



## **Economic Impacts of the Proposed European ePrivacy Regulation**

**Spring 2018**

The proposed ePrivacy Regulation (ePR) currently being discussed in Brussels is potentially costly, definitely confusing, and likely to reduce investment and innovation across the EU. In fact, it could cost European businesses up to €551.9 billion annually in reduced turnover, alongside broader economic losses of up to €58 billion a year, and the potential impact will extend far beyond the technology sector. Businesses in all industries are at risk of disruption and uncertainty since they all rely on data and electronic communications to some degree.

These findings, and more, are shown in a new report commissioned by the Developers Alliance and produced by the independent economic consultants at London Economics. While the Developers Alliance strongly supports data security and developer practices that promote user trust, the ongoing debate over government-imposed data legislation must take into account their far-reaching effects and seek to mitigate unintended consequences. The Developers Alliance tasked London Economics to test our hypothesis, speak with industry, and provide their independent assessment on the cost of this Regulation.

The predicted scope of the ePR, both in terms of economic cost and the sectors affected (which is to say, all of them) is an obvious reminder of the importance and ubiquity of the use of data in today's products and services. This is not an issue confined to the technology sector and sectors adjacent to it. Virtually every business and every industry relies on the collection and use of data; either directly, through their vendors and partners, or through the very products they sell. Data is used to monitor and respond to problems, to identify improvements, to create new products and services, to build new capabilities, and ultimately to generate revenue. Legislation that restricts the flow of data reduces economic growth, eliminates European jobs, and stifles European innovation.

The London Economics' analysis indicates that one impact of overbroad regulatory reach is a potential reduction in service quality. For example, the collection of pseudonymized data (that is, data that is collected in bulk and not traced to any individual) is fundamental to troubleshooting and service improvements. Consider the analyses of mobile networks, a dynamic and high-penetration market that is subject to service interruption and congestion. The use of metadata can identify problems before they manifest, preserving vital telecommunications links for consumers, businesses, and government services alike.

Beyond service improvements, the study looked at the use of pseudonymized data in analytics to allow for advanced targeting and marketing for products and services. Not only does this provide a better experience for the user and efficiencies for the business, but it is also an important model for a growing number of startups and emerging services. Barriers to this data use would mean a worse experience for the end users, and will force some emerging SMEs out of the market

The negative impacts of extensive legislation are compounded where the rules are unclear and tangled with other regulatory regimes – something the study participants particularly fear. Just the prospect of disruption creates a freezing effect on businesses. Uncertainty prevents investment in new improvements, new products and new services, slowing growth and innovation. Uncertainty stifles new businesses that can no longer secure funding. Investment requires predictability and stability, and the consequences of expansive legislation threatens both.

Worse still, imprecise and overly broad regulatory definitions cause unintended consequences, another concern study participants highlighted. The current iterations of the ePR are primarily written from a business-to-consumer (B2C) perspective in order to safeguard end users. As proposed, however, the impact would apply to other electronic communications as well, including business-to-business (B2B) and machine-to-machine (M2M). Consider the supply chain and logistics sector, and a truck driver in a vehicle fleet where data is used to optimize routes, fuel use, and vehicle maintenance. In addition, policy makers have failed to reflect the complex relationship between the truck manufacturer, the fleet company leasing the vehicles, the shipping company, the client whose goods are being shipped, and the driver - and how the roles of these various players are reflected in the proposed rules.

Participants also found it easy to imagine the impact beyond just the supply chain sector. The use of data is fundamental to the growth of semi-autonomous vehicles, on the eventual path to fully autonomous vehicles. This raises issues over the collection of user inputs, location data, electronic communication of that data, and who in the increasingly complex M2M ecosystem is responsible for what under the ePR.

Ultimately, the scope of the ePR's impact is limited only by one's imagination, as any number of future industries will be subject to this Regulation. The economic costs presented in the report only cover existing businesses, while the theoretical costs are much higher. More than just economic consequences, the use of data in sectors as diverse as smart cities (to manage traffic and reduce pollution), smart agriculture (to maximize yields and protect the environment), and the Internet of Things (IoT) must ultimately be considered.

The Developers Alliance welcomes the discussion over the best ways to protect consumers and businesses alike. As part of that conversation, we encourage all parties to consider the risk of billions in lost economic productivity and the impact on current and future businesses in all sectors and industries, alongside the Regulation's implied goal of giving consumers more influence in how data is collected and used.

