, both ranking significantly higher than those restrictions that might be imposed by the Database Directive⁸².

This suggests that, overall, conditions of access to data which may be seen as barriers by users are mainly driven by other protection mechanisms, and not the Database Directive. In other

⁸¹ In principle, databases from hydroelectric companies themselves would not be covered by the *sui generis* right as they would be considered 'spin-off' databases (see 5.2.1) made of 'created' data (i.e. part of the very activity of the company). However, certain database firms (there are several real life examples) might obtain data from different companies to produce and commercialise databases on the overall hydroelectric industry. These databases would in principle be covered by the *sui generis* right.

⁸² See Table 10, Study Annex (economic analysis): 'Barriers to the protection of databases, as a % of responding database users'.

words, absent the Database Directive, contractual restrictions and price would play the same primordial roles as they do now.

A related question is whether the Database Directive has facilitated access and re-use in spite of contracts or economic constraints (i.e. an institute of climate research being able to re-use databases on hydroelectric companies it cannot afford).

First, the optional exception regime (Article 9)⁸³, which allows re-use of substantial parts of database information under certain circumstances, was implemented in virtually all MS⁸⁴. While the practical value of the exceptions may be rather low, the Directive leaves up to Member States to strengthen the *sui generis* exceptions by outlawing contractual override, an option that some MS have indeed introduced in their legislation. Yet, stakeholders in academia and research do not seem to use exceptions much⁸⁵.

Second, the Directive establishes that ‘lawful users’ can re-use insubstantial parts of databases regardless of contractual provisions (Article 15, in conjunction with Article 8(1))⁸⁶. Despite its relative relevance, the notion of a ‘lawful user’ has been contested in litigation⁸⁷ and criticised by stakeholders for its lack of clarity, its potential redundancy⁸⁸ and its limitations.

In short, despite the fact that the *sui generis* right contains interesting access and re-use possibilities that cannot be overridden by contract, the drawbacks with the exceptions regime and the ambiguities around the concept of ‘lawful user’ do not seem to allow access-seekers to experience the full potential of the regime⁸⁹.

Yet no significant data lock-up situation caused by the *sui generis* right was observed. This might be due to the 2004 CJEU clarification of the scope, which limits the applicability of the right in the broader data economy context⁹⁰, and the prevalence of contractual mechanisms in the protection of databases. The situation is similar to that in 2005. While not being able to take full advantage of the re-use regime, the most important issue for access-seekers related to

⁸³ This is unlike other exception regimes in the copyright *acquis*. See Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society (or InfoSoc Directive). Article 5(1) inserted a mandatory exception on temporary reproduction; the exceptions in Article 5(2) and (3) do not rely on the notion of lawful users.

⁸⁴ At least twenty MS had clearly transposed Article 9(a), (b) and (c), two parts of the exceptions, while it was not clear in the remaining countries.

⁸⁵ For example, in the Public Consultation only 18 % of database users had relied on the ‘teaching and scientific research’ exception (Article 9(b)). In the consultations undertaken by the contractor, one leading expert commented that the exception are ‘too limited and too rigid’ Study (interviews). Respondents at the public consultation from the university sector and the technology-industry and public interest groups made similar comments. *Ibid*.

⁸⁶ This follows from Article 7(1) on the exclusive rights that only extend, by definition, to the use of substantial part.

⁸⁷ See *British Horseracing Board Ltd v William Hill* (fn 6) paras 60-65.

⁸⁸ One leading expert on the field concluded the provision to be ‘redundant and misleading.’ Study Annex (legal analysis) 14.1.

⁸⁹ It is interesting to point out that the ongoing legislative initiatives such as the PSI review (see 5.5.1.) and Proposal for a Directive of the European Parliament and of the Council on Copyright in the Digital Single Market, COM(2016) (see 5.3.4.) might contribute to improve the balance of the Database Directive.

⁹⁰ See 5.4.

the *sui generis* right seems to be not the data lock-up, but the fact that the licensing process is sometimes more complex because of the additional layer of protection⁹¹.

From the point of view of database owners, the overall opinion is that the scope of the *sui generis* right should be broadened⁹². Moreover, in the public consultation, the main benefits reported by database makers are the improvement in legal clarity as regards the protection of their databases (48 %) and the better protection against unauthorised use.

Indeed, many of the consulted owners agree that the database right is key for preserving databases against illegal uses and copies of the data (e.g. via web-scraping). They argue that while contracts regulate the relationship with their clients, the *sui generis* right protects them against third-party infringements⁹³.

Users continue to be critical about the effectiveness of the re-use regime in the Database Directive. Owners consider that the *sui generis* right maintains a good balance of interests and its scope should be expanded. The interpretation of the scope in the 2004 CJEU rulings and the prevalence of contracts rules out concerns about the *sui generis* right playing an anti-competitive role.

5.3 Efficiency

In this section of the report the efficiency of the Directive will be scrutinised with special emphasis on the *sui generis* right. This section will seek to assess how efficient the Directive was in achieving its objectives. First, it analyses the Directive's regulatory costs and benefits and its regulatory burdens. Second, it explores the potential for simplification and removal of regulatory burdens, examining crucial concepts in the Directive to ask whether there are better ways to achieve its goals.

It is important to note here that the Database Directive does not require any form of registration process, and rules and procedures associated with it are minimal. While the potential for streamlining the current instrument is not relevant, the potential for conceptual simplification can be addressed.

5.3.1 Overall analysis of the costs and benefits and regulatory burden induced by the Database Directive

One central objective of the Directive was to provide more incentives for the creation and trading of databases. Section 5.2.2 has explored quantitatively the potential benefits in that respect. Moreover, in section 5.2.3, and following also one explicit objective of the Directive,

⁹¹ See also 5.3.3.

⁹² Yet, there are certain paradoxes in this respect see discussion at 5.3.3.1 on the *Ryanair v PR Aviation* (fn 107).

⁹³ On this topic, see also 5.5.2 on text and data mining.

the report provides for an analysis of the balance of rights and interests between users and makers, explaining already some of the costs, benefits and burdens of the Directive.

Quantifying further the specific impact of the Directive (for example in terms of growth that the Directive might have brought to the EU economy) is intrinsically very difficult, if not impossible, due to the characteristics of the policy intervention and the interplay of many factors in the economics of the database industry, very much affected by technological change.

To compensate for these methodological limits, this section relies on qualitative material mainly extracted from the multiple stakeholder consultations. It also draws on the more extensive cost-benefit and regulatory burden analysis section (Chapter 3 and Annex 2) included in the Study on the Database Directive. The section is divided by stakeholder group: database owners and database users.

Database owners

In the public consultation, a majority (63 %) of database owners from the private sector who expressed an opinion held positive to neutral views about the cost-benefit balance of the Directive. This positive take is confirmed by the other consultations in the supporting study, where database makers declare that in general they have experienced more benefits than costs related to the Directive.

For example, according to several workshop participants and interviewees, a central benefit of the Database Directive is the investment protection it offers against situations where other means of protection (e.g. technological protection measures, contract) cannot help, especially against third parties (see 5.2.3). Workshop participants also appreciated the reduced contractual costs from harmonisation under the Database Directive. Similar results emerge from the online survey. Approximately 18 % of database makers reported high benefits, the main concrete benefits being legal clarity (42 % experienced high or moderate benefits), better access to produced databases (35 % experienced high or moderate benefits) and the protection offered by the *sui generis* right against third parties (32 % experienced high or moderate benefits).

On average 35 % of database makers who responded to the online survey reported no additional costs related to the Directive, followed by 24 % who reported low costs and 15 % reporting high costs. One specific cost mentioned during the workshop, closely tied to the benefits of the Database Directive, relates to the ongoing high cost of proving that somebody has copied data where changes to the data (e.g. reformatting, merging with other data) have been made.

According to the consultations, database owners have not experienced significant regulatory burdens that may have dissuaded them from relying on the Database Directive and from complying with its provisions. For example, around half of database makers who responded the online questionnaire claimed that administration costs associated with the Database Directive were zero. Moreover, during the workshop and interviews, there was no mention of any major administration costs acting as a burden on the legal protection of databases under

the Database Directive. The legal analysis of the Database Directive undertaken in the Study did not identify any significant regulatory burden either. However, the remaining legal uncertainty (see 5.3.2) could be considered as imposing certain regulatory burdens on database makers.

Database users

Database users are more critical about the cost-benefit balance of the Directive. In the public consultation, 63.5 % of those users who expressed an opinion thought that the costs outweighed the benefits, while 19.2 % thought the opposite.

According to the online survey, the most significant benefits of the *sui generis* right for users are: the certainty about the legality of using databases (56 % of respondents assessed it as a high or moderate benefit); the certainty as to the identification of the owner; and the access to databases that would not have been available or created without the existence of the *sui generis* right. Legal certainty was also mentioned by several interviewees and workshop participants as a paramount factor for bringing down legal costs within the European data market.

Moreover, the answers from users in the public consultation reveal a relatively extended use (63 % of users who provided an opinion) of Article 8(1) of the Database Directive, which allows the extraction and re-use of insubstantial parts of databases without the rightholder's authorisation, a right that cannot be overridden by contractual provisions (Article 15).

48 % of database users responding the online survey experienced no additional costs, 13 % experienced moderate costs and none experienced high costs from the *sui generis* right. When asked about particular costs, 19 % of database users reported moderate costs related to the search, access and use of alternative data/databases that are not protected, the highest-cost category reported in the survey.

Users did not report any significant problems with regulatory burden either. 13 % of users answering the online survey declare that they have experienced moderate administrative costs from the Directive. Further consultations with stakeholders reveal that such costs are mainly related to the fact that the *sui generis* right needs to be cleared when a database is traded or shared openly with users, a situation that can require legal advice. As for the case of owners, some of the legal uncertainties surrounding the *sui generis* right might be considered moderate regulatory burdens for users as well.

At the stakeholder level, both the costs and the benefits of the *sui generis* right are moderate, pointing to a relatively good balance. Database makers benefit in terms of protection, especially against third parties, and legal clarity, while users mainly benefit from improved legal clarity and lawful user access. No significant regulatory burdens were detected.

5.3.2 Scope of the *sui generis* right: current situation and simplification potential.

The CJEU provided a narrow interpretation of the scope of the *sui generis* right in 2004 by distinguishing between the investment in the creation and the obtaining of data contained in databases⁹⁴. On the one hand, according to most of the consulted stakeholders and experts, this interpretation implies that companies who ‘create’ the data that make up the content of their database may not claim *sui generis* right. These would be ‘spin-off’ databases, or necessary by-products of the main activity of the organisation, and thus fall outside the scope. On the other hand, industries like publishers, who seek out and ‘obtain’ data from external sources, would remain protected.

One important thing to bear in mind is that the databases with ‘created’ data, in principle not protected, are single-source databases, meaning that there is no other way of sourcing data than through one database. Data might be an important asset for competition to emerge in the data economy context, especially when the full dataset can be re-used⁹⁵. The CJEU’s narrow interpretation of the *sui generis* right efficiently guaranteed that no database maker’s consent in relation to the *sui generis* right was needed for accessing such data, thus alleviating fears of information monopolies. Therefore, the scope reduction was an efficient interpretation to safeguard the balance, and there seems to be little room for further simplification⁹⁶.

Additionally, this interpretation followed closely the policy objective of the *sui generis* right, which targeted the stimulation of database production and not the generation of data. It is generally understood that, in the case of spin-off databases, companies would have produced these databases anyway without further incentives. It is evident that football leagues keep creating fixture lists as much as horse racing companies create racing data, despite not having a *sui generis* right⁹⁷.

The CJEU rulings, nevertheless, have been controversial. When asked in the public consultation to consider the effect of CJEU case law on the scope of the database protection, stakeholders were split: 35 % considered the effect of the rulings positive and 34 % negative⁹⁸. In general database makers remain sceptical, especially in the sports industry, and have called for a change in the legislation that would clearly include ‘created’ data in the scope.

⁹⁴ See fn 38.

⁹⁵ Under the *sui generis* right regime, while insubstantial parts of the database can be re-used by the lawful user, the use of a complete dataset in a database is subject to the authorisation of the database owner. This feature makes the current access regime of the *sui generis* right rather inefficient for the data economy context, as patchy datasets are of reduced value for data analytical purposes. The *sui generis* right in its current forms favours the holders of data sets to third parties for the purposes of using complete datasets.

⁹⁶ See the 2005 Report p. 14.

⁹⁷ Some experts have argued for a case-by-case approach interpretation of the Database Directive, in which stakeholders would be able to obtain *sui generis* protection only if they are able to show that investment would not have been made without the *sui generis* right.

⁹⁸ The rest (31 %) did not know. Similarly 29.7 % of the respondents to the public consultation found the scope satisfactory, 28.8 % too broad, 14.4 % too narrow, while 24.3 % considered it unclear.

Conversely, users and public interest groups support it⁹⁹. Besides, many replies to the public consultation asserted the practical difficulty in drawing a distinction between investments in obtaining and creating data. Some national courts seem to have adopted an efficient practice in requiring clear evidence that the investment served to build the database, not create data¹⁰⁰.

Some experts have highlighted that the reduced scope may come under pressure in the future, potentially producing unexpected results in relation to machine- and sensor-generated ‘big data’¹⁰¹.

One reason is that the CJEU has not issued a judgment on what qualifies as investment in obtaining data. The key question is whether the recording of pre-existing data counts as obtaining (thus qualifying for protection)¹⁰². Examples might include measuring body temperature, the speed of a car or air humidity. For instance, a UK high court found that the football league has a *sui generis* right in live football data that it obtains by recording them as the game unfolds (e.g. goal-scoring, passes, fouls), thanks to substantial investment in data-collection operations¹⁰³.

Furthermore, the 2004 judgments only concerned the creation/obtaining of data, not the verification, or the presentation of the contents of the database (also in Article 7). With the unprecedented increase in company-held data that are rendered usable by processing, structuring and optimisation, it is possible that these databases might become *sui generis* protected databases on account of the presentation or verification of the data included. This might influence the legal regulation of the emerging data-driven business models building on ‘big data’ analytics of machine-generated, Internet of Things data. As pointed out at the stakeholder workshop, machine- and sensor-generated data will play an important role in an array of sectors, not least the automotive and transport sectors.

To sum up, despite the efficient interpretation of scope of the *sui generis* right, some experts highlight that it is not clear what role the Database Directive will play, given the increasing importance of machine- and sensor-generated data in the future (see also 5.4).

The 2004 CJEU interpretation of the *sui generis* scope has efficiently tackled concerns about potential information monopolies.

⁹⁹ The gambling and betting industry is a strong supporter. See Study Annex (workshop) 3.2; and Study Annex (legal analysis) 10.3.2-10.3.4.

¹⁰⁰ Notably the Dutch – and, to an extent, the Italian – courts require some traceability of the substantial investment. See the Study Annex (countries) 1.3 -1.4.

¹⁰¹ See Study 2.4.2, 2.4.7-8 and 5.1.2; Study Annex 5 (workshop).

¹⁰² Davison, Mark J. and Hugenholtz, P. Bernt: ‘Football fixtures, horseraces and spin offs: the CJEU domesticates the database right’ (2005) European Intellectual Property Review 113. Leistner, Matthias: ‘Big Data and the EU Database Directive 96/9/EC: Current Law and Potential for Reform’ in Lohsse, Schulze, Staudenmayer (eds), *Trading Data in the Digital Economy: Legal Concepts and Tools* (Nomos, Baden-Baden) 2017.

¹⁰³ *Football Dataco Ltd v Stan James Ltd* (No 2) [2013] EWCA Civ 27 Another case confirming the rationale of recording data is *British Sky Broadcasting plc v Digital Satellite Warranty Cover Ltd* [2011] EWHC 2662 (62). This contrasts with some German sport industry statements, according to which they were unable to claim database rights for similar data on account of the CJEU’s distinction. Study Annex 4 (interviews).

5.3.3 Legal uncertainties about the *sui generis* right

Key concepts of the *sui generis* right will be scrutinised analytically from the perspective of efficiency. In this section a deeper analysis is provided to understand better how the Database Directive has worked in practice. The question is: have these concepts advanced efficiently the objectives of the Directive? Special attention will be paid to legal uncertainties that prevent the Directive from operating efficiently.

5.3.3.1 Database definition

Article 1(2) lays down the definition of a database, which was meant to function as a first step for assigning the scope of *sui generis* protection along with Article 7 (substantial investment). The definition attracted considerable litigation.

The central definition-related question was whether the elements contained in the database kept their ‘autonomous information value’ independent of the whole of the database. The CJEU gave an expansive reading to include¹⁰⁴, for instance, geographical maps that are made up of independent data points¹⁰⁵. As a result, second-hand car meta-search engine websites¹⁰⁶, flight websites¹⁰⁷ or online cloud services in health care¹⁰⁸ may all qualify as a database.

The efficiency and potential for simplification of this expansive reading need to be considered together with the general reduction of scope studied in the previous section. Indeed, in actual fact, the question of protection still largely depends on the question of substantial investment, and whether the data in the databases has been ‘created’ or ‘obtained’.

However, if the scope is modified or substantially re-interpreted, any dataset could also amount to a database as a matter of definition, and broader competition issues could emerge.

5.3.3.2 Term of protection

The protection under the *sui generis* right lasts for 15 years, and is renewed at every substantial change¹⁰⁹. This term is heavily criticised by users and public interest groups, while approved by database producers¹¹⁰. Critiques highlight the potentially perpetual protection, which is out of line with intellectual property that is limited in time by definition. Moreover, dynamic databases, which are increasingly replacing static and offline databases in the data economy context, may be perpetually protected due to their continuous updating, and thus significant informational lock-up situations may emerge in the future.

5.3.3.3 The database maker

Beyond Recital 41, the Directive gives MS the leeway to define who the maker is¹¹¹. Most countries have actually followed Recital 41 and linked the status of maker either to the risk-

¹⁰⁴ *Fixtures Marketing Ltd v OPAP* (fn 6). See the Study 4.1.1.

¹⁰⁵ *Freistaat Bayern* (fn 43).

¹⁰⁶ *Innoweb Bv v. Wegner* (C-202/12, 19/12/2013).

¹⁰⁷ *Ryanair Ltd v. PR Aviation* (C-30/14, 2015).

¹⁰⁸ See the UK national case *Technomed Ltd v Bluecrest Health* [2017] EWHC 2142.

¹⁰⁹ Article 10(3) — it is evaluated qualitatively or quantitatively.

¹¹⁰ See Study 4.1.21, Study Annex (legal analysis) 6.1.6.