We hope this report will add richness to an important dialogue that will ultimately impact all Europeans.

Bruce Gustafson  
President/CEO, Developers Alliance



# Economic impacts of the proposed European ePrivacy Regulation

Report to the Developers Alliance



**LE**  
**Europe**

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Our membership includes a global network of tens of thousands of developers with diverse skills, expertise, and interests, and hundreds of companies that depend on and work with developers.

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# 1 Introduction

## Box 1 Summary: ePR state of play

The ePR has a dual function serving as *lex specialis* to GDPR and creating rules that are additional to the GDPR or have a different scope. As the ongoing discussions at the policy level show, considerable uncertainty persists about the scope and content of the Regulation. Key issues include the alignment between ePR, GDPR and EECC, the applicability of confidentiality protections to M2M communication, possible alternatives to consent for processing personal data (contractual necessity, legitimate interest and purpose compatibility<sup>1</sup> for further processing), and whether access to website content can be made conditional on the acceptance of cookies.

The telecommunication sector has experienced deep changes in the last decade. Telephony and other traditional communications services are competing with online-based electronic communications services such as Voice over IP, instant messaging and web-based e-mail services (Over-the-top communications services). As a consequence, the European Commission undertook a review of the European Regulatory Framework for the telecommunications sector to ensure compliance with the scope of Art. 7 and Art. 8 of the Charter of Fundamental Rights of the European Union on the privacy of communications and data protection. This process of modernisation led to the approval of the new General Data Protection Regulation (GDPR) - which will come into effect on May 25<sup>th</sup>, 2018 - and to the Proposal by the European Commission of a new European Electronic Communications Code (EECC, 2016). Within this broad reforming process, the European Commission has proposed a new European ePrivacy Regulation, which aims to update the provisions of the ePrivacy Directive (2002) to ensure consistency with the new Regulatory Framework.

## 1.1 State of play

On January 10<sup>th</sup>, 2017, the European Commission published the proposals for the new ePrivacy Regulation aimed at repealing the current ePrivacy Directive (2002). In February 2017, the proposal and the impact assessment were presented to the Working Party on Telecommunications and Information Society in the Council and have been subject to an article-by-article analysis. At the European Parliament level, on October 19<sup>th</sup>, 2017 the lead LIBE committee adopted its report, together with the mandate to start interinstitutional negotiations. The mandate was confirmed by a vote in the Plenary Assembly on October 26<sup>th</sup>, 2017.

The following analysis refers to the draft as amended by the European Parliament and adopted in the interinstitutional negotiations (henceforth the amended text will be referred to as ePR).

In the time this analysis has been performed, negotiations were carried out and amendments were proposed by the European Council. For completeness, these amendments will be included in the following summary of the legal framework established under the ePrivacy Regulation.

<sup>1</sup> in line with Article 6 of the GDPR)



**Table 1** State of the play

|      | European Commission Proposal | European Parliament Reading* | European Council Reading* | Adopted | Come into effect from:  |
|------|------------------------------|------------------------------|---------------------------|---------|-------------------------|
| ePR  |                              |                              |                           |         | <i>Under discussion</i> |
| GDPR |                              |                              |                           |         | <i>25/05/18</i>         |
| EECC |                              |                              |                           |         | <i>Under discussion</i> |

Note: \*If the text is amended by either the European Parliament or the European Council a second/third reading is necessary.

## 1.2 Overview of the ePrivacy Regulation

The ePrivacy Regulation deals with the confidentiality of electronic communications and data protection. This means that overlaps exist between the scope of the ePrivacy regulation and the General Data Protection Regulation: while some provisions of the ePR particularise the GDPR – functioning as a *lex specialis*, so that provisions in the ePR prevail over those in the GDPR – others complement it, i.e. the ePR creates rules not otherwise established in the GDPR or not within the same scope. In absence of the ePR provision, no other rule to protect the privacy of electronic communications would apply. A summary of the relationship between the GDPR and the ePR is provided in Table 2 and Table 3.

**Table 2** The scope of the ePrivacy Regulation and the General Data Protection Regulation

| Regulation                                | Material scope   | Territorial scope            | Subjects                               |
|---|--|------------------------------|--|
| <b>ePrivacy Regulation</b>                | The processing of electronic communications data carried out in connection with the provision and the use of electronic communications services and to information related to the terminal equipment of end-users (Art. 2 ePR)         | European Union (Art. 3 ePR)  | Natural and Legal Persons (Art. 1 ePR) |
| <b>General Data Protection Regulation</b> | The processing of personal data wholly or partly by automated means and the processing other than by automated means of personal data which form part of a filing system or are intended to form part of a filing system (Art. 2 GDPR) | European Union (Art. 3 GDPR) | Natural Persons (Art. 1 GDPR)          |

Source: General Data Protection Regulation and ePrivacy Regulation

**Table 3** Relationship between the ePrivacy Regulation and the General Data Protection Regulation

|  |  |            |
|--|--|------------|
| <b>The ePR particularises the GDPR on:</b> | The protection of electronic communication data that qualifies as Personal Data  | Art.5 ePR  |
|  | The processing of electronic communication data that qualifies as Personal Data  | Art. 6 ePR |
|  | The storage and erasure of electronic communications data  | Art.7 ePR  |
|  | The processing and the access to the storage capabilities of the terminal equipment and the collection of information from the end-user's terminal equipment that qualifies as Personal Data | Art. 8 ePR |
|  | The protection of electronic communication data that does not qualify as Personal Data   | Art.5 ePR  |

|   |   |             |
|---|---|-------------|
| <b>The ePR complements the GDPR on:</b> | The processing of electronic communication data that does not qualify as Personal Data  | Art. 6 ePR  |
|   | The processing and access to the storage capabilities of the terminal equipment and the collection of information from the end-user's terminal equipment that does not qualify as Personal Data | Art. 8 ePR  |
|   | The requirements for specific types of software to have a specific privacy setting available  | Art. 10 ePR |

Source: General Data Protection Regulation and ePrivacy Regulation

The ePrivacy Regulation is designed to make consent the “central legal ground” for the processing of electronic communications data, the access to end users’ terminal devices and the sending of direct marketing communications<sup>2</sup>.

The ePR follows the GDPR<sup>3</sup> in its definition and conditions for consent release: a statement or a clear affirmative action is required to qualify as valid consent. Affirmative actions can consist of ticking a box on a website, “choosing technical settings for information society services”, or “another statement or conduct” that clearly shows the data subject is consenting to their data being processed. “Silence, pre-ticked boxes or inactivity”, on the other hand, do not constitute valid consent. The burden of proof that consent was obtained lawfully according to these principles rests with the data controller (Art. 7(1) GDPR).

The ePrivacy Regulation establishes consent requirements for:

- The processing of electronic communication data (Art. 6(1) ePR), electronic communications metadata (Art. 6(2) ePR) and electronic communications content (Art. 6(3) ePR) – the processing is otherwise allowed on the legal basis provided at Table 4;
- The processing and access to the storage capabilities of terminal equipment and the collection of information from end-users’ terminal equipment (Art. 8(1)) – the processing, access and collection is otherwise allowed on the legal basis provided at Table 5<sup>4</sup>;
- The inclusion of personal data into publicly available directories (Art. 15 ePR); and
- The use of electronic communication services for the purpose of sending direct marketing communications (Art. 16 ePR).

<sup>2</sup> For marketing communications, the ePR regulation establishes soft opt-in consent requirements. Indeed, in the context of an existing customer relationship, the use of the electronic contact for direct marketing is allowed limited to similar products or services and only if customers are clearly and distinctly given the opportunity to object, free of charge and in an easy manner, to such use.

<sup>3</sup> Art. 9 (1) ePR.

<sup>4</sup> Further, the ePrivacy Regulation creates additional barriers to the processing of information related to the users’ terminal equipment: the following controls shall be implemented to mitigate the risks (Art. 8 ePR):

- the purpose of the data collection from the terminal equipment shall be restricted to mere statistical counting;
- the processing shall be limited in time and space to the extent strictly necessary for this purpose;
- the data shall be deleted or anonymised immediately after the purpose is fulfilled; and
- the users shall be given effective possibilities to object that do not affect the functionality of the terminal equipment.