¹¹¹ Recital 41 continues: ‘whereas this excludes subcontractors in particular from the definition of maker.’

taker or the initiator. Some stakeholders pointed out that this may lead to confusion in practice, as various types of risks and initiatives may exist: financial, organisational or professional¹¹². Moreover, it is not clear whether the criteria are meant cumulatively or separately. Should a bank that provides a loan to the initiator of a database become the maker of the database? Alternatively this may lead to joint ownership, where it is allowed. The concern expressed by experts is that in large and complex organisations with potentially many initiators and risk-takers at once, accidental or unconscious joint ownerships may become unavoidable, especially as data becomes more valuable, and may lead to uncertain ownership situations and high transaction costs¹¹³. Indeed, the issue of who can be efficiently considered as the ‘owner’ of a database in big data situations is very much under debate¹¹⁴. However, while this might be a key inefficiency of the *sui generis* right in the data economy context, so far there is no considerable evidence about the Database Directive interacting with this problem.

5.3.3.4 Substantial investment

As a general rule, investment needs to be more than minimal, which points towards a relatively low threshold¹¹⁵. Nevertheless, the interpretation of substantial investment remains a subject of criticism on account of legal uncertainty. In addition, there are no specific CJEU decisions that would give an indication of a particular quantitative and/or qualitative threshold. This has led some national courts to grant protection to what appear to be relatively low-level investments thresholds¹¹⁶.

For instance, in Germany, the threshold of substantial investment is interpreted as being rather low, especially by the Federal Court of Justice, that has recognised *sui generis* protection for telephone directories¹¹⁷. Besides, the German Federal Supreme Court has accepted a EUR 4 000 investment as sufficiently substantial¹¹⁸. In Greece, a map has been protected by the *sui generis* right because of the effort involved in collecting information¹¹⁹. In Italy, the Court of Rome¹²⁰ has ruled that inserting 4 000 records into a database and then revising, adapting and homogenising the collected data required a consistent use in economic terms of implementation and time, and thus amounts to a substantial investment. Similarly, in France, a *sui generis* right has been confirmed in an enriched telephone directory due to the sufficient amount of investment¹²¹.

¹¹² See Study Annex (legal analysis) 6.1.6.

¹¹³ Leistner (fn 102) 35-39, the Study Annex 4 (interviews).

¹¹⁴ See 5.4.

¹¹⁵ Recital 19. The Study Annex (legal analysis) 8.

¹¹⁶ See the Study Annex (legal analysis) 8.1.

¹¹⁷ ‘Tele-Info-CD’ case (BGH, 6 May 1999, I ZR 199/96. See the Study Annex (countries) 1.1.

¹¹⁸ Zweite Zahnarztmeinung II (Case No. I ZR 196/08) Ibid.

¹¹⁹ Supreme Court, Decision No 1051/2015, HCO Website. See the Study Annex (countries) 2.10.

¹²⁰ Court of Rome on 10 December 2009. — See the Study, Annex 6 (countries)’1.3.

¹²¹ Cass. com., 23 March 2010, R.I.D.A. 2010, No 225, 273, Com. com. électr. 2010, comm. No 84, note Caron. See Study Annex (countries) 1.2.

Therefore, some MS courts have taken a permissive approach as long as financial investment was not trivial. Scholars called this a ‘*de minimis* exclusion rule’¹²².

The majority of the respondents to the public consultation, the interviews, the online survey and the workshop considered ‘substantial investment’ unclear and difficult to apply¹²³. The criticism stems from the lack of specification of what ‘substantial’ means.

Some database makers put forward the idea of deleting the adjective ‘substantial’ from the Directive¹²⁴. The possible consequence of that would be to widen the scope of protection, and thus potentially bringing the *sui generis* right fully into the domain of big data. Other stakeholders, particularly users, demand a clearer definition to narrow down the *sui generis* protection further¹²⁵.

Uncertainty about the amount of investment may be a legitimate concern, but one that seems to be difficult to tackle with more precision. MS courts seem best placed to give meaning to the term ‘substantial’.

5.3.3.5 Exclusive rights

The *sui generis* database protection was tailored to protect against the right of extraction (akin to reproduction) and re-utilisation (akin to making available) of substantial parts of databases. The framers of the Database Directive meant to create an efficient tool for protecting and stimulating investment in databases, while balancing it with the users’ right, due to fears from information monopolies. It explains the limitation of exclusive rights to the substantial part¹²⁶. The exclusive rights do not apply to the insubstantial part as long as the use is not repeated and systemic¹²⁷. The CJEU interpreted the rights broadly in line with the policy objectives of protecting efficiently the investment of database makers¹²⁸. It also clarified that the substantial part, measured qualitatively, should not take into account the intrinsic value of the part used by the user — what matters is whether the substantial investment relates to the used part of the database¹²⁹.

It has proven hard to pin down the ‘substantial part’ in practice¹³⁰. A large majority of respondents in the public consultation criticised the lack of clarity. As one stakeholder put it, this uncertainty may exercise ‘a chilling effect on users’¹³¹. According to the public consultation, it is particularly problematic in industries like the transport sector, where ‘dynamic’ databases are frequently updated¹³². For these databases the substantial part can

¹²² Leistner (fn 102) 30.

¹²³ See Study 2.1.2 and its Annex (legal analysis), 8.3.

¹²⁴ See Study 8.4.

¹²⁵ See Study Annex 5 (workshop).

¹²⁶ Article 7 does not include some rights included in Article 5 for copyright protection e.g., adaptation, alteration or translation.

¹²⁷ Article 7(5).

¹²⁸ *Apis-Hristovich EOOD v. Lakorda AD* (C-545/07, 2009), *Innoweb* (fn 106), *Directmedia Publishing GmbH v. Albert-Ludwigs-Universität Freiburg* C-304/07, 2008).

¹²⁹ British Horseracing Board (fn 6) para 72.

¹³⁰ See this opinion expressed in Study 3.3.2.

¹³¹ Annex 2 (Synopsis) 5.3.

¹³² See the discussion of dynamic databases at 5.1.

become insubstantial over a very short time, making it impossible to measure the whole of the database serving as a baseline.

MS case law seems to confirm the difficulty, as the range of interpretation of the substantial part quantitatively measured varies from 20 % to 50 % of the database. Despite the criticisms, the exact workable proportions are impossible for the Directive to define and MS courts remain the best placed to deal with such difficulties.

‘Substantial’ always compares to the whole of a database and should be measured in comparison to the size of the data included in the database. On this point the CJEU pronounced in favour of a broad understanding by allowing substantiality to be measured to a subordinate part of the database, as long as it amounted, in itself, to a database even if that was part of a larger database¹³³.

The most contested application of the exclusive rights concerns unauthorised data-scraping on websites¹³⁴. The CJEU, in its seminal *Innoweb v Wegner* judgment, interpreted the exclusive rights of a specialised (second-hand car) search engine against a meta-search engine¹³⁵. The judgment found against the meta-search engine, even though it only displayed hyperlinks to the individual specialised search engines’ websites, because by scraping it came close to becoming a ‘*parasitic competing product*’, against which the right was meant to protect (see Recital 42). However, the practice in other MS still seems unstable. For instance, in Germany and Spain some cases point to different directions in scraping¹³⁶. What seems rather certain is that specialised search engines that invest in obtaining their data qualify as databases, but the application criteria for infringement in the wider context of web-scraping is not yet settled.

5.3.3.6 Exceptions

There are three optional exceptions. Despite their optional character, most MS have incorporated them in national law¹³⁷. Moreover, cases on exceptions to the *sui generis* right are highly limited.

The academic and research sector, public interest groups and several experts heavily criticised the exception regime of the *sui generis* right. They voiced the view that the list was excessively restrictive¹³⁸, leading to an imbalanced relationship between the database makers and the databases users. Other points of criticism highlight the ‘outdated’ types of exceptions. Private use is limited to non-electronic databases¹³⁹. This may reflect the directive’s origins, when electronic databases were not as widespread. The teaching and research exception does not extend to public communication, even though communication is an essential component of these activities¹⁴⁰. An often discussed proposition in the literature, taken up by several

¹³³ *Apis-Hristovich EOOD v. Lakorda AD* (fn 128).

¹³⁴ The separate question of text- and data-mining will be treated later at 5.5.4.

¹³⁵ *Innoweb BV v Wegner* (fn 106) the decision only dealt with the right of re-utilisation.

¹³⁶ *Ryanair v Atrapalo*, Case STS 572/2012, 9 October 2012.

¹³⁷ Study Annex (legal analysis) 15.

¹³⁸ Study 3.3.3. See also 5.3.4.3 on Technological Protection Measures.

¹³⁹ Article 9 (a).

¹⁴⁰ Article 9 (b).

stakeholders¹⁴¹, is the alignment with the exceptions in the InfoSoc Directive. This would effectively render the *sui generis* exceptions similar to the exceptions to copyright database¹⁴². The majority of commercial database makers expressed scepticism about such alignment, as it may induce further uncertainty and fragmentation, given the optional nature of the InfoSoc exceptions.

In addition, another criticism emanates from the research and academic sector as regards contractual override. Indeed, if Article 15 of the Directive renders Article 8¹⁴³ on lawful users rights imperative, an *a contrario* interpretation would mean that the other exceptions can be overridden by contract¹⁴⁴. This two-fold regime for exceptions is source of legal uncertainty for users¹⁴⁵.

5.3.3.7 Lawful user

Under Article 8, ‘lawful users’¹⁴⁶ are allowed to extract and/or re-utilise insubstantial parts of the database for any purposes. This right, which constitutes a fundamental access/re-use provision of the Database Directive, cannot be overridden by contract¹⁴⁷. The interpretation of the concept of ‘lawful use’ by national courts appears to have caused significant confusion¹⁴⁸. The provision has been characterised as redundant¹⁴⁹ or unnecessary by academics and seems to create considerable uncertainty among stakeholders¹⁵⁰. National courts also seem to interpret ‘lawful use’ inconsistently, with issues arising in more specific cases¹⁵¹.

Indeed, Article 7(1) grants database makers *sui generis* rights on substantial parts of databases¹⁵². This implies that, on insubstantial parts, database makers do not have any rights, meaning that any user should be able to extract and re-use these insubstantial parts, provided that such acts are not repeated and systematic¹⁵³. The additional condition placed on the lawful user in Article 8(1) may lead to confusion and also to a possible interpretation that the *sui generis* right applies over insubstantial parts of databases. Yet there is a specific reason

¹⁴¹ See Study 3.7.3.

¹⁴² The exceptions to the copyright database right are the same (Article 6) with the significant difference that the ‘traditionally authorised’ exceptions to copyright under national law are allowed (Article 6 (2) (d)).

¹⁴³ And Article 6 (1) copyright part.

¹⁴⁴ Study Annex 1 (legal analysis), 19. 1. And the reference made to Guibault, Lucie: *Copyright Limitations and Contracts: an Analysis of the Contractual Overridability of Limitations on Copyright*, (Kluwer Law International, 2002).

¹⁴⁵ See Study 3.3: ‘Concerning the exceptions of the Database Directive, the barriers experienced by stakeholders are mainly related to their limited breath of scope.’ Also in Study 3.3.3.

¹⁴⁶ Both exceptions (Article 9) and users rights (Article 8) explicitly refer to the notion of lawful user.

¹⁴⁷ Article 8(2) and (3) deal with acts a lawful user cannot perform, i.e. where it conflicts with normal exploitation of the database and unreasonably prejudices the legitimate interests of the maker of the database, and where it causes prejudice to the holder of a copyright or related right in respect of the works or subject matter contained in the database. Article 8 has to be read together with Article 15, which renders it imperative – meaning that contractual override of user’s rights as laid down in Article 8 is prohibited.

¹⁴⁸ See Study 4.1.14 and Annex 1 (legal analysis), 14.1 and 14.2.

¹⁴⁹ E. Derclaye, *The Legal Protection of Databases: A Comparative Analysis*, Edward Elgar, 2008. — Study 3.3.2 and its Annex 1, 14.

¹⁵⁰ See e.g. Derclaye *Ibid*, 127 (citing Havelange and Mallet-Poujol).

¹⁵¹ For example, controversy arises from the ambiguity of definition of ‘lawful user’ concept in the context of database sublicensing, reported in polish case law.

¹⁵² Study Annex (legal analysis) 14.1.

¹⁵³ Article 7 (5).

why Article 7(1) only grants control over substantial parts, leaving out insubstantial parts ranging from one single datum to small parts.

The only function of Article 8(1) would be to read it together with Article 15, which prohibits contractual override in that case. This would mean that Article 8(1) only benefits a ‘lawful user’ in the context of a contract¹⁵⁴.

The standing legal uncertainties of the *sui generis* right do not prevent some efficient outcomes under the current factual scope.

5.3.4 Other protection mechanisms for database makers

The efficiency of the Database Directive, and in particular the *sui generis* right, also needs to be analysed vis-a-vis other forms of protection. After all, the *sui generis* right is an extra layer of protection built on top of, notably, contract law and unfair competition protections. How do these forms of protection interact in practice with the *sui generis* right?

5.3.4.1 Contracts

Contracts are the most widespread form of database protection, and can of course be applied also to databases protected by the *sui generis* right¹⁵⁵. In the public consultation, on the question ‘Which of the following do you rely on to control extraction or re-use of the content of your database(s)?’, a high percentage of database owners (52.5 %) answered that they always use contractual provisions and clauses, including terms and conditions. The percentage is considerably higher in the publishing sector (78.6 %), finances and banking sector (100 %) and IT sector (80 %). In contrast, 60 % of the academic, research and scientific sector replied that they rarely use contractual clauses as a means of protection.

On the question of whether national contract law gives more legal certainty than the *sui generis* protection when it comes to prevention of extracting or re-using database content, 40.3 % of the respondents answered that they agree/strongly agree and 37.1 % that they disagree/strongly disagree. By sector, 78.6 % of the respondents belonging to the publishing sector disagree with the previous statement, while the academic and research sector seems to be divided, with 40 % agreeing and 40 % disagreeing. Finally, 83.3 % of IT service respondents agree or strongly agree that national contract law provides more certainty than the *sui generis* right.

Database makers participating in the workshop explained that while contract agreements regulate the relationship with their clients, the *sui generis* right protects them against third-party infringements¹⁵⁶, and is therefore a very useful complement¹⁵⁷. Besides, as explained by

¹⁵⁴ *Ibid* (n 16) 409.

¹⁵⁵ Absent the *sui generis* right, contracts are widespread in the United States, where technological protections are also very common.

¹⁵⁶ See Study Annex (workshop).

¹⁵⁷ See Study 4.2.2.

database makers in the online survey and during the workshop, contracts are also used to waive the *sui generis* right¹⁵⁸. From the point of view of database users, as revealed by the online survey, a majority of them found contracts to be an important or very important barrier to access¹⁵⁹.

In a recent case, the CJEU held that the Database Directive ‘is not applicable to a database which is not protected either by copyright or by the *sui generis* right under that directive, so that Articles 6(1), 8 and 15 of that directive do not preclude the author of such a database from laying down contractual limitations on its use by third parties, without prejudice to the applicable national law’¹⁶⁰. This confirms that database makers, in cases where their databases are not entitled to be protected by copyright or the *sui generis* right, are authorised to impose contractual restrictions that would not have been possible in the framework of the Directive. But it has also other implications.

As explained in the Study¹⁶¹, the CJEU decision leads to the paradox that a database that is not¹⁶² protected by copyright or *sui generis* right may receive a stronger protection through contracts. In this latter case, the database maker is free to determine the contractual conditions of use of the database without being limited by the provisions in the Directive. For instance, a database maker could ignore exceptions as laid down in the Database Directive when drafting contractual terms. While some stakeholders explain that the decision did not affect their methods for handling databases, they also admit that the indirect consequences of the Ryanair case are unfolding and not sufficiently known¹⁶³. Indeed, as pointed out in the Study, the significance of the decision probably depends on how far a particular country’s laws treat the contractual terms imposed by the website owner as binding on users¹⁶⁴. For instance, according to the Court of Appeal of Amsterdam¹⁶⁵, contractual provisions in a database manual have been deemed to be unenforceable, even though the database in question was an unprotected database.

5.3.4.2 Unfair competition

The case law suggests that the *sui generis* right efficiently dealt with unfair competitive practices which some MS already prohibited through other means¹⁶⁶. The *sui generis* right thus often functioned as a special unfair competition rule against deceptive conducts between businesses such as passing off someone else’s product as one’s own¹⁶⁷.

¹⁵⁸ See also Study Annex (legal analysis) 19.2.

¹⁵⁹ See Study 4.2.2.

¹⁶⁰ *Ryanair Ltd v. PR Aviation* (fn 107) See the Study 2.3.2 and its Annex (legal analysis) 19.1.

¹⁶¹ Study, 2.3.2.

¹⁶² Or no more, meaning public domain databases: see the Study, 2.3.2.

¹⁶³ *Ryanair Ltd v. PR Aviation* (fn 107) See the Study 2.3.2 and its Annex (legal analysis) 19.1.

¹⁶⁴ Study 2.3.2.

¹⁶⁵ Court of Appeal of Amsterdam, *Pearson v Bar Software*, 22 November 2016. See the Study 2.3.2.

¹⁶⁶ See the CJEU cases: *Apis-Hristovich* (fn 133), *Innoweb v Wegner* (fn 106). We refer to unfair competition in the context of business-to-business, not business-to-consumer.

¹⁶⁷ See Directive recital 6.

What remains unclear is the articulation between unfair competition law and the *sui generis* right in countries where both protections exist. The main question is whether the *sui generis* right should work alternatively or cumulatively with unfair competition rules.

The CJEU has not yet provided a clear answer and MS practices diverge¹⁶⁸. Some seem to allow for cumulated protection¹⁶⁹, in others unfair competition is only used in absence of *sui generis*¹⁷⁰, while in many the situation is unclear¹⁷¹.

Apart from the legal uncertainty, the valid concern with cumulating these protections is the resulting overprotection for makers and potential chilling effect for users¹⁷². This could result in doubling damages for the same infringement, and it may deter legitimate database users. For instance, a user may think that a database unprotected by the *sui generis* right is free to be used, yet it still may be unlawful to use it under unfair competition.

However, currently this concern remains secondary. The case law is limited and both the public consultation and the online survey suggest that makers rarely rely on unfair competition law as a means of protection¹⁷³.

5.3.4.3 Technological protection measures

The online survey carried out in the context of the Study demonstrated a high level of reliance among database producers on technological protection measures (TPMs) such as access control, passwords or encryption¹⁷⁴. This attraction is possibly explained by the increasing technical efficiency of TPMs and the legal protection against anti-circumvention enshrined in the InfoSoc Directive¹⁷⁵. However, unlike database rights, TPMs are not relevant for non-digital offline databases and, more importantly, they are interlinked with database rights because the legal protection against anti-circumvention extends only to protected databases. Where TPMs do not intend to protect databases protected under the Database Directive, they will not receive any protection against circumvention. The enforcement of TPMs is fully dependent on the legal protection given to databases. Therefore, although they are important in practice, TPMs do not function as alternatives to database rights; rather, they operate to technically reinforce database rights.

¹⁶⁸ See related case C-604/10 *Football Dataco Ltd and Others v Yahoo! UK Ltd and Others*.

¹⁶⁹ E.g. Germany in the Study 4.2.3. One important judgment in Spain suggests it similarly: STS 988/2008, 30 January 2008 (Study *Ibid*).

¹⁷⁰ E.g. Netherlands: Study Annex (legal analysis), 19.3.

¹⁷¹ E.g. France's not yet settled case-law e.g. *Précom, Ouest France Multimedia v Direct Announces* (Cour de Cassation, 1st civ, 5/3/2009) Study 4.2.3.

¹⁷² See the opinion of an expert: Study Annex (interviews) Interview 1.

¹⁷³ Study 4.2.3. At the public consultation no respondent showed preference for protection through unfair competition law. Similarly, in the workshop competition law was barely mentioned by stakeholders (both makers and users) as a protection method.

¹⁷⁴ Study 4.2.1: 24 respondents placed high or moderate reliance on TPMs, 18 on contracts and 17 on database rights. E.g. websites can be protected by a CAPTCHA technology see the Study *Ibid*.

¹⁷⁵ Article 6(3) of the InfoSoc Directive states that technological measures are 'designed to prevent or restrict acts, in respect of works or other subject-matter, which are not authorised by the rightholders of any copyright or any right related to copyright as provided for by law or the *sui generis* right provided for in Chapter III of Directive 96/9/EC'. Article 6(4) and (5) explicitly state that 'when this Article is applied in the context of Directives 92/100/EEC and 96/9/EC, this paragraph shall apply mutatis mutandis'.

According to stakeholders and experts, TPMs may have a detrimental effect on safeguarding the balance of interests between users and makers¹⁷⁶. TPMs may render lawful user's right — which is indeed protected against contractual override — and exceptions more difficult to use by making these permitted uses subject to technological measures, especially in the case of online databases¹⁷⁷. This problem is not, however, unique to the databases and the number of issues reported is so far limited.

Contracts play a primordial role in protecting the investment in databases. Their importance is only matched by technological protection measures according to database makers. Unfair competition law seems to have considerably less importance.

5.3.5 Ongoing Digital Single Market legislation's impact on efficiency

In September 2016, the Commission released a proposal for a Directive on copyright in the Digital Single Market¹⁷⁸. The provisions in the proposed Directive equally apply to the database rights (copyright and *sui generis*) and to copyright. The proposal includes a number of provisions to which databases are relevant. The exceptions for text and data mining, for illustration for teaching and for preservation of cultural heritage also apply to the rights granted under the Database Directive, in particular the right of reproduction (Article 5(a)) and right of extraction (Article 7(1)). In particular, the proposed directive requires MS to provide for an exception for reproductions and extractions made by research organisations to carry out text and data mining (TDM) of works or other subject-matter to which they have lawful access for the purposes of scientific research. Contractual override is prohibited, meaning that it is legally forbidden for anybody to circumvent the TDM exception by contract. Besides, TPMs can only be implemented following the rules of Article 6(4) subparagraphs 1, 3 and 5 of the InfoSoc Directive, to the exclusion of Article 6(4) subparagraph 4¹⁷⁹.

Therefore, the new proposed exceptions, if adopted, are expected to improve the situation for researchers also as regards the *sui generis* right.

Ongoing legislative proposals on copyright, if adopted, will play an important role in increasing the efficiency of the Database Directive, especially in terms of improving its re-use regime.

¹⁷⁶ See 5.1.3 and Study 4.2.1.

¹⁷⁷ Subparagraph 4 of Article 6(4) of the InfoSoc Directive explicitly excludes the safeguard mechanism in TPM when databases are 'made available to the public on agreed contractual terms in such a way that members of the public may access them from a place and at a time individually chosen by them'.

¹⁷⁸ Proposal for a Directive of the European Parliament and of the Council on Copyright in the Digital Single Market, COM(2016) 593 (14.9.2016.).

¹⁷⁹ Article 6(4) subparagraph 4 states that: 'The provisions of the first and second subparagraphs shall not apply to works or other subject-matter made available to the public on agreed contractual terms in such a way that members of the public may access them from a place and at a time individually chosen by them'.

5.4 Relevance

The Database Directive deals with a subject — data — that is becoming more and more important in the digital economy¹⁸⁰. In this sense, the Directive as such is still very relevant today because it has avoided the previous regulatory fragmentation in the protection of databases. As stakeholders admit¹⁸¹, a return to such fragmentation in the data economy context could have very negative effects for the Digital Single Market.

Yet, based on the available evidence, as in the 2005 Report, it cannot be concluded here that the *sui generis* right has fulfilled all its policy objectives, especially in terms of creating more incentives for investment in databases, nor in contributing to a balanced environment for data to flow between relevant parties.

Notwithstanding this background, no major problems were detected, while some benefits of the Directive can still be highlighted.

For example, database owners, especially from copyright and publishing industries, stress the continued relevance of the Directive in terms of legal clarity and the extra layer of protection that it provides for them, especially in relation to third parties¹⁸². At the same time, database users, while still calling into question the overall efficiency of the access regime, can now rely on provisions that allow limited access to databases which are protected by contracts, clearly the most widespread and important form of protection, and thus gain certain legal clarity¹⁸³.

As it has been mentioned before, the 2004 CJEU ruling, which clarified the scope of the Database Directive, has greatly contributed to this relatively workable situation. But given this ruling, how relevant is the Database Directive in the data economy context?

5.4.1 Machine-generated data, digitisation and the *sui generis* right

It is generally understood that raw machine-generated databases, which, it can be argued, are central to the data economy environment, are not protected by the *sui generis* right¹⁸⁴. Such databases would not meet the condition of ‘substantial investment’ as courts, following the 2004 CJEU ruling, will conclude that the data forming these databases were not ‘obtained’ (i.e. seeking out existing independent material to commercialise a database) but ‘created’ (i.e. as a by-product of the central activity of the firm) — that is, they may largely be considered ‘spin-off’ databases¹⁸⁵. Thus most of the investment going into generating such databases should not be taken into account when assessing the case. As stated earlier, this is a relatively efficient situation for the *sui generis* right.

¹⁸⁰ See Study 5.

¹⁸¹ See Study Annex (workshop) 3.3.

¹⁸² See Figure 25 of the Study.

¹⁸³ See Figure 21 of the Study.

¹⁸⁴ According to Leistner this opinion about the effects of the *British Horseracing Board* and *Fixtures Marketing* cases is widely shared: “many authors have derived that in typical big data scenarios, the investments of ‘producers’ of sensor or machine-generated data of all kinds will be excluded from the *sui generis* right because in most practical cases, such investments would have to be regarded as investments in the ‘creation’ of data.” Leistner (fn 102) 28. (Leistner criticises this trend in the literature.)

¹⁸⁵ See 5.3.1.

Similarly, most of the process of digitisation that affects all industries, involving the intense use of multiple databases and big data, would generally fall outside the scope of the *sui generis* right, as the data confirming these databases would be a by-product of the company's central activity: data would not be 'obtained', but 'created'.

This would also apply to webpages created by most companies which, while falling within the definition of database contained in the Database Directive, would be made of 'created' data rather than 'obtained' data, and thus would not be protected¹⁸⁶.

Yet there is some, albeit limited, debate on the issue. The trigger has been the revival of the 2010 German Federal Court of Justice (BGH) decision (*Autobahnmaut*) where machine-generated data, namely data about motorway use, was deemed to be protected as a *sui generis* database.

In the case, the German Federal High Court of Justice accepted a highway company's *sui generis* right in a database of machine-generated toll data¹⁸⁷. The court found that the company invested money in the recording of pre-existing data ('obtaining') on cars using the highway and in the processing of such data through software ('verifying' and 'presenting'). The case is revealing, as the highway company resembles a spin-off database producer, yet the company successfully claimed a *sui generis* right in these, in essence, traffic data. Stakeholders from the automotive industry provided similar examples resonating with this case: for instance the car industry's incorporation of sensors in cars¹⁸⁸. These data are vital for other, potentially competing services such as car maintenance or secondary vehicle accessory producers.

If courts, possibly prompted by litigation strategies of some market players, start to adopt a broader understanding of investment in obtaining, verification and presentation, then the interpretation of the scope from 2004 case-law may be contested.

Moreover, in the context of automated data collection by sensor-equipped, connected 'Internet of Things' objects, it becomes increasingly difficult to distinguish between data creation and obtaining of data when there is systematic categorisation of data already by the data-collecting object (e.g. industrial robots). Also, business models are changing as a result of digitisation and the economic importance of what today may appear to be a by-product of a physical process (data generation) may be at the core of the significant business model of tomorrow.

Indeed, according to the online survey participants, the collection of data requires higher investment efforts than setting up databases. 39.6 % of owners who responded the public consultation said that they have invested substantially more in the content of the databases than in the production of the databases themselves. The verification of the content of the database is also regarded as a cost-intensive activity by most database makers.

¹⁸⁶ For example the Ryanair website, whose content comes mainly from the activity of the company itself, is notably not protected by the *sui generis* right (see 5.3.3.1). By contrast, websites that compile data from different external sources might be protected by the *sui generis* right, thus potentially making meta-search and web-scraping illegal in that context. See 5.3.2 on the seminal *Innoweb* (fn 106) case at the CJEU.

¹⁸⁷ *Autobahnmaut* (fn 43). See e.g. Leistner (fn 102) 29.

¹⁸⁸ See Annex 3 (workshop).

In addition, one of the database makers interviewed for the Study mentioned that the budget to pay software engineers that curate and maintain the database is the highest in the company. This database maker uses an open-source database management system implemented by its software engineers who develop software scripts for acquiring content automatically from different sources and earn EUR 2000 a month. However, the data in their databases not only requires automatic processing and formatting, but also manual processing and quality checks. These manual tasks are done by data operators whose remuneration is EUR 300-400 a month. Moreover, there is case-law where relatively small investments triggered *sui generis* protection¹⁸⁹.

While this anecdotal evidence does not change the conclusion of the limited scope of the *sui generis* right, it suggests the need to monitor the situation.

5.4.2 What would be the consequences if the current *sui generis* right extended broadly into the data economy?

The proposal for a Database Directive was first adopted in 1992, with the CD-ROM market as reference¹⁹⁰. At that time, the European market accounted for 15 % of the production of commercial titles, compared to 56 % for the US market. EU policy makers detected a potential for growth in the information market in general, at that time dominated by copyright industries, and created a policy that constituted a bold quasi-experiment to create new economic incentives for EU industry¹⁹¹.

While the *sui generis* right continues to be applicable to a limited number of databases, the economic context in which it was created has nothing to do with the current one.

As the digital economy progressed, and digital technologies diffused, the intense production, use and trading of online databases went well beyond traditional copyright industries. Practically all economic sectors are deeply involved in the creation of data, with variable rates of growth¹⁹². The value of the data market for the EU-27 was estimated at EUR 238 billion in 2016, representing over 1.92 % of EU-27 GDP¹⁹³. According to the European Data Market Monitoring Tool, the growth rate of the value of data between 2015 and 2016 was 9.5 % in the 28 MS, with mining and manufacturing (21.5 %) and the financial sector (19.8 %) having the highest market share.

¹⁸⁹ See 5.3.2.4.

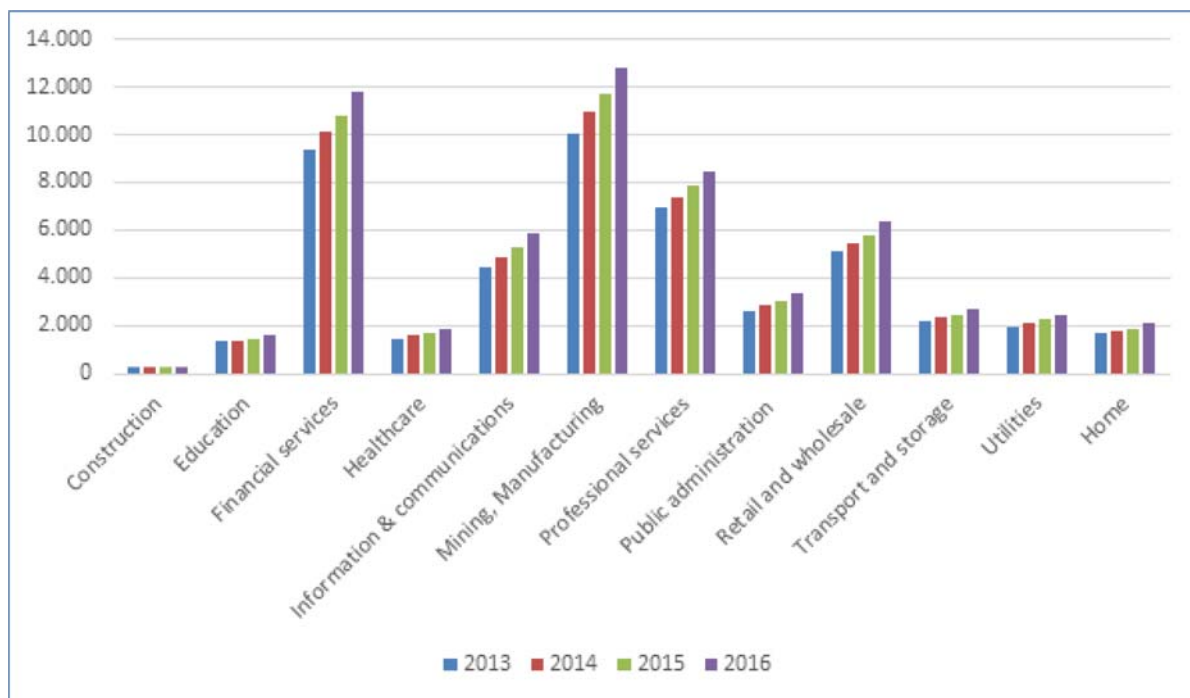
¹⁹⁰ Reference taken from explanatory memorandum of the Database Directive. With the advent of online technology, the production of databases contained exclusively on CD-ROMs has been substantially reduced in the EU market, but they can still be found in many libraries.

¹⁹¹ Hugenholtz (fn 46) 205-222.

¹⁹² See 5.4.

¹⁹³ IDC and Open Evidence (2017). European data market SMART 2013/0063- Final Report.

Figure 5: Value (million euros) of the data market by industry from 2013 to 2016



Source: European Data Market Monitoring Tool, 2016

Moreover, with the arrival of online technologies, the database industry itself has experienced fundamental changes to its technology and cost structure, which has become much more efficient (more databases can be produced with less investment)¹⁹⁴.

Data itself, however, has a competitive value only when it is processed, analysed and turned into communicated knowledge¹⁹⁵. The non-rival nature of digital data means that data can be used multiple times and by multiple users without diminishing in value. The social optimal regarding digital datasets is attained when data analysis is maximised, as far as this openness does not lead to the undersupply of data, and thus to a market failure. With online technologies, these characteristics are intensified¹⁹⁶.

The *sui generis* right is an extra layer of intellectual property on datasets, fundamentally built on top of other legal protections, such as contracts, copyright, unfair competition rules or trade secret laws¹⁹⁷, the intention being that more databases will be produced and made available at a socially optimal market price.

If this dynamic setting is not achieved, especially in relation to single-source datasets, economic theory suggests that the right might simply be restricting the spill-over effects of digital data, allowing companies to either keep data inaccessible for anti-competitive reasons,

¹⁹⁴ See Study Annex (economic analysis).

¹⁹⁵ EPSC, *Enter the Data Economy — EU Policies for the Thriving Data Ecosystem* (Strategic Notes 2017).

¹⁹⁶ For instance, a dynamic online dataset on the environment can be used by the entire pharmaceutical industry, automotive companies, the whole academic community etc. in real time and without diminishing its possibilities of use.

¹⁹⁷ See 5.5.4.

or increase prices above the competitive level, in both cases artificially restricting data flows¹⁹⁸.

The 2005 Report of the Commission identified as one of the problems of the *sui generis* right the fact that, in practice, the right ‘comes close to protecting data as property’¹⁹⁹.

While it seems that the Directive had no such intention²⁰⁰, the wording used to define the object of protection indeed suggests that the *sui generis* right may become a form of indirect property in data. Indeed, the *sui generis* right prevents ‘extraction and/or re-utilisation’ of substantial parts of the contents of the database. Copyright, on the other hand, protects the ‘selection or arrangement’ of such data, and explicitly states in Article 3(2) that the protection ‘shall not extend to their contents and shall be without prejudice to any rights subsisting in those contents themselves’.

Thus, while infringing database copyright would imply copying the way in which the data has been selected and arranged (i.e. substantially re-arranging extracted data would not be an infringement of copyright), the *sui generis* right puts much more emphasis on protecting data as such.

Economists tend to concur with this assessment²⁰¹, which was also a basic argument for the US to abandon the idea of a *sui generis* right in the past. As the 2005 Report identified, there has been a general understanding that extending property rights to raw data would be problematic at various levels. Yet the debate around a data ownership right has clearly revived, and is currently part of the policy reflections on the data economy around the globe²⁰².

In the EU context, the European Commission recently published a communication on ‘Building a European Data Economy’²⁰³ and accompanying documents²⁰⁴, in which, referring to an intense academic debate²⁰⁵, the possibility of creating a data producer’s right for non-personal or anonymised data is one of the options discussed.

The aim of such a right would be less about providing an incentive for the creation of databases (as the *sui generis* right intends) than about enhancing the tradability of data as an

¹⁹⁸ See e.g. European Commission — JRC, *The Economics of Ownership, Access and Trade in Digital Data* (JRC Technical Reports 2017).

¹⁹⁹ The 2005 Report p. 24. It is also important to mention here the inadequacy of the access/re-use regime of the Database Directive for big data uses. See 5.3.1 and 5.4.1.

²⁰⁰ Recital 46 of the Directive states that the *sui generis* right ‘should not give rise to the creation of a new right in the works, data or material themselves’.

²⁰¹ See e.g. JRC report fn 198.

²⁰² In China for example.

²⁰³ See the Commission Press Release on 10 January 2017: <https://ec.europa.eu/digital-single-market/en/news/commission-outlines-next-steps-towards-european-data-economy>.

²⁰⁴ Commission Staff Working Document on the Free Flow of Data And Emerging Issues of the European Data Economy — accompanying the document Communication Building a European data economy, COM(2017) 9 final (10 January 2017).

²⁰⁵ Herbert Zech, *A legal framework for a data economy in the European Digital Single Market: rights to use data* (2016) Vol. 00 Journal of Intellectual Property & Practice 1. See more: Thomas Hoeren: ‘Big data and the Ownership in Data: Recent Developments in Europe’ (2014) 12 European Intellectual Property Review 751.

economic good. Ideally, data would then flow towards the entity that would extract more value from it.

Some of the contentious issues of the debate revolve around the optimal geographical scope of the right, the scope of the data covered, the criteria used to allocate the right to persons or entities, the possible exceptions to the right and the need for complementary measures, such as the creation of access rights for certain types of data.

The *sui generis* right has an implicit position on each theme. It is especially significant to note that it indirectly allocates data ownership to whoever took the risk in the ‘qualitative and/or substantial investment in either obtaining, verification or presentation of the contents’ (Article 7(1) of the Directive).

Putting aside the general considerations of this policy debate, there is some doubt as to whether the criteria offered by the *sui generis* right to allocate ownership are economically optimal and target the proper areas of value generation in the digital economy. The evidence presented in this report points to the same doubts.

It is worth noting that more than half (54.4 %) of the respondents to the public consultation consider that the directive is not fit for purpose in the context of an increasingly data-driven economy. If the *sui generis* right was to be turned into an economically effective and efficient data ownership right for the digital economy, a thorough assessment of the different allocation and access options should be undertaken. Such an assessment should also include most of the analytical considerations presented in this report about the legal shortcomings of the right.

The Database Directive is still very relevant, as it restricts regulatory fragmentation which could be detrimental to the Digital Single Market. The right’s narrow scope avoids problems in the digital context. The interaction of the *sui generis* right with the broader data economy is not fully clear at this stage and would need to be further monitored.

5.5 Coherence

5.5.1 Interplay with the Public Sector Information Directive

Directive 2003/98/EC on the re-use of public sector information (or PSI Directive) provides a common legal framework for a European market for government-held data²⁰⁶. The goal of the PSI Directive is to stimulate the growth of the European information market by allowing re-use of public sector information. In 2017, the Commission carried out a public online consultation on the review of the PSI Directive, as part of the periodic review obligation laid down in the Directive itself.

²⁰⁶ Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information, entered into force on 31 December 2003. It was amended by the Directive 2013/37/EU, the amended version entered into force on 17 July 2013.

Public sector bodies can hold *sui generis* rights as laid down in the Database Directive if they have invested ‘time, money and effort’ in establishing a database and they want this investment to be protected²⁰⁷. In practice, public bodies may invoke the *sui generis* right to escape the application of the rules of the PSI Directive²⁰⁸.

A contradiction may appear between the aims of the two instruments. The PSI Directive aims at making as much public information available for re-use as possible (with the smallest number of exceptions possible), while the Database Directive ‘sought to create a legal framework that would establish the ground rules for the protection of a wide variety of databases in the information age’²⁰⁹ (also public datasets). The vast majority of interviewees and research bodies underlined that both directives are not fully compatible — an opinion that is not shared by publishers²¹⁰.

The PSI Directive contains recitals²¹¹ that aim to provide clarity on the relationship between intellectual property rights and the obligations under the PSI Directive. However, in practice, legal certainty could be improved, at least as regards the interplay between the obligations under the PSI Directive and the *sui generis* right held by public sector bodies.

Case law suggests that such uncertain reading of recitals might be at play in practice. Also, in a French court case a judge decided that local authorities were allowed to deny re-use of genealogy data to a website based on its *sui generis* right. This judgment was overturned by the *Conseil d’État*²¹², which ruled that the *sui generis* right cannot prevent the re-use of data under the rules of the PSI Directive²¹³. Also, in a 2012 CJEU judgment, the Austrian government asserted a *sui generis* right over the official companies register in an attempt to deny its re-use by private companies. While this last case was not specifically about PSI but competition law²¹⁴, the case also highlights the uncertainty surrounding how *sui generis* applies in cases of public data re-use.

Moreover, various instances were reported by practitioners where the authorities exercised their *sui generis* right to block access to and re-use of public information such as population census data or official map and traffic data²¹⁵. As a result, even if courts resolve the conflict of the directives to the advantage of the public information re-users, the transaction cost of litigation is a relevant factor to take into account.

²⁰⁷ Combined Evaluation Roadmap/Inception Impact Assessment, Review on the Directive on Re-use of Public Sector Information, European Commission, 2017, http://ec.europa.eu/info/law/better-regulation/initiative/112354/attachment/090166e5b523f50f_en.

²⁰⁸ For an in-depth analysis, please see Study 5.1.3 and its Annex 1 (legal analysis) 19.

²⁰⁹ DG Internal Market and Services working paper, First evaluation of Directive 96/9/EC on the legal protection of databases, 12 December 2005. http://ec.europa.eu/internal_market/copyright/docs/databases/evaluation_report_en.pdf.

²¹⁰ See Study 5.1.3 and its Annex (legal analysis) 19.

²¹¹ See original PSI Directive: 2003/98/EC Recitals 22, 24.

²¹² *Conseil d’État* n° 389806 (8 February 2017).

²¹³ See ABR v S n. 07/786, AMI 2009-6 (29 April 2009) (College B&W Amsterdam/Landmark) See Study 5.1.3.

²¹⁴ *Compass-Datenbank GmbH v Austria* (C-138/11, EU:2012) The case predates the last modification of the PSI Directive (2013/37/EU).

²¹⁵ In absence of case law it is not clear whether the legal basis of re-use of public information related the PSI directive or not. Information gathered from a stakeholder in the course of the public consultation on the evaluation of the Database Directive in 2017. Source: *ad hoc* consultation with a public interest stakeholder.

The misalignment is to some extent confirmed by the results of the public consultation on the PSI Directive, in which 34 % of respondents agreed that the PSI and Database directives are well aligned, while 30 % disagreed and 46 % did not express a particular view. This trend is confirmed by the public consultation on the Database Directive, in which 29.8 % of the respondent stakeholders thought that the Database and the PSI directives were not coherent legislation, while 31.5 % thought that they were while 38.5 % did not express an opinion.

At the same time, and despite these occurrences, the intention has always been for the PSI Directive to take precedence over the *sui generis* right contained in the Database Directive. Therefore, clarifying that the *sui generis* right should not stand in the way of the obligations set out in the PSI Directive would appear welcome²¹⁶.

5.5.2 Coherence with EU's Open Data policies for research activities

The Recommendation to Member States on access to and preservation of scientific information (C(2012) 4890, 17 July 2012) offers key principles for open access policies for research²¹⁷. The EU Framework Programme for Research and Innovation applies these open access rules for research activities²¹⁸. These policies exist also at national level. The rationale behind open access policies for research is that publicly funded research should in principle be openly accessible and re-usable. The question is whether the Database Directive prevents the research community from applying open access policies as regards the dissemination of their research results²¹⁹.

It emerges from the public consultation that the research community is of the opinion that the Database Directive is not coherent with the EU's open research data policies for research²²⁰. This trend was confirmed by the interviews and the online survey carried out in the context of the Study²²¹ and also during the workshop where stakeholders from research emphasised that the directive negatively affects research and innovation²²².

Despite these difficulties and shortcomings stemming from the Database Directive, the emergence of open databases in the database landscape is becoming an important trend, even beyond the research sector²²³. In sectors where the core activity is the sharing of data (public

²¹⁶ The French Lemaire Act solved this interplay between the directives clearly stating that 'Without prejudice to intellectual property rights held by third parties, the *sui generis* rights of public sector bodies as defined in Article 2, under Article 7§1 and §5 of the Database Directive, cannot hinder the re-use of the contents of the databases made available by these public sector bodies in application of the rules of the PSI Directive'. This French law may be taken as an example.- See the PSI recast COM(2018)234.

²¹⁷ A technical update of this Recommendation is proposed as part of the third data package: C(2018)2375.

²¹⁸ Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020 (updated in March 2017).

²¹⁹ See the Study 5.1.4.

²²⁰ To the question 'Is in your opinion the Database Directive coherent with the EU open access policies regarding research activities', 11.1 % disagree (1 respondent), 66.7 % strongly disagree (6 respondents) and 22.2 % don't know (2 respondents).

²²¹ Please refer to the Study 5.1.4 and its Annexes (online survey) and 4 (interviews) .

²²² Please refer to the Study, Annex (workshop).

²²³ Study Annex (legal analysis) 19.2 and 19.4.

administration and open access operators), creative commons licences (versions 4.0) are often used to waive the *sui generis* right²²⁴.

Open access is nothing but a way for database makers to exercise their property right as granted by the Database Directive. In that sense, deciding to publish databases in open access is fully consistent with the Database Directive.

5.5.3 Coherence with other relevant copyright *acquis*

When the Database Directive was adopted in 1996, there was little harmonisation of copyright. Since then, thanks to the adoption of several directives, mainly the InfoSoc Directive, key aspects of copyright and related rights have been harmonised²²⁵.

Nevertheless, several doctrinal and terminological inconsistencies between the copyright part of the Database Directive and the InfoSoc Directive have been pointed out, the most important being the difference in the lists of exceptions²²⁶. Many respondents to the public consultation expressed a preference for alignment across the exception regimes to increase coherence²²⁷. Similarly, some stakeholders and experts seem to favour greater coherence between the *acquis* and the Database Directive in general²²⁸. 45.2 % of the respondents to the public consultation considered that the Directive was coherent with the *acquis*, against 28.9 % who disagreed²²⁹. Overall, the potential incoherencies do not seem to have produced negative impacts in practice, as no significant problems were reported during the evaluation. Finally, the newly adopted directive implementing the Marrakesh Treaty enabled MS to adopt an exception to both database rights, thus increasing coherence in the *acquis*²³⁰. This applies also to the proposed Digital Single Market Directive, where the three proposed exceptions would apply not only to the rights as laid down in the InfoSoc Directive, but also to the rights enshrined in the Database Directive (both copyright and *sui generis* right).

5.5.4 Coherence with the Trade Secrets Directive

A directive on trade secrets (or TSD) was adopted recently by the European Parliament and the Council²³¹. The TSD sets out rules for the protection of undisclosed know-how and business information against their unlawful acquisition, use and disclosure. It overlaps with the Database Directive, but in a way that does not pose any significant challenge or change

²²⁴ See the Study 3.5.4 and its Annex (legal analysis) 19.

²²⁵ See the Study 5.1.1.

²²⁶ Article 6, InfoSoc Directive Article 5.

²²⁷ See the Study 5.1.1.4.

²²⁸ E. g. the Study Annex (interviews).

²²⁹ On the sectoral level, 86.7 % of the publishers' representatives, 66.7 % of the IT industry considered the Directive to be coherent with the *acquis*, whereas 77.8 % of the academic research and scientific sector supported the opposite.

²³⁰ Directive (EU) 2017/1564 on certain permitted uses of certain works and other subject matter protected by copyright and related rights for the benefit of persons who are blind, visually impaired or otherwise print-disabled and amending Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society.

²³¹ Directive (EU) 2016/943 of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure.

the utility value of the *sui generis* right²³². The two legislative pieces are, therefore, coherent parts of the *acquis*.

The TSD's subject matter differs from the *sui generis* right in several respects. It extends to any information, unlike the *sui generis* right, which in principle does not extend to mere facts or data²³³. Related to that, the *sui generis* right only extends to the substantial part of a database, but not the insubstantial part²³⁴. Crucially, the TSD only protects secrets that are unpublished, whereas the database protection extends to databases both unpublished and published (i.e. made available to the public). Finally, the TSD stipulates as a condition for protection that the commercial value of the trade secret be linked to its secrecy. By contrast, the *sui generis* right protects against any unauthorised use, regardless of the public availability of the database.

It is possible for both the trade secrets right and the *sui generis* right subsist in the same dataset. This situation is not problematic, as cumulative protection for intellectual property is widely accepted and practised. Nevertheless, the two instruments should not be seen as alternatives offering equivalent protection. Trade secrets protection, if subsisting in a database, only offers protection against unpublished (i.e. not yet available) databases. In practice, the TSD may only offer protection to database makers in cases of piracy, such as unauthorised disclosure of as yet non-commercialised databases, which is far from a typical infringement case.

There are no major incoherencies between the Database Directive and other EU legislation. However, a clarification of the interaction with the PSI Directive would be advisable.

²³² The coherence analysis only extends to *sui generis* right, as meaningful overlap with copyright is excluded.

²³³ Database Directive Recital 45.

²³⁴ Article 7.

5.6 What is the EU added value of the intervention?

The EU intervention in the harmonisation of copyright protection and *sui generis* right of databases is rooted in the single market logic. It is clear that the Database Directive managed to reduce substantially the regulatory differences between MS²³⁵. The previous highly fragmented regulatory situation was clearly detrimental to a well-functioning database market.

This seems to be borne out by stakeholders and experts, who expressed a generally positive opinion about harmonisation²³⁶. Several responses to the public consultation reflected this attitude, pointing to the easier cross-border application of database rules, the level playing field across Member States and the greater legal certainty.

The EU added value concerning the Directive is even more relevant in the context of increased digitalisation and the Digital Single Market strategy, where cross-border production and the trade in data and databases are instrumental for the overall success of the policy²³⁷.

The harmonisation of key legal rules about databases across the EU continues to be the central value added of the Database Directive. In the online, cross-border Digital Single Market context, the importance of the EU intervening in the field has substantially increased.

²³⁵ National contract and unfair competition laws are not harmonised at EU level.

²³⁶ This was widely reflected at the workshop, where many highlighted the value of harmonised framework for reasons of cost and legal certainty. See the Study Annex 5 (workshop), 3.3. See also the Study 6.1: ‘there is wide recognition (...) the manner in which the Directive creates a harmonised framework applicable throughout the European Union.’

²³⁷ European Commission, *A Digital Single Market Strategy for Europe*, COM(2015) 192.

6. CONCLUSIONS

In general terms, the conclusions of the 2005 evaluation report still apply — the Directive has been quite effective in harmonising database protection in Europe, but there is no evidence to conclude that the *sui generis* right has been fully effective in stimulating investment in the European database industry, nor in creating a fully functioning access regime for stakeholders.

In terms of social welfare, it seems that the available protection mechanisms (especially contracts) could already be providing enough incentives for the production of databases. Therefore, regardless of the legal uncertainty associated with some concepts included in the instrument, which is in part eased by available case law, the *ex ante* economic value added of the *sui generis* right as such seems to be of limited impact.

Nevertheless, the *sui generis* right has some efficient elements. For example, it provides an extra layer of protection from third parties (users who do not have a contractual relationship with the database owner) that EU database owners value. Moreover, given the anti-contractual override provisions included in the Directive, users can sometimes claim unilateral extraction and re-use rights to databases protected by both the *sui generis* right and contracts. This could be in fact reinforced by the ongoing policy initiatives, such as the exceptions contained in the proposed Copyright Directive.

Regarding the potential negative effects of the *sui generis* right, i.e. linked to intended or unintended data lock-up and related anti-competitive consequences, currently there is no evidence pointing to relevant problems, notably in view of the limited scope of application of the right following CJEU case law.

Database owners willing to share or sell their data, and database seekers willing to access such data, need sometimes to clear an extra administrative hurdle and clear the *sui generis* rights in their agreements. However, the *sui generis* right neither significantly facilitates nor prevents access to data in relation to other protections, especially contracts.

An exception is databases held by public entities covered by the revised PSI Directive 2013/37/EU. The *sui generis* right might be invoked by public entities to prevent the re-use of data prescribed by the PSI Directive. For these cases, swift clarification would be needed.

A key element explaining this relatively non-problematic situation continues to be the 2004 CJEU rulings²³⁸ which, as the 2005 Report also pointed out, help establish efficient scope for the right.

Indeed, it is generally assumed that most databases, notably so-called spin-off databases, do not fulfil the crucial criteria of protection — substantial investment — that would grant the ‘database maker’ the *sui generis* right. At this point, this conclusion extends to most websites

²³⁸ *Fixtures Marketing Ltd v. Oy Veikkaus Ab* (C-46/02, 2004), *British Horseracing Board Ltd v. William Hill* (C-203/02, 2004); *Fixture Markets v. OPAP* (C-444/02, 2004); *Fixtures Marketing Ltd v. Svenska Spel Ab* (C-338/02, 2004).

and machine-generated databases (for example, data automatically produced by Internet of Things devices), which would be considered outside the scope of the *sui generis* right.

Yet debates have emerged within academic and stakeholder circles, sparked by occasional court cases, as to whether the right might in fact apply more broadly than what is generally assumed. While there is not enough evidence to change the conclusion about its limited scope, the application of the *sui generis* right in the data economy context should continue to be closely tracked.

In sum, in the light of the available evidence and case law, its restricted policy potential under the current scope, and the limited range of problems it generates for stakeholders, the Commission Services consider that engaging in a process of limited reform of the *sui generis* right would be, at this stage, largely disproportionate.

While keeping the current status quo seems to be a good option, as the harmonisation of database protection is highly valued by all stakeholders, any meaningful approach towards a policy intervention on the *sui generis* right would need to be substantial, and build a stronger case, taking into account the policy debates around the data economy.

For this to be the case, a broader range of stakeholders would need to be engaged in the strategic reflection around the concrete design and potential benefits that a considerably reformulated *sui generis* right might have for the competitiveness of the European data industry overall.

ANNEX 1: PROCEDURAL INFORMATION

Lead DG: DG Communications Networks, Content and Technology

Organisation and timing:

The evaluation took place between March 2017 and March 2018, following the commitment established in the 2017 communication "Building a European Data Economy"¹ The evaluation also arises from Article 16.3 of the Database Directive, which specifies that the Commission should in particular examine periodically the application of this sui generis right.

The evaluation has been carried out by Unit I2 "Copyright" "of the European Commission, DG Communications Networks, Content and Technology. The evaluation was carried out in cooperation with other Commission DGs in the context of the Inter-Service Steering Group on 15th March 2018 convened by the General Secretariat of the European Commission. The following DG participated to the Steering group: DG TRADE, DG GROW, DG JUST, DG RTD, DG SANTE, JRC, DG ENV, DG COMP, SJ, DG REGIO, DG EMPL, DG EPSC, DG ECFIN, DG ESTAT, DG EAC together with the Secretariat-General and the Legal Service.

Evidence used

- Study to support the evaluation of the Database Directive

A study was commissioned to JIIP Consortium in June 2017 (referred to in this SWD as the "Study"). The Study aimed at gathering all the available evidence that would help the Commission Services assess whether the Database Directive fulfils its policy goals and is adapted to the new technological and regulatory environment. The Database Directive Study consists of two parts. A first part focuses on in-depth consultations with stakeholders (see below). A second part, which also draws on stakeholders' consultations, consists of a legal and economic analysis of the Database Directive, based on available statistics, case law and scientific literature. The analysis covers all MS, with a particular emphasis on Germany, Spain, France, Italy, the United Kingdom, the Netherlands, Poland and Sweden.

- Stakeholder consultations
 - Public online consultation

A public consultation on the Database Directive was undertaken on the EU Survey website from 24 May 2017 until 30 August 2017. All interested parties, including public and private database owners, public and private database users, big data and digital economy players, government and public sector content holders, experts, academics as well as citizens were invited to contribute. The online questionnaire covered both the evaluation of the current Directive implementation and the problems, objectives and possible options for the future.

¹ EU Commission Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Building A European Data Economy* (2017) <https://ec.europa.eu/digital-single-market/en/news/communication-building-european-data-economy>.

With several targeted actions, the Commission made stakeholders aware of the public online consultation. In accordance with the Better Regulation Guidelines, the questionnaire was available in 3 EU languages and attracted 113 responses. An initial summary report of the findings was published on 6 October 2017², and the full report of all the stakeholder consultations undertaken for the evaluation can be found in the Annex.

- Online Survey

In the context of the Database Directive Study, in order to get a more in-depth knowledge and reach a wider variety of stakeholders who might presumably be less aware of the Database Directive, the contractor launched and promoted an online questionnaire on 29th September 2017³. In total, 171 responses to the survey were received: 105 from database users and makers, and 66 from experts.

- In-Depth Interviews with Database Directive Experts

The contractor also undertook a series of one hour long, semi-structured in-depth interviews to gain deeper insight in the overall legal developments and opinions around the Database Directive. The interviews were conducted during the period 13 November – 31 December 2017. A total of 19 interviews were done with academic, legal experts and practitioners⁴.

- Stakeholder Workshop

On 21 November 2017, the contractor of the Database Directive Study organised a workshop to collect further evidence on the impacts that the Database Directive has been having on the database users and/or makers; and, secondly, to discuss and validate the preliminary analyses made based on the evidence already collected⁵. 25 participants, mostly representing business, academic and civil associations, participated in the Workshop that took place in Brussels.

- *Ad hoc* meetings

Several ad hoc meetings have taken place with stakeholders' representatives from the publishing sector, one from the gambling industry and two public interests groups.

- Literature Review

Apart from all the available academic literature on the Database Directive, a series of documents previously produced or commissioned by the Commission were important sources of information and insights of this evaluation. These include:

- "Evaluation of the Directive 96/9/EC on the Legal Protection of Databases" EC – DG Internal Market, (2005);
- "Study on the Legal Framework of Text and Data Mining (TDM)" commissioned by EC, produced by De Wolf & Partners for the EC (2014);
- "Legal Study on Ownership and Access to Data" commissioned by EC, produced by Osborne Clark (2016);

²Available at: <https://ec.europa.eu/digital-single-market/en/news/summary-report-public-consultation-legal-protection-databases>.

³ For a full analysis of the online survey see the Study Annex 3.

⁴ For the analysis of the interviews see the Study Annex 4.

⁵ For a full analysis of the workshop see the Study Annex 5.

- "Enter the Data Economy: EU Policies for the Thriving Data Ecosystem" European Political Strategy Centre, Enter the Data Economy – (Strategic Notes 2017);
- "Building a European Data Economy" European Commission Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (2017);
- "The Economics of Ownership, Access and Trade in Digital Data" EC, JRC Technical Reports (2017).

Limitations and Robustness of the Findings

The data collection and analysis carried out has a number of intrinsic limitations, whose impact was mitigated to a maximum possible extent.

Several statistical sources used for the economic analysis of the impact of the Database Directive have limitations that have been highlighted in each specific section. In particular, the Gale Directory of Databases⁶, which had a prominent role in the 2005 Report, has to be mentioned here, as this source has been used also in this report to assess the evolution of the production of databases during the evaluation period. Despite its limits and the ample consultation with stakeholders in search for alternatives, the contractor of the Database Directive Study confirms that the Gale Directory of Databases remains the best statistical tool to assess this important aspect of the evaluation.

In general, whenever quantitative data is lacking, this is indicated as appropriate and counter balanced or complemented with qualitative analysis and considerations. This is for example the case of the cost-benefit analysis provided in 5.3.1.

The evaluation takes into account the inherent limitations of the findings of public consultations. First, as in all surveys, the answers received reflect the views of a sample of relevant stakeholders and not those of the entire population who have a stake in this domain. Secondly, stakeholders' views convey an individual rather than a holistic perspective.

⁶ See 5.2.2.

ANNEX 2: STAKEHOLDER CONSULTATION: THE SYNOPSIS REPORT

Synopsis Report on the responses to the public consultation activities for on the evaluation of Directive 96/9/EC on the legal protection of databases

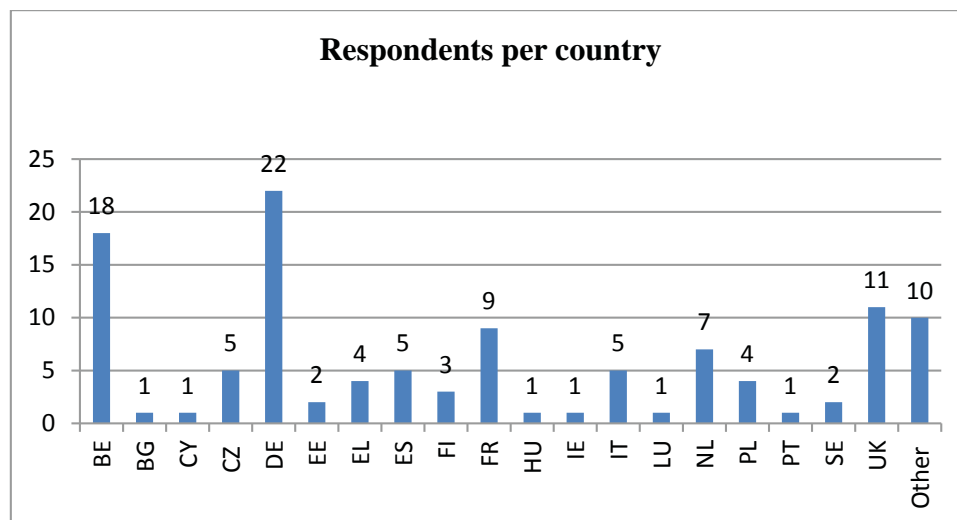
1. Introduction

The Commission coordinated various consultation activities between 24 May 2017 and 1 February 2018 in the context of the ex post evaluation of Directive 96/9/EC on the legal protection of databases (the ‘Database Directive’)¹. One public consultation was conducted by the Commission itself². Its aim was to assess the use and impact of the Database Directive, and in particular the sui generis protection of databases, and to identify any possible need for adjustment. In addition to the public consultation, the Commission conducted some ad hoc stakeholder meetings³.

The Commission also asked a contractor to produce a study in support of the evaluation⁴. The study⁵ included an online survey, in-depth interviews and a workshop — all conducted by the contractor⁶. Their results are also included in this report.

2. Overview of the participants

2.1 The public consultation respondents



¹ REFIT evaluation (Regulatory Fitness and Performance Programme), part of the 2017 Commission Work Programme.

² The details of the public consultation can be consulted at: https://ec.europa.eu/info/consultations/public-consultation-database-Directive-application-and-impact-0_en

³ The four stakeholders for these meetings came from the publishing sector (1), the gambling sector (1), the public sector (1) and one public interest group (1).

⁴ SMART contract No 30-CE-0 875 109/00-61 (SMART number 2017/0084) with ‘Joint Institute for Innovation Policy’ (signed June 2017).

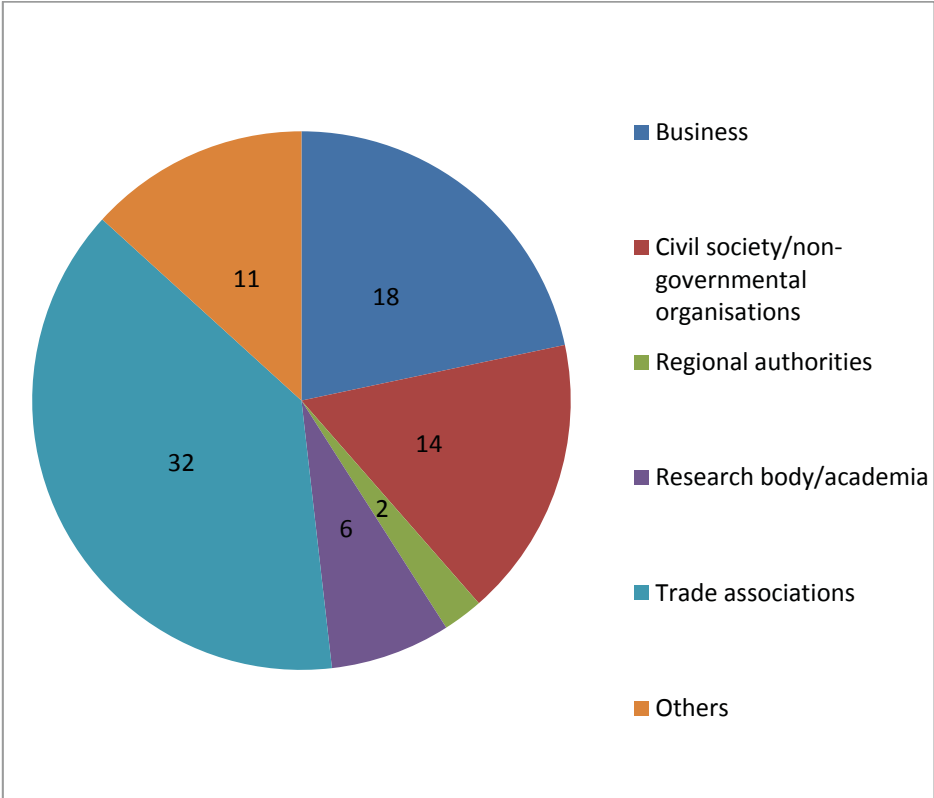
⁵ ‘Study in support of the evaluation of Directive 96/9/EC on the legal protection of databases’ by JIIP commissioned by the European Commission.

⁶ The references to ‘the online survey’, ‘the workshop’ and the ‘interviews’ in this report mean the consultation activities carried out by the contractor.

The public consultation received a total of 113 replies from stakeholders in 19 Member States and from outside the EU. 83 were from organisations and 30 from individuals. The largest number of replies came from Germany (22), Belgium (18) and the United Kingdom (11). As regards non-individual replies, the largest proportion of respondents was from trade associations and businesses, followed by organisations representing civil society and non-governmental organisations. There were no contributions from national administrations, national regulators or from consumers’ organisations.

Respondents who indicated their sector of activities mainly came from the publishing sector (20.5 %; 17 respondents), the research, scientific and education sector (10.8 %; 9 respondents), the IT services sector (8.4 %; 7 respondents) and the transport sector (7.2 %; 6 respondents⁷). Only three respondents identified themselves as part of the public sector. Others respondents came from areas such as the gaming, media and sport industry.

2.2 Categories of non-individual respondents to the public consultation



2.3 Participants of the online survey, workshop and interviews

The online survey received 171 responses, including 105 from database users and/or makers and 66 from experts.

Concerning the interviews: a total of 19 semi-structured, in-depth interviews were conducted, 9 with legal experts and 10 with database owners/makers and users from different sectors.

⁷ The six respondents in the transport sector provided the same replies. They are associations active in the automotive and transport fields.

Finally, the contractor organized a workshop on 21 November 2017 in Brussels with 27 participants representing 25 organizations. The breakdown of these participants is the following: 7 database owner organisations, 5 database user organisations and 13 organizations both owning and using databases⁸.

3. Method of analysing and referencing responses

As the questions at the Commission organised public consultation were optional, the percentages in the report refer to the amount of respondents per group that answered the particular question.

Respondents were asked to indicate the type of organisation they represented (see categories of non-individual respondents above) and to describe themselves as database producers/owners or/ and users. In general, the report refers to the positions of respondents mainly by identifying them as database producer/owners or database users, as this is the classification which shows clear trends in the clearest manner. However, when relevant, reference will be made to the positions of specific categories of stakeholders⁹.

This method of referencing stakeholders was maintained for all consultation activities (online survey, workshop and interviews).

4. Overview of the database market

A first part of the public consultation aimed to create an overview of the current structure of the database market. While the limited number of respondents means the statistics reported below cannot be considered representative of the market's structure, the statistics do provide valuable information on the types of available databases, business models, funding issues and other market features.

The majority of respondents (67 out of 113) were owners of databases, from both the public and private sectors. 61 % own educational, scientific and research-related databases, the largest category among owners. This was followed by collections of legal materials (50.8 %), mapping (49.3 %) and news and journal data (47.8 %).

The respondents were asked to provide information on the exploitation of their databases, including the revenue model and origin of data.

⁸ 10 participants represented organisations using and/or producing commercial databases, 6 media and cultural goods related, 5 research and education, and 3 public sector information databases, while one big data analytics provider dealing with various databases also took part. The majority of the participants (15) also answered the public consultation. By contrast, only 3 of the workshop participants also took part in the online survey.

⁹ When assessing the replies to the public consultation, it is important to note that a majority of owners also identified themselves as users of databases. As regards databases owners in the private sector, 67.3% of them use private sector databases and 21.8% also use public sector databases. As regards databases owners in the public sector, 71.4% of them use public sector databases and 14.3% also use private sector databases.

The consultation found that 83.6% of respondents use free/open access databases as a model for running their database, albeit with varying levels of intensity. Among public sector database owners, open access is used exclusively or in most cases by 58.3 % of respondents (against 22.7 % in the private sector). Subscription-based revenue models are used by 78 % of both private and public owners, ‘pricing per item’¹⁰ by 64 % and advertising by 49 %. This shows that many owners seem to apply hybrid models¹¹.

98 % of database owners indicated that they are also database content creators. 61.7 % of them use their own content in their databases (as opposed to acquired content, for example).

The vast majority of owners (93.1 %) answered that both the amount of content and the number of databases they produce has increased in the last 10 years. 39.6 % of owners say that they have invested substantially more in the content of the databases than in producing the databases themselves.

Free/open access databases seem to be used significantly more than subscription and ‘pricing per item’ databases. This is true particularly in the sectors of research/education (42.9 % of respondents mostly use free/open access databases) and IT services (40 %), while 75 % of the publishers tend to use subscription databases. 52.6 % of database users tend to use free/open-access databases (against 19.2 % for subscription and 2.1 % pricing-per-item databases).

The relevance of the free/open-access model seems to be confirmed by the results of the online survey. A significant share of the respondents (63 %) do not commercialise their databases but make them freely accessible to the public or produce them exclusively for internal use (24 %). Moreover, one quarter of all responding database makers and database user-makers sell or license their database for a fee.

5. Impact of the Database Directive

This section of the consultation activities sought to receive views on the impact of the Database Directive, and in particular of the *sui generis* right¹², on database owners and users.

The public consultation found that views are balanced as to whether the Database Directive has achieved its objective of protecting a wide variety of databases: 36.6 % of respondents think it has been achieved to a large extent and 37.5 % of them to a limited extent.

5.1 Impact on investments

Half of the respondents (50.5 %) consider that, by creating the *sui generis* right, the Database Directive sufficiently protects investments made in creating, updating and maintaining databases. However, more owners were of this opinion (57.2 %) than users (46.8 %), as well as a large majority of respondents, both owners and users, in the publishing sector (87.5 %). This was largely confirmed at the workshop.

¹⁰ The selling of a database, contrary to a mere licence contract.

¹¹ By hybrid models we mean models that combine subscription-based revenues and open-access models.

¹² The *sui generis* right applies to databases for which a substantial investment has been made to obtain, verify or present the contents. It allows database owners to authorise or prohibit any substantial extraction or re-use of the contents of their databases.

There is less support¹³ for the idea that the Database Directive has encouraged further investments in advanced data processing systems¹⁴ or has stimulated the production of databases¹⁵. Several respondents, including in the research and academic sector, consider that the positive impact of the sui generis right on the production of databases remains unproven.

Similarly, in the online survey, more than half of the responding database makers contend that the sui generis right did not increase the level of investment made in databases in the EU and the number of databases produced.

This feeling was shared by half of the participants at the workshop, who stated that the economic rationale for the sui generis right was neither solid nor backed up by economic evidence. Around half (54.4 %) of the respondents indicated that the Directive is no longer fit for purpose in an increasingly data-driven economy. However, the reasons for that are not explicitly provided.

5.2 Impact on the balance of interests between the rights of owners and users

Positions in the public consultation were divided on whether the Directive achieves a good balance between the rights and interests of owners and users: 54.4 % considered this not to be the case. Significant differences emerged, notably between owners and users. Half of the owners consider that the Directive strikes a good balance, compared to only a third of users¹⁶. The opinion that the Directive does not achieve a good balance is particularly put forward by respondents in the research and academic sector (75 %). They point to the allegedly broad scope of the sui generis right and an exceptions regime which they consider insufficient¹⁷. Similarly, interviews with experts and users also expressed a rather critical view of the balance.

5.3 Impact on legal certainty

Legal certainty is another point on which the public consultation found divergences between owners and users. More than half of owners think that the sui generis right positively impacts legal certainty for them (58.1 %) and for users (55.7 %). Less than 40 % of users agree. Two thirds of respondents in the research and academic sector (including both users and owners) consider that the sui generis right has had a negative effect on legal certainty for users. In general, respondents in this sector consider that legal uncertainty stems from the large room for interpretation left by the provisions of the Directive, in particular as regards the concepts of ‘substantial investment’ and ‘substantial extraction or re-use’. They also consider that the lack of harmonisation of exceptions creates legal uncertainty. In the words of one respondent,

¹³ In general, 41.3 % of respondents agree with that statement while 45.2 % disagree.

¹⁴ Tools, including processes and software, for managing and analysing high-volume data.

¹⁵ In general, 46.5 % of respondents agree with that statement (including all respondents from the publishing sector).

¹⁶ 90.5 % of individual users disagree.

¹⁷ A new mandatory exception to the database rights has been proposed by the Commission in the context of the ongoing copyright modernisation initiatives (draft Directive on copyright in the digital single market) to cover text and data mining in the area of research.

this situation gives rise to a chilling effect, preventing users from using data for fear of infringement.

The contractor's online survey found that the majority of database users consider that the different sources of legal uncertainty jeopardise their use of databases. During the workshop, users/makers specified that obtaining clearance for the right to access databases for re-use often give rise to non-negligible costs.

5.4 Impact on access and reuse of data

Around one third of respondents consider that the sui generis right has had a positive effect on access to (30.1 %) and the re-use (33 %) of data. As an illustration, one respondent considers that, by encouraging investment in databases, the Directive stimulates the usage of the underlying content. The majority of respondents in the publishing sector consider that the Directive had a positive effect on access to and reuse of data. Respondents in the IT services are divided¹⁸.

Most of the negative opinions come from users, in particular from respondents in the research and academic sector¹⁹. All the respondents in the transport sector consider the sui generis right has a negative impact²⁰. Even though these respondents rarely explain their position, one of them mentions that the exceptions fail to meet the needs of stakeholders, which in turn negatively affects the re-use of data. A similar pattern emerged during the interviews, mostly among users and especially the library sector.

6. Application of the Database Directive

This section of the questionnaire aimed to assess how the Directive is used in practice and what specific problems are faced by stakeholders, in particular as regards the sui generis right.

6.1 On the scope of the Directive

The scope of the Directive is deemed satisfactory by 40.9 % of the respondents. Again there are divergences of opinions between owners (50 %) and users (36.9 %) and among the different sectors. The publishing and transport sectors and, to a lesser extent, the IT services sector mostly consider the scope to be satisfactory. On the contrary, the research and academic sector considers the scope to be too broad, unclear or outdated. Although explicit reasons are rarely given, respondents who indicated that the scope is too broad seem to consider that this is due to the limited scope of exceptions and, to a lesser extent, the duration

¹⁸ Out of six respondents, three consider it has a positive effect, two a negative effect and the remaining one that it has no effect.

¹⁹ 66.7 % and 83.3 % of respondents consider the impact to be negative on respectively the access to and re-use of data.

²⁰ 100 % of the respondents in that sector consider the impact to be negative.

of the protection and the unclear definition of a database²¹ (with one respondent giving the example of the unclear difference between a data pile²² and a database).

6.2 On the sui generis right

6.2.1 On the scope of the sui generis right

The sui generis right applies to databases for which a substantial investment has been made in obtaining, verifying or presenting the contents. In 2004²³, the Court of Justice clarified that the investment in creating the data should not be taken into account when determining whether a database can be protected by the sui generis right. The consultation asked respondents' opinion on the impact of this case law.

The replies to the public consultation show that 29.7 % of respondents consider the scope of the sui generis right to be satisfactory, but 28.8 % deem the scope too broad and 24.3 % find it unclear.

Respondents in the publishing sector mostly consider the scope to be satisfactory (76.5 %). However, almost a quarter of them consider the scope to be too narrow because it excludes the investments in creating the data. For them, this case law has proven to be unclear and impractical. They refer in particular to the impossibility in practice of drawing a clear distinction between investments in obtaining the data and in creating them since human resources often work on both aspects. Moreover, publishers echoed sport organisations' demand to extend the scope of the sui generis right to the creation of data. By contrast, the gambling industry opposes this, explaining that extending the scope in this way would stifle innovation and hinder the circulation of information.

Most respondents in the research and academic sector, consider the scope of the sui generis right to be unclear (55.6 %). Despite some clarifications brought by the case law, respondents in that sector consider that the scope of the sui generis right is very difficult to define. In particular, they single out the notion of 'substantial investment' as too vague. Fully 62.4 % of respondents²⁴, including in sectors other than research, consider the notion of 'substantial investment' to be unclear and difficult to apply.

6.2.2 On the rights conferred by the sui generis right

Under the sui generis right, the maker of a database can prevent the extraction or re-utilisation of the whole or a substantial part, evaluated qualitatively or quantitatively, of the contents of

²¹ Respondents in the transport and automotive sector consider the notion of database to be vague and broad.

²² Term used by the respondent and understood in this context as an unstructured amount of data (in other words, data not arranged in a systematic or methodical way, as required by the definition of a database in the Directive).

²³ *Fixtures Marketing Ltd v. Oy Veikkaus Ab* (C-46/02, 9/11/2004), *Fixtures Marketing Ltd v. Svenska Spel Ab* (C-338/02, 9/11/2004) *British Horseracing Board Ltd v. William Hill* (C-203/02, 9/11/2004) *Fixtures Marketing Ltd v. OPAP* (C-444/02, 9/11/2004).

²⁴ Including all respondents in the transport sector. 23.5 % of respondents in the publishing sector consider this notion to be unclear and, at least for one of them, the source of significant legal costs and lengthy lawsuits (quoting notably the case law of the Court of Justice).

the database. 40 % of the respondents consider that the scope of this right is satisfactory²⁵, but again this differs greatly between sectors.

The large majority of respondents in the publishing sector (94.1 %) considers the scope of the sui generis rights to be satisfactory. Some respondents in this sector consider it necessary to clarify the notion of ‘substantial part’, notably as regards small but qualitatively significant parts.

On the other hand, two thirds of respondents in the research and academic sector consider that the scope of the rights is too broad. A large majority of them (75 %) point out that the notion of ‘substantial part’ is unclear²⁶. One respondent highlights the risk that this lack of clarity might cause a chilling effect. Several respondents in this sector consider that the notion of ‘substantial part’ should be clarified or objectified.

Respondents in the transport sector also consider the scope of the rights to be unclear because the notion of ‘substantial part’ is unclear. They illustrate this by reference to databases that are continuously updated, meaning a substantial part can quickly become unsubstantial, or vice-versa.

6.2.3 On the exceptions to the sui generis right

In general, respondents to the public consultation in the research and academic sector show dissatisfaction with the exceptions. This view was by and large confirmed at the workshop and by the expert interviewees, one of whom called the exceptions ‘too rigid and too narrow’. The optional nature of exceptions is often viewed by these respondents as a source of legal uncertainty and fragmentation (likely in one respondent’s view to affect cross-border projects). They consider the exceptions excessively restrictive, for example because the ‘private purposes’ exception does not cover electronic databases or because the ‘research and teaching’ exception is limited to extraction (and not re-use) and to non-commercial uses.

6.2.4 On the term of protection

A slight majority of respondents (51 %) considers that the term of protection of the sui generis right (15 years) is too long, notably in view of the quickly changing data and information environment. This criticism was also stressed by the expert interviewees. This critical attitude is shared by most users (61 % are of this opinion) and is particularly prevalent among respondents in the transport (100 %), IT (85.7 %) and the research and academic (66.7 %) sectors.

6.2.5 On the application of the sui generis right to specific databases

The public consultation sought to determine whether the current application of the sui generis right was appropriate for databases produced by public sector bodies or financed with public money and databases which contain automatically-collected or machine-generated data. Respondents tend to consider that the sui generis right is not appropriate either for public

²⁵ 51.5 % of right holders and 27.7 % of users.

²⁶ Notably as regards the qualitative criterion (e.g. a respondent raises the issue of an individual but significant data).

sector databases (45.3 %) ²⁷ or databases consisting of automatically-collected or machine-generated data (42.9 %) ²⁸. Respondents consider the protection either too broad or not sufficient. For instance, the large majority ²⁹ of respondents in the research and academic sector consider that public sector databases should not be protected. On the contrary, a majority of respondents in the transport and IT services sectors (71.4 %) considers that databases consisting of automatically-collected or machine-generated data should be protected. They do not, however, explain the reasons why. Most of the respondents in the publishing sector did not reply to the question. The workshop did not bring more clarity. Most participants thought it unclear whether the sui generis right applied to machine-generated data.

7. On other means of protection

The public consultation sought to determine which means of protection owners use to control the extraction and re-use of the content of a database. It also sought to determine whether owners consider that contractual protection would provide more legal certainty than the sui generis right. Opinions on this were split: 46.8 % of the respondents consider that national contract law gives more legal certainty than the sui generis right protection while 53.3 % disagree. Respondents in the publishing sector tend to feel that contractual protection would provide more legal certainty (75 %) while respondents in the IT services sector did not. The workshop confirmed that publishers would consider using a variety of protection mechanisms which include the Database Directive, technological protection measures and contracts. Database makers prefer the sui generis right as it offers protection against infringements by third parties.

Contractual provisions seem to be the most used means of protection, with 72.1 % of respondents declaring they rely on it always or in most cases. The reliance on contractual terms is sometimes justified by the flexibility contracts allow. However, a respondent in the publishing sector considers that the case law remains unclear regarding to what extent it is possible to rely on contractual terms to protect the use of databases.

Copyright and sui generis protection are still considered appropriate protection means: 60 % of respondents rely always or in most cases on copyright and 57.6 % on sui generis protection. Technical protection such as robot.text or pay-walls is often used by more than half of the respondents (58.2 %). As to whether databases do not need any protection, a majority of respondents (62.5 %) and all respondents in the publishing sector consider that protection is needed.

According to the online survey and the opinions expressed at the workshop, 91 % of database users find understanding contractual terms and conditions particularly challenging, and 88 % of them have difficulty circumventing technological or technical barriers (such as the use of passwords).

²⁷ Against 12.3 % of respondents who consider that such protection would be appropriate.

²⁸ Against 22.9 % of respondents who consider that such protection would be appropriate.

²⁹ Respectively 75 % and 87.5 %.

8. Need of adjustments and means to ensure an adequate balance

Opinions are divided on how to achieve an adequate balance between database owners' rights and users' needs), according to all the consultation activities (online survey, workshop and interviews). Almost a third (30.2 %) of the respondents to the public consultation considers that the sui generis right should be amended. According to some respondents, this could involve extending the scope to protect investment in the creation of data, while others consider that existing exceptions should be broadened and that new exceptions should be introduced.

Guidance to Member States to clarify the notions of 'substantial investment' and 'substantial part' is sometimes mentioned as a way to reduce legal uncertainty. According to some respondents, guidance would help prevent divergent national case law and would improve the applicability and enforceability of the sui generis right across the EU.

Slightly less than a quarter of respondents (22.6 %) opt for no policy change. On the other end of the spectrum, a non-negligible part of respondents (27.4 %) considers that other solutions could be envisaged, ranging from repealing the sui generis protection — an opinion shared by many users during the workshop — to reinforcing its protection. A group of interviewees also entertained the idea of repealing the Directive, mostly on account of its 'outdated' nature. A specific option suggested by several non-profit organisations at the workshop was to require the registration of owners wishing their databases to be protected by the sui generis right.

ANNEX 3: SELECTED EVIDENCE FROM THE STUDY

This annex reproduces the following parts of the evidence from the supporting study:

- JIIC, Study in Support of the Evaluation of Directive 96/9/EC on the Legal Protection of Databases Appendix 4 on the "In-depth Interviews with Experts and Practitioners";
- JIIC, Study in Support of the Evaluation of Directive 96/9/EC on the Legal Protection of Databases Appendix 5 on the "Workshop Report".

Other evidence used in this report, such as the online survey, can be found in the annexes of the Study.

"In-depth Interviews with Experts and Practitioners" (Annex Study 4)

Scope and objectives

Next to desk research and an online survey, a series of in-depth interviews were conducted by the project in order to inform the economic and legal analyses of the outputs, outcomes and impacts of the Database Directive, in the context of the broader data economy and the Data Economy Package.

The scope of the in-depth interviews was determined by the goals of the study, namely:

- to assess whether the Directive still fulfils its policy goals of providing protection of databases, including those not protected under copyright, while taking into account users' legitimate interests;
- to determine whether the Directive is still adapted in view of the development of new technologies, new business models based on data exploitation, and other emerging data-related issues, policies and legal frameworks on data access and ownership, stemming notably from the Digital Single Market (DSM) strategy.

Dimensions to be captured by the interview questions included:

1. The performance of the Database Directive in relation to its objectives;
2. Its costs and benefits;
3. The impacts of the current legal and economic context;
4. Its interactions with other means of database protection and the latest technological developments; and,
5. The importance of a database protection at the EU level.

Methodological note

Building on the results of the project online survey and the European Commission public consultation, the purpose of the in-depth interviews was to gather additional empirical data, opinions, perceptions, etc. regarding the effects of the Database Directive as experienced by experts, practitioners and other categories of relevant stakeholders. The data thus gathered served, together with the results of the online survey, as input to the evaluation of the Database Directive.

More specifically, the in-depth interviews aimed:

- to gain deeper insight in the overall **legal developments and opinions**;
- to gain deeper insight into the **position and experiences** of the different stakeholder categories (across different Member States).

A distinction was made between the more general-purpose in-depth interviews that go beyond merely legal issues, and the interviews conducted with legal experts whose purpose was to give insights to the country analysis.

The in-depth interviews were **semi-structured** and qualitative and estimated to take **up to an hour** to conduct.

A **standard reporting format** was used to record the answers.

Two categories of critical issues were identified for both the online survey and the in-depth interviews:

- Developing the sample (representative for the current database landscape); and,
- Ensuring sufficient response.

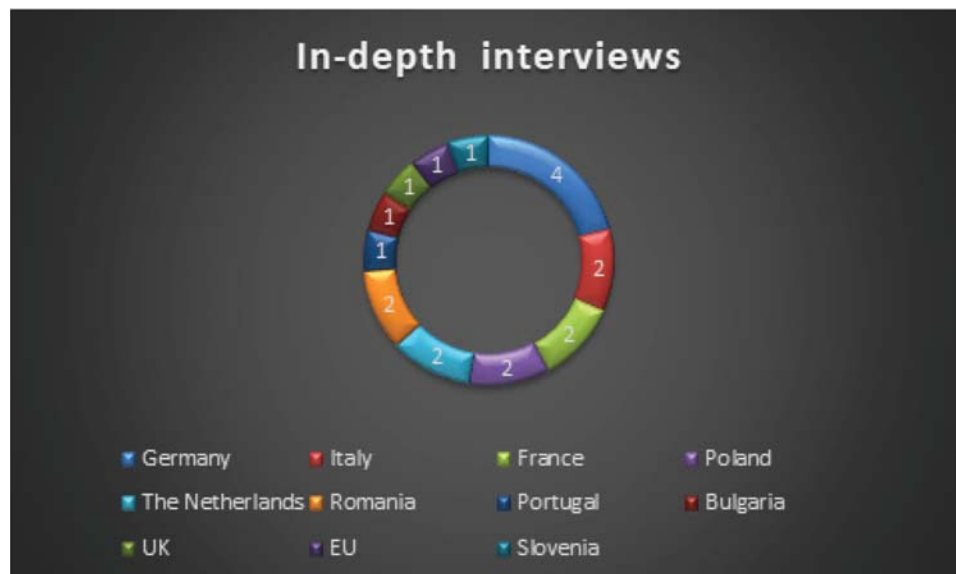
The in-depth interviews were going to be as much sequential to the online survey as possible, in order to accommodate for missing data or further deepening questions arising from the survey. To this end, the **list of in-depth interview questions** was determined after collecting and analysing partial results of the project online survey and the European Commission public consultation. A gap analysis determined which key questions needed further clarification. The in-depth interviews were the first step to remedy and fill those gaps. Remaining information gaps, persisting after the in-depth interviews, were addressed through internal and external expertise and desk research.

Participants in the in-depth interviews

The project approached over **60 experts** between October and December 2017, with a request for an interview. In selecting the experts, the project aimed to cover not only all categories of stakeholders relevant for the current study, but also all Member States, insofar as possible.

Eventually, **19 responded positively**, 3 tentatively and 7 declined the invitation. The remaining experts did not respond.

Figure 1 In-depth interviews



Of the 19 interviews conducted:

- 1) 7 interviews were with Database Directive and copyright experts (both academics and practitioners - practicing lawyers, database industry sectors, policymakers); and
- 2) 12 interviews including the following stakeholder categories:
 - a) commercial services databases,
 - b) public sector information databases,
 - c) research databases and,
 - d) community driven databases.

More specifically, the stakeholders interviewees could be distinguished as follows:

1. users of databases, such as
 - a) big (e.g. libraries, downstream commercial database makers),
 - b) small (individuals e.g. scientists, visually impaired persons),
2. makers of all four categories, as they reflect both the traditional databases envisaged by the Directive (including research and public-sector databases) but also the new type of open/community databases to see if the Directive is still suited to them,

- a) commercial databases - financial, legal, medical databases, classifieds (job ads, lists of properties, cars etc. for sale), dictionaries, anthologies, newspapers and the like
- b) public sector databases - made by the state including the EU
- c) research/scientific databases - made by scientists, universities, non-profit research institutes,
- d) open/community databases - made by communities

The interviews were conducted during the period November 2017 – February 2018.

The table below provides information about the participating interviewees.

	Country	Name and role	ORG	Stakeholder Group
1.	Germany	Prof Dr Matthias Leistner, LL.M. (Cambridge) Chair for Private Law and Intellectual Property Law with Information Law and IT-Law (GRUR-Chair)	Ludwig-Maximilians University, Munich	Academic expert
2.	Italy	Prof. Marco Ricolfi	Turin University Department of Jurisprudence	Academic expert & practitioner
3.	France	Prof Séverine Dusollier	Sorbonne University, Paris Sciences Po	Academic expert
4.	Poland	Prof Ryszard Markiewicz	Institute of Information and Library Science of the Jagiellonian University	Academic expert & practitioner
5.	Portugal	Mrs Patrícia Akester	Sérvulo e Associados	Legal practitioner
6.	The Netherlands	Mr Wouter Addink	Naturalis, Catalogue of Life, Leiden	Database owner/ Research database
7.	Romania	Anonymous		Commercial services databases
8.	Bulgaria	Anonymous		Legal practitioner
9.	UK	Anonymous		Research database

10.	EU	Drs Marian Lefferts, Managing Director	Consortium of European Research Libraries	Research databases
11.	France	Mr Arnaud Le Lann, General Manager	Euroleads	Commercial services databases
12.	Germany	Mr Stefan Brost	Bundesliga	Commercial services databases/Sport sector
13.	Poland	Ms Sybilla Stanislawska	Markiewicz & Sroczynski	Legal practitioner
14.	Germany	Prof Lion Hirth, Director	Neon-Energie	Research & Commercial services databases/Energy sector
15.	Romania	Mr Adrian Dragomir – Director, IT Department and Mr Cosmin Pinteă – Head of the Electoral Register Office	The Permanent Electoral Authority	Public sector / Electoral database
16.	The Netherlands	Prof Mr Dr Mireille Hildebrandt	Faculty of Science University of Nijmegen	Academic expert
17.	Slovenia	Mr mag. Tadej Ulčar, Sectoral Secretary	AJPES - Agency of the Republic of Slovenia for Public Legal Records and Related Services	Public sector
18.	Germany	Mr Frank Scholze	KIT Library	Public sector/University library
19.	Italy	Mr Michele Tessera	Gruppo CAP, Head of the Information Technology Dep.	Public utilities/ Water management

Table 1 Interviewees

Insights from the online survey and in-depth interviews

The in-depth interviews aimed to collect the opinions of those with direct experience with the Database Directive, whether as experts or practitioners. Additionally, it aimed to clarify a number of issues that emerged from the public consultation conducted by the European Commission and the online survey deployed as part of this project. Rather than providing a

definitive clarification on the aforementioned issues, the results of the in-depth interviews would appear to underscore the heterogeneity of opinions regarding the working of the Database Directive (in terms of perceived benefits or disadvantages). A tentative explanation for the persistent difference of opinions regarding the benefits or disadvantages associated with the Database Directive could be found in the extreme diversity of databases it addresses (diversity greatly enhanced by digitalization) and the many types and categories of stakeholders for which the Directive is relevant. Under such circumstances, the said differences would be unlikely to diminish, especially when taking into account technological developments expected to result in a further proliferation of databases.

The main issues that emerged from the three rounds of consultations are presented below:

1. In the category main advantages derived from / challenges posed by the Database Directive, opinions varied widely regarding:

- the effectiveness of the database right in controlling **extraction or re-use** of database content as compared to copyright, contractual terms (e.g. restrictive clauses) or technical means (encryption, password protection, captcha)

- the effectiveness of the Database Directive in preventing the **circumvention** of technical and other types of protection (e.g. contractual)

- the level of **protection** provided by the sui generis right as a promoter or barrier to innovation for the database industry and for users, in particular in relation to:

- **legitimate access** for and **use** by third parties
- legitimate access and use for educational/research purposes
- allowing entry to market of **new players**
- encouraging **free competition** rather than consolidating the position of incumbents/market leaders
- **competition from outside the European Union** (especially the United States)
- the perceived **benefits** to be derived from the sui generis right in terms of:
 - clarity of **ownership** for those wanting to use databases
 - possibility for database owners to charge **higher prices**
 - possibility for database owners to extract additional **licensing income**
 - protection against **use not authorised** by the database owner
 - ability to run the **chosen professional activity/business model**
 - potential to create (additional) **company value**
 - catalyst role for **(new) partnerships / collaborations**
 - **access to databases** by users and makers, databases that would otherwise not have been available/created

- the ability to **quantify the benefits** e.g. in terms of turnover or additional employees
- the ability to articulate the way in which the professional activity/business of the relevant stakeholders has been **affected** by the sui generis right, in terms of
 - more / fewer databases produced
 - more / limited access to data
 - more / fewer litigation activities
 - less / more complex licensing procedures
 - impact on the professional activity/business model
 - higher / lower costs (e.g. personnel, purchase of data, etc.).

2. More consistency of answers was noted in relation to the general **future trends** (technological and non-technological) the respondents indicated as relevant to databases in general and to the Database Directive in particular. The issues related to data storage, acquisition, access, sorting, re-use, security, privacy, Internet of Things (IoT), technology neutrality, standards; balancing of (new) interests of rights owners, open access, enforcement & oversight, litigation, liability. More specifically, they indicated the importance of:

- the impact of **digitalization & automation**
- the expected impact of **IoT**-related developments
- at a lower level of abstraction: **live data & machine-generated data** issues
- issues of **(deep)linking**, currently not explicitly addressed in the Directive but clarified via / addressed in the case law (Bestwater and Innoweb)

In the same category of general future trends likely to have an impact on the working of the Directive, respondents more notably referred to:

- the changing of the meaning of **'creation'** in the case of automatically generated databases (such as logging data, sensor data)
- changings in the **cost structure** (lower costs in the case of automatically generated databases; lower costs in updating data in dynamic databases; lower maintenance and data(base) storage/hosting costs, etc.)
- the new meaning and limits of EU protection in an increasingly **globalized digital and data-driven** world.

3. However, responses regarding the **overall satisfaction with the Database Directive** in its current form has once again displayed divergence of opinions, corresponding to those regarding the benefits/drawbacks respondents associated with the Directive and mentioned above.

- several respondents expressed mild to very strong doubts, especially regarding the impact through the **sui generis right**:

- its impact on the **reuse** of data

- if any, what would be a suitable **term for the sui generis protection** (currently it is 15 years as from the completion of the database)
 - the **legal certainty** it provides database makers and users (especially clarity regarding in which cases databases are protected and in which cases users' acts are licit).
- doubts have also been expressed regarding the balance between the **rights and interests** of rightsholders and users alike:
- comparisons were also made with the **US regime/protection system** which is regarded by some as preferable, if only because its simplicity.

4. The same diversity of opinions was recorded in the respondents' recommendations regarding **potential future improvements or changes** to the Directive. Simply summarized, they would fall in the following broad categories: keep unchanged/amend/improve/ repeal. However, such categories do not reflect the richness of the respondents' answers. Especially in the categories amend/improve, more nuance can be revelatory and perhaps more useful. To this end, we are providing below a selection of suggestions made by respondents:

- Repealing only the sui generis right
- Amendments to the distinction between online/offline databases
- Amendments to the distinction between databases made for own use / for public / for commercial use
- Amendments to (semi-)automatically generated data(bases)
- Addressing the needs of different sectors separately/specifically
- Expanding the scope of protection to other value-creation activities, currently not included
- Clarifying the relation to other data rights (such as protection of personal data)
- Clarifying terminology (such as what constitutes a 'database', 'substantial investment', 'quantitative and qualitative part of the database')
- Clarifying the distinction between copyright & sui generis right
- Clarifying the meaning of re-use of data
- Making the registration of databases mandatory in order to enjoy the sui generis right
- Addressing specific needs of SMEs
- Simplifying the terminology
- Providing additional guidance for the interpretation and implementation of the Directive
- Ensuring pan-EU harmonization of the interpretation and implementation of the Directive

- Ensuring pan-EU harmonization of the interpretation and implementation of the exceptions: e.g. use for educational, research, public safety, administrative and judicial procedures
- Having a fair-use exception instead of a closed list of exceptions
- Reducing the scope of abuse of the 15-year sui generis right protection which can, in some case, become de facto perpetual through minor/automatic updates to databases (dynamic or otherwise)
- Reducing the scope of (perceived) abuse of proprietary rights
- Reducing the scope of (perceived) abuse of database claims
- Reducing the scope of potential abuse of contractual or other terms to undermine the Database Directive protection rights as they might create certain problem(s) e.g. competition downstream not possible, no derivative/new databases created because of that (especially relevant for users) (in particular related to the Ryanair case)
- Recognizing other types of activities deserving protection under the Database Right
- Including other types of (pan-EU harmonized) exceptions linked to recent technological developments (e.g. text and data mining)
- Making consistent/removing conflicts with other EU legislation and policy priorities (e.g. data protection, re-use of public sector information, open access, digital single market, data economy package, etc).

5. As a final remark, it should be noted that some of the interviewees expressed either confusion between the Database Directive and the **General Data Protection Regulation (GDPR)** or concern about how some of the requirements of the GDPR are to be reconciled with those deriving from the Database Directive.

"Workshop Report" (Study Annex 5)

Organisation

On 21st November 2017, a workshop was conducted in the context of the study on the legal protection of databases. The ultimate objectives of the workshop were two-fold. It aimed, firstly, to collect further evidence on the impacts that the Directive 96/9/EC has been having on the database users and/or makers; and, secondly, to discuss the preliminary analyses made based on the evidence already collected (through a dedicated online survey, interviews, and the public consultation that the European Commission organised).

The participants were selected jointly by the Consortium and the European Commission, along with the following principles:

- Privileging the presence of representatives from business organisations (instead of representatives of single companies); and,
- Limiting the attendance of legal experts (academic experts and legal practitioners).

Furthermore, attention was paid to build a sample that was as much representative as possible in terms of geographical location, types of databases used and/or produced, sectors, and types of activities in relation to databases (creation or use, provision of data analytical tools, advocacy for open science).

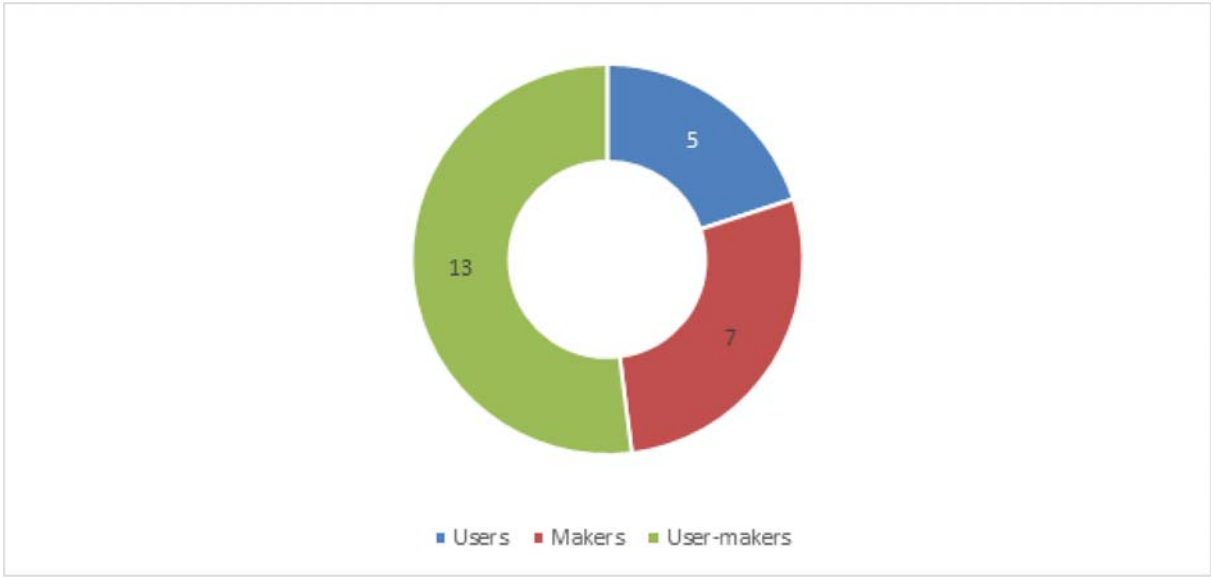
Invited organisations were found through desk research, by looking e.g. for representatives of publishers, libraries, organisations advocating open data, or public utilities involved in projects involving management of databases (e.g. smart metering of water/electricity consumption). Respondents to the public consultation organised by the European Commission on the same topic were also invited, if they had expressed interest in being further involved and if their contribution was deemed worth further elaboration. For the same reason, some respondents to the online survey managed by JIIP for the purpose of the study were contacted again. However, it was agreed with the European Commission that the organisations that had participated or would participate in the in-depth interviews conducted in the context of the same Study will not be invited to the workshop to avoid giving more weight to their insights. In consequence, organisations that could not participate in the workshop due to unavailability (e.g. KIT Library/re3data) or because organisations from the same sector were already represented (e.g. the German Football League) were given the opportunity to be interviewed.

In total, 47 invitations were sent and accompanied with a Letter of Endorsement from the European Commission in attachment. Up to three reminders were sent out, and some organisations (mostly those from sectors that were underrepresented so far) were called directly. Ten invited organisations declined mostly due to unavailability on the day of the workshop, and lack of official position or insufficient knowledge on the legal protection of databases.

The participants in the Workshop were 27, coming from **25 participant organisations** (two of them had two representatives¹; i.e. Federation of European Publishers and the SROC – Sports Rights Owner Coalition).

The organisations to be considered as solely user or maker were few: **five ‘user’ organisations** (estimation) and **seven ‘maker’ organisations** (estimation). The rest of the participants represented hybrid organisations, which have an extensive use of databases while producing databases for their own business or activities (estimation of 13)².

Figure 2 – Organisations break-down



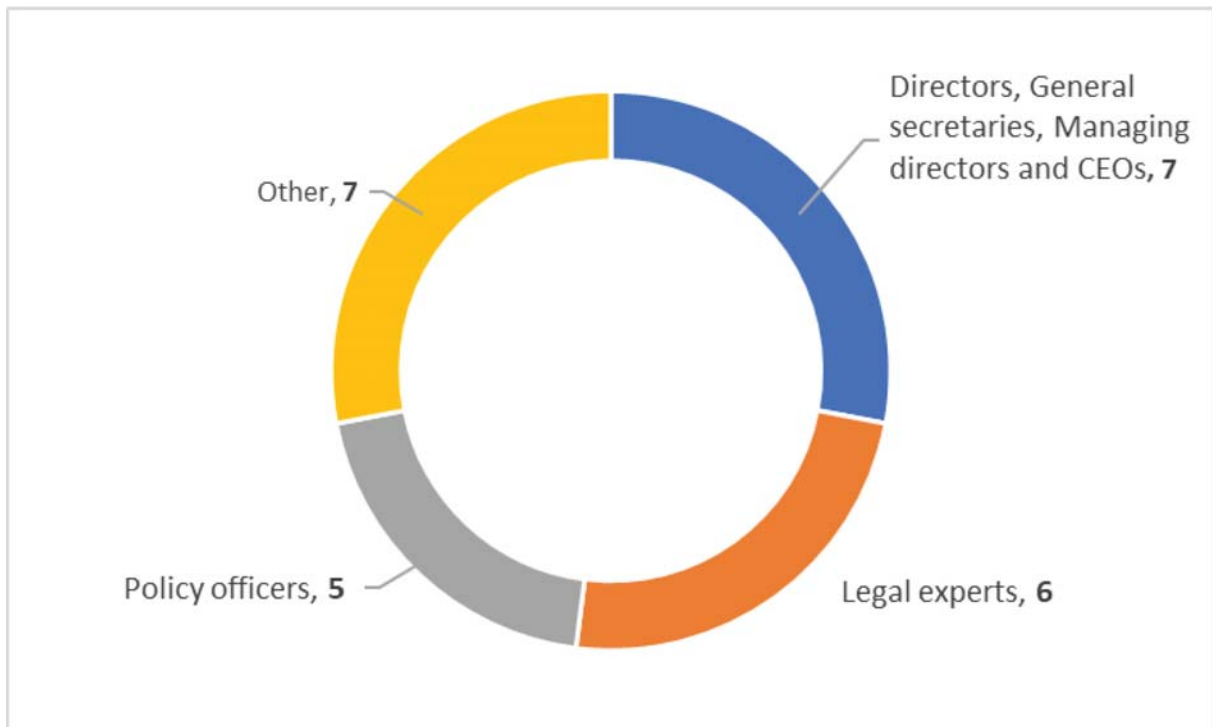
Source: Workshop statistics.

Regarding the **professions of the participants**, several among them have a management role in their organisations (at least seven of them were **Directors, General Secretaries, Managing Directors and CEOs**). Some others (six) were legal advisers. The rest of them had a policy profile (five policy officers) and **experts** in several fields related to the Database Directive (e.g. in EU Policy, ITS projects, R&I) and other.

Figure 3 – Profession of the participants

¹ These representatives were treated as single participants, following the principle of one organisation one voice. In consequence, they seated in the same groups, and were not given twice more time to express themselves than the others.

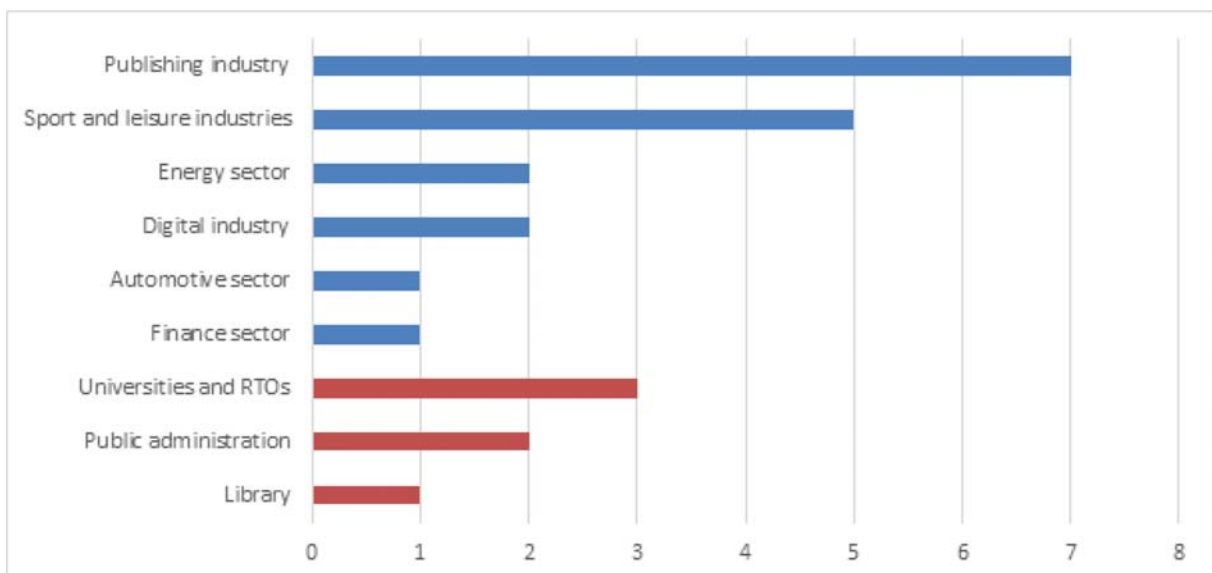
² The break-down has been made by the participants self-declaration and the Study team estimation.



Source: Workshop statistics.

Regarding the **sector** to which the organisations belong, most of them were representatives of the private sector: seven are related to the publishing industry, five others to the sport and leisure industries, two to the energy sector, two to the digital industry, one to the automotive industry and one to the finance sector. The rest came from the public sector: three universities and research centres, two from public administrations and one library representative.

Figure 4 – Participants per sector of activity

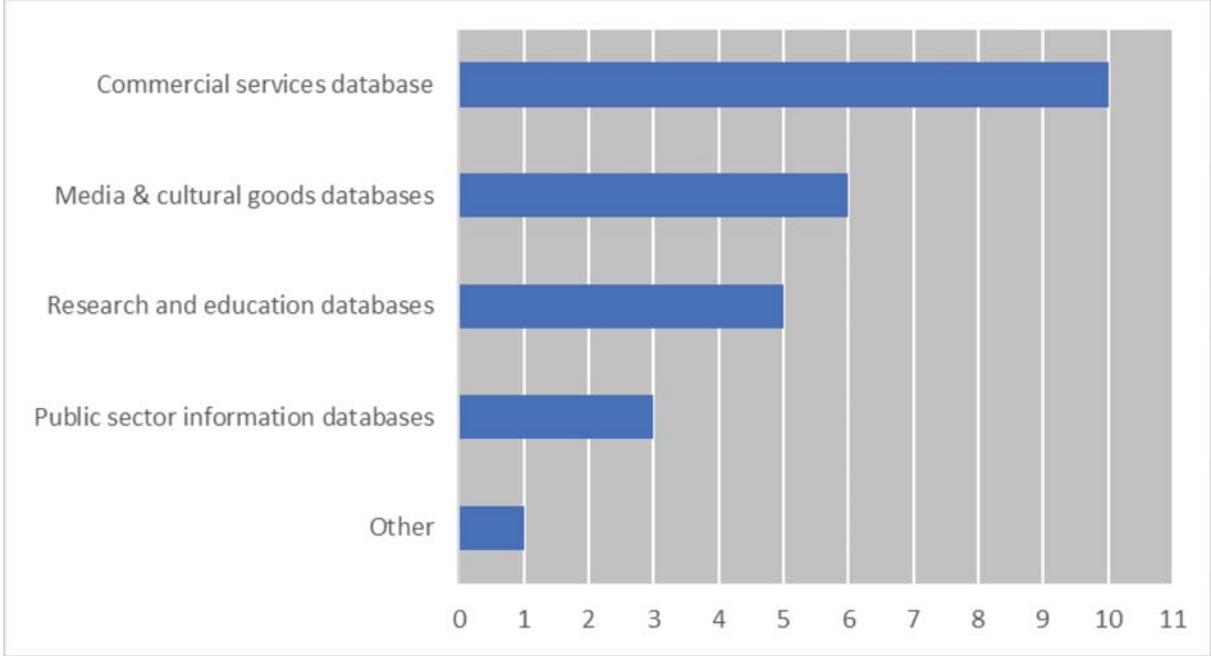


Source: Workshop statistics.

About the type of database, ten participants represented organisations using and/or producing **commercial services databases**, six **media & cultural goods databases**, five **research and**

education databases, and three **public sector information databases**. Finally, an additional stakeholder provides and develops **Big Data analytic tools**, and deals with multiple types of databases, so it is not relevant to this break-down.

Figure 5 – Participants per type of database



Source: Workshop statistics.

The **majority of the participant organisations** (15) also **answered in the public consultation** organised by the European Commission during the summer 2017 on the legal protection of databases³. By contrast, **only three of them also answered the survey** designed in the context of the Study.

Table 2 – List of represented organisations

Organisation	
Communia	IFPI
Deutsche Börse AG	Infogreffe
DIGITAL EUROPE	LERU
DILICOM	LIBER Europe
EBLIDA	Municipality of Iraklio Attikis
Eesti Energia	News Media Europe
EMMA	Romax Technology
EuroGeographics	SROC
European Publishers Council (RELX Group)	STM Association

³ Public consultation on the Database Directive: Application and Impact, https://ec.europa.eu/info/consultations/public-consultation-database-directive-application-and-impact-0_en

European University Association	The European Lotteries
Federation of European Publishers	Trustworthy model-aware Analytics Data platform
FIGIEFA	Wikimedia
Football DataCo Ltd	

Approach/methodology

Introductory session

Giuseppe Abbamonte, Director for Media Policy at the European Commission, opened the event with a welcome speech. Robbert Fisher, Managing Director of JIIP, then made a short presentation about the topic and purpose of the Workshop. Professor Lionel Bently introduced the basics of the Database Directive and the related legal issues (including the *Ryanair* case). Finally, Alfred Radauer presented intermediary results of the economic analysis conducted as part of the Study on the legal protection of databases (prepared with the support of the responses already received from the online survey).

The topics to be discussed

During the workshop, the participants were divided in small groups: in four groups for the morning session, in three for the afternoon session.

Group members were asked to express and confront their opinions, based on their respective experience, on three themes related to the legal protection of databases via the Database Directive:

- a) Means of database protection and usage behaviours (theme 1);
- b) Economic impacts of the Database Directive (theme 2);
- c) The future of the Directive (theme 3).

The organisation of the group discussion was designed in order to collect the contributions of all participants for each of the three themes. Each moderator had to ensure that all group members had the opportunities to air views, and that no important issues were overlooked. For this reason, each theme had two posters to complete: one for the morning session and one for the afternoon session. The posters listed the main issues to be discussed, and participants were invited to write down their related view on notes and to stick them on the poster.

Each group had the opportunity to discuss one theme for 30 minutes. Twice, once the timeslot of 30 minutes expired, moderators, recorders and theme posters moved to the following group,⁴ which was then asked to discuss other themes related to the legal protection of databases.

Issues discussed during the group discussions

⁴ As the morning session was rescheduled, due to the fact that two themes were overlapping and had been merged, the participants have discussed only three of the pre-defined (four) themes during the morning session.

Means of database protection and usage behaviours (theme 1)

Level of understanding and reliance, and any change noticed?

- What do participants understand to be the meaning of the different means of protection?
- How are they using it in their environment (as maker and or user)?
- Why have they decided to rely on specific means instead of others?
- Did they notice any recent changes in the choice of database protection measures, for instance, reliance on technological protection measures and contractual terms instead of using the sui generis right? What are the drivers of these changes?

Comparison of means of protection

- Can participants draw some comparisons between different means of protection? (particularly between the sui generis right and copyright)
- Have they encountered any problem with this sui generis right? Did these problems relate to determining:
 - Whether something is a database or not?
 - Whether it is legally protected or not?
 - Who owns the sui generis right?
 - Whether particular uses infringe the sui generis sui generis right?

What has been the impact on your organisation or your use? (not economic impact)

- Did participants notice any significant impact on their organisation (besides economic ones) due to the adoption of specific means of protection, instead than others?

Economic impacts of the Database Directive (theme 2)

Costs-benefits analysis

- Have some means of protection had an economic impact on your database sector?
- What have been the impacts of the legal protection of databases on:
 - Level and type of investments in databases?
 - Level of database production?
 - Revenues generated from database-related activities?

Impact of the Ryanair case

- What have been the main change in participants' database sector since 2005, if any?
- How did these changes and the means of database protection influence each other?
- Experienced any changes related to:
 - Their investments in and production of databases?
 - Their organisation (general terms)?
 - The market(s) in which they operate?

Database Directive and current trends in the database economy

- Incidences of the growing Internet of Things (IoT)
- Incidences of the expansion of Open Data

- Other major trends in the database economy (e.g. issues of deep linking, whereby a link is provided directly to specific contents of an online database)

The Future of the Directive (theme 3)

No change

- Is any participant in favour of not changing the Database Directive and leaving the level(s) of protection as they are?

Changes to the Database Directive (general)

- Clarifying terminology and providing additional guidance
- Distinguishing between databases made for personal/private/internal public and commercial uses
- Amending copyright or sui generis right in response to (semi-) automatically generated data(bases)
- Expanding the scope of protection to other value-creation activities, currently not included
- Increasing harmonisation of copyright protection under the Database Directive and the Information Society Directive

Specific changes to the sui generis right system

- How could the system of legal protection of database be improved?
- Maintaining the sui generis right as it is, but:
 - Introducing mandatory registration;
 - Aligning it more closely with copyright;
 - Aligning the exceptions regimes of copyright and sui generis right.
- Strengthening the sui generis rights by:
 - Extending 15-year period;
 - Extending protection to investment in the creation of data;
 - Extension of the scope of the protection.
- Narrowing the sui generis right:
 - Adding exceptions;
 - Adding compulsory licences (e.g. for sole source databases);
 - Reducing 15-year period.
- Abolishing the sui generis right
- Are your proposed changes absolutely necessary and therefore urgent or less urgent because they only require fine-tuning?

Purpose of the sessions

The workshop was designed to help identify the main issues in relation to the legal protection of databases, including the most pressing identified issues, as experienced and judged by the relevant groups of stakeholders.

The workshop consisted of a mix of plenary and group sessions. All participants were gathered for the welcome and conclusion speeches and the final wrapping-up session. However, they were divided in group in one morning and one afternoon sessions to discuss the aforementioned themes. These sessions had different purposes:

1. Morning group session: open discussion on the four themes to identify the main issues;
2. Afternoon group session: reflection on the outcomes of the morning discussions, and ranking of the issues;
3. Wrap-up session: sum-up of the main outcomes of the group sessions and last debate with the whole audience.

Morning group session

The morning session was designed as an open discussion during which all participants were encouraged to express their opinion on four themes.

At the very beginning of the group discussions, the moderators explained the topics that were to be discussed, invited the participants to identify and elaborate on the main issues, and sought to interrogate their points of views. Once a participant expressed an opinion, the moderator and the recorder asked to him/her to report it on a post-it note to be stuck on the poster.

During the following group discussions, the moderators once again introduced the theme and briefly summed up the outcomes of the previous group discussion(s) and invited participants to react and reflect on them.

Afternoon group session

The afternoon group session followed a similar organisation to the morning one. At the beginning of each group discussion, the moderators briefly reminded the participants of the outcomes of the discussions from the morning and of the main issues that were then identified.

Where possible and appropriate, participants were asked to rank these issues and ideally to reach a consensus in this respect. The main outputs were then written on post-it notes and placed on blank posters. Participants confronted their respective points of view and were helped by the moderators to find a consensus.

During both sessions, the recorders took notes in an attempt to keep track of the contributions of the different stakeholders and later transcribed the outcomes of the discussions.

Final wrap-up session

After the afternoon session, the key experts of the Study team (Lionel Bently, Estelle Derclaye and Alfred Radauer) summarised the main outcomes of the (morning and afternoon) group sessions and identified the most controversial issues (also the most interesting ones for the study). After briefly reflecting on them, they invited the audience to react and to raise issues cross-cutting the different group of stakeholders.

Change in the topics and group participant allocation

The Workshop was conceived as having four themes for discussion: 1) the means of protection employed by the participants' organisations (theme 1: Means of database protection); 2) an overview of the behavioural aspects in benefitting from these means of protection (theme 2: Usage behaviours); 3) the cost-benefit assessment for each of them (theme 3: Economic impacts of the Database Directive); 4) suggestion and wished modifications in view of the Database revision (theme 4: The future of the Directive).

During the progress of the morning session, the Study team agreed with the European Commission on merging themes 1 and 2 for the afternoon session. The first discussions showed participants giving similar contributions in both themes, as the two themes were mostly overlapping. For the same reason, participants in the afternoon session were divided in three groups, instead of four as previously planned.

Role of moderators and recorders

The discussions for each theme were guided by one moderator and one recorder from the consortium member organisations.

The moderators attempted to ensure that:

- All participants contributed to the conversation by expressing freely their opinions;
- The conversations did not deviate from the theme;
- The timing was respected; and,
- All questions were addressed.

The recorders assisted the moderators and took note of the discussions. Both moderators and recorders invited the participants to stick post-it notes on the theme posters.

Conclusions

Overall impression

The positions between users and makers were quite polarised especially on possible policy changes. In simplified terms, users want to get rid of the sui generis right and makers don't want it to change and creators of data (e.g. sports organisations) want sui generis right to extend to created data. But there are also areas of consensus.

Points of dissent

More specifically, the opinions differ across types of organisation:

- There are the commercial database publishers, who make and make available databases. For these participants, legal protection is important. They would not invest in the creation or maintenance of databases without adequate legal protection. At present, they use a variety of mechanisms which includes the sui generis right. They

regard this as important in addition to technological protection, contract and copyright. They operate outside the EU without a sui generis right, but say that doing so is more complex, and that in many cases copyright is more generous outside the EU. To this group, maintaining the status quo would be the most important outcome of the review.

- In contrast, public and community creators of database, and public users of databases (libraries, educational and research institutions) find the regulatory environment unnecessarily complex and burdensome. Many makers do not want to automatically acquire sui generis right. Many users find navigating sui generis right, copyright, contract to be a real drain. Many of these would like to see the sui generis right abolished so as to simplify the landscape.
- Outside these two communities, there are other parties with different positions. The sports organisations favour greater protection of sports data, including extending protection back to created data. They get some support from some of the commercial publishers. Others, such as the gambling industry, oppose this. Many recognised this would create other problems, including for the public circulation of information (comparative advertising), and importantly for innovation more generally. Particular concerns were raised as to the impact of protecting created data on innovative technologies.

Points of consent

Points of consensus were:

- All types of protection are generally used to protect databases because they are complementary, but the sui generis right is the preferred one for makers as it binds everyone – contracts do not and TPMs can be circumvented. Copyright only protects the arrangement and selection of data. Copyright is not such a hindrance or complex to understand for all participants; users, makers and maker/users find it more or less equally easy to navigate and would not change it. However, many said it could be streamlined and the exceptions could be aligned with those of the Information Society Directive, though not all may be relevant, and it should be carefully checked which ones should be aligned.
- Not all provisions of the sui generis right are clear (even with the case law of the CJEU) e.g. notions of: database, substantial (investment), database maker, status of spin-off databases, and it is not clear whether the sui generis right applies to new types of databases such as machine-generated/IoT ones and who owns the data so generated. Thus, it would be good if those areas could be clarified.
- Many thought that there should be an opt-out mechanism such as mandatory registration to benefit from the sui generis right
- Many highlighted the value of having a harmonised framework (i.e. copyright and a sui generis right in the directive) over the un-harmonised one – i.e. contracts – a harmonised framework lowers costs and legal uncertainty for everyone involved. This

favours the retaining of the sui generis right, though in a modified and clarified form.

- Finally, it may be worth tailoring the sui generis right depending on the industry sector. Some sectors are more hit by competition issues such as the automotive and energy markets; compulsory licences could be useful in these types of industry.

Economic dimension

Participants mostly relied on their professional experience and to some extent also on anecdotes to support their views on the economic impact of the Database Directive. Their accounts have not been supported with quantitative evidence (e.g. turnover, creation of employment) and most of them acknowledge that such evidence might not be available, or it is difficult to obtain. The major issues discussed by the participants were:

- **Legal uncertainty affecting investments, data exploring and infringement.** Generally speaking, legal uncertainty was considered by all parties to be a negative issue driving costs for enforcement. In particular, issues were seen in the group of user-makers of databases, mostly because of costs associated with clarifying/clearing the rights when trying to access other databases for re-use; or a statement which suggests that European partners in international research consortia might be at an economic disadvantage, again because the databases used/produced by them must be ‘cleared’ of Database Directive issues / respective issues clarified. These examples were also used as major points arguing for the claim that the Database Directive – specifically the sui generis protection, as this is seen as the European ‘speciality’ no one else has – may actually hinder the development of databases (in terms of investment and innovation).
- **The economic rationale for the sui generis right**, which a group of participants believe neither to be solid nor backed up with by economic evidence – for example, with data on databases that would not have been created if there were no Database Directive, or with respect to an analysis of the occurrence of piracy/infringements of the sui generis right.
- **Nevertheless, the sui generis right was seen as a beneficial legal framework for companies to help them secure investment in databases by some database owners.** Examples of databases were provided – for example with respect to old pieces of culture/literature – where the database owner would not have made the (same amount of) investment if they were not confident that the rights were protected by the Database Directive.
- **The contrasting needs of different business sectors and activities.** It became clear during the workshop that the general database framework met with very specific situations in different industries. For example, start-up industries – where rules and ways of doing business have not yet been established – may be unfavourable for an application of database protection, as it might hinder access to original data that is needed to create new business models.

- An overall point addressed by many is lack of awareness of the existence of database protection which could constitute a hampering factor for usage and/or enforcement purposes.

The role of case law / landmark decisions: The Ryanair case has not influenced participants. However, they acknowledge that this might be because the indirect implications of this case are not sufficiently known. Other CJEU cases have not influenced them either except the 2004 decisions and *Football Dataco* which have reduced the scope of the right for sports organisations.

Steps forward and creative thinking: It seems difficult to reconcile the opposing views particularly, but then again there may also be opportunities here for considerable creative thinking. Three ideas stood out, against the backdrop of what was stated above:

- Complexity of multiple systems for users can be reduced if greater coherence and consistency is introduced, particularly with respect to exceptions. Many supported the idea that the same exceptions should be available with respect to database copyright and other copyright; and some that exceptions to the sui generis right should also be aligned. From a user perspective, this could make the multiple layers of rights less costly and less intimidating. In some cases, exceptions might even be reframed as ‘user rights’, thus ensuring that they could not be overridden by contract – even if the use was of a database that was not or was no longer protected.
- Concerns that the coverage of the EU system is unnecessarily broad might be met either by excluding certain types of investor/investment/creator (such as publicly funded institutions) or by the creation of ‘opt in’ or ‘opt out’ mechanisms. The advantage of these approaches is to provide clear protection to those who really care/need protection for their investments via a sui generis right. At the same time, it relieves the burden from those who do not want such protection, and guides users as to which databases fall into which categories:
 - **Opt-in mechanisms** might include a registration system, according to which database makers who consciously invest on the basis of protection register their database with an EU authority (such as the EUIPO), gaining 15 years protection from registration. Unregistered databases would fall into the public domain. One additional advantage that would flow from this is that the public could find out when rights in a database expired, which currently may be problematic. A less bureaucratic version might be to require a notice along the lines of ‘Database right, Football Dataco, 2020-2035’. However, when discussed it was recognised that problems might arise from third party re-use of databases that did not include the notice. Advantages would also occur if the purpose were to track economic effects, as owners of rights would become centrally identifiable and the rights countable.
 - **Opt-out mechanisms** could take a similar form. Community or public bodies that made databases would be able to indicate the public domain status, either through notice or registration.

- Concerns over whether the sui generis right can, or should, protect ‘created’ as opposed to ‘obtained’ data were controversial, it also being recognised that the distinction is not always easy to understand. One proposal was to abandon the distinction and offer protection to any database that is the sole purpose of investment (excluding spin off databases). More interesting, perhaps, was discussion as to the possibility of compulsory licensing of created data on ‘FRAND’ style terms. It should be said, however, that such an approach was only endorsed by a few participants, others highlighting a host of problems.

ANNEX 4: SELECTED BIBLIOGRAPHY

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ANNEX 5: LEGAL SOURCES

EU Directives

Directive (EU) 2017/1564 on certain permitted uses of certain works and other subject matter protected by copyright and related rights for the benefit of persons who are blind, visually impaired or otherwise print-disabled and amending Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society

Directive (EU) 2016/943 of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure

Directive (EU) 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information

Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society

Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases

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France:

Précom, Ouest France Multimedia v Direct Annonces, Court of Cassation (Cass.), 1st civ. (5 March 2009)

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Germany:

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Netherlands:

ABR v S n. 07/786, AMI 2009-6 (29 April 2009) (College B&W Amsterdam/Landmark)

ANNEX 6: RESEARCH QUESTIONS

Effectiveness

- Has the Database Directive eliminated the differences between Member States in the legal protection of databases?
- Has the Database Directive stimulated the investments into the creation of databases?
- Has the balance between the legitimate interests of manufacturers and lawful users of databases been safeguarded?

Efficiency

- What are the key factors explaining the mixed performance of the Database Directive?
- Is the scope of the Database Directive still limited?
- What are the key sources of legal uncertainty of the Database Directive?
- How does the Database Directive compare and interact with other protection mechanisms?

Relevance

- Is the Database Directive still relevant today?
- Does the sui generis right apply to machine-generated databases?
- What would be the consequences if the current sui generis right would extend broadly into the data economy?

Coherence

- Is the Database Directive well aligned with the PSI Directive?
- Is the Database Directive well aligned with Open Research Data policies for research activities?
- Is the Database Directive well aligned with other relevant copyright acquis?
- Is the Database Directive well aligned with Trade Secret Directive?

EU added-value

- Is the Database Directive necessary in the Digital Single Market context?