**Table 4** Legal ground for processing of electronic communications metadata and content

| Content of the Article                                 | Legal Ground   | Proposed Text               |
|--|--|-----------------------------|
| <i>Processing of electronic communication data</i>     | Technical necessity to achieve the transmission of the communication, for the duration necessary for that purpose  | European Parliament text    |
|  | Technical necessity to: <ul style="list-style-type: none"> <li>maintain or restore the availability, integrity, confidentiality and security of the respective electronic communications network or services; or</li> <li>to detect technical faults and/or errors in the transmission of electronic communications</li> </ul> for the duration necessary for that purpose |                             |
| <i>Processing of electronic communication metadata</i> | Consent  | European Parliament text    |
|  | Necessity to meet mandatory quality service requirements in compliance with the European Electronic Communication Code (EECC) or Regulation 2015/2120 on open internet access  |                             |
|  | Payment services   |                             |
|  | Crime prevention   | Council Proposed Amendments |
|  | Necessity for performance of the contract with the end-user  |                             |
|  | Compliance with a legal obligation   |                             |
|  | Vital interest   |                             |
| <i>Processing of electronic communication content</i>  | Scientific research and statistical purposes   | European Parliament text    |
|  | Consent  |                             |
|  | Provision of an explicitly requested service only where such requested processing does not adversely affect the fundamental rights and interests of another user or users  |                             |
|  | Necessity for an explicitly requested service for individual use based on the consent of the requesting end-user as long as fundamental rights and interests of other end-users have been adequately protected   | Council Proposed amendment  |

Source: Art. 6 ePrivacy Regulation

**Table 5** Legal ground for the processing and storage capabilities of terminal equipment and the collection of information from end-users' terminal equipment

| Content of the article   | Legal Ground   | Proposed Text            |
|--|--|--------------------------|
| <i>The usage of processing and storage capabilities of users' terminal equipment and access to information stored in or related to users' terminal equipment</i> | Consent  | European Parliament text |
|  | Necessity for carrying out the transmission of an electronic communication   |                          |
|  | Strict technical necessity for providing an information society service specifically requested by the user   |                          |
|  | Technical necessity for measuring the reach of an information society service requested by the user, provided that: <ul style="list-style-type: none"> <li>• such measurement is carried out by the provider, or on behalf of the provider, or by a web analytics agency acting in the public interest including for scientific purpose;</li> <li>• that the data is aggregated and the user is given a possibility to object; and</li> <li>• no personal data is made accessible to any third party and that such measurement does not adversely affect the fundamental rights of the user; and,</li> <li>• The obligations on risk mitigation are fulfilled</li> </ul> |                          |
|  | Necessity for locating a caller of an emergency call   |                          |
| <i>The processing of information emitted by terminal equipment to enable it to connect to another device and, or to network equipment</i>                        | Consent  | European Parliament text |
|  | Necessity for establishing a connection requested by the user (provided that obligations on risk mitigation are fulfilled)   |                          |

Source: Art. 8 of ePrivacy Regulation.

Further, the ePrivacy Regulation set up:

- The prohibition of any “interference with electronic communications data, such as by listening, tapping, storing, monitoring, scanning or other kinds of interception” (Art. 5 ePR); and
- The obligation to erasure or anonymization of any electronic communication data when such data are no longer needed for the provision of the electronic communication service (Art. 7 ePR).

### 1.3 Ongoing controversies

The ongoing negotiations on the ePrivacy Regulation between the European Parliament and the European Council have identified a number of remaining issues that are still under discussion.

Among others, five main remaining issues concern:

- The relationship between the ePrivacy Regulation and the European Electronic Communication Code (EECC);
- The applicability of confidentiality protections to M2M communication;
- The absence of legitimate interest and contractual necessity as legal ground for processing of electronic communications data (Art. 6 ePR) and the relationship between the ePrivacy Regulation and the GDPR; and
- The possibility to prevent end-user who deny consent to cookies from accessing website and mobile apps content; and
- The use of browsers as gatekeepers.

#### **Relationship between the ePrivacy Regulation and the European Electronic Communication Code (EECC)**

On 16th September 2016, the European Council proposed a new European Electronic Communication Code (EECC) that is currently under trilogue negotiations. The EECC establishes common EU rules and objectives on the regulation of the telecom industry and defines how providers of networks and/or services can be regulated by national authorities. During the negotiations, several delegations have highlighted discrepancies in the provisions in the ePR and in the EECC with regards to *ancillary electronic communication services*.

The terms *ancillary services* refers to all “services which enable interpersonal and interactive communication merely as an ancillary feature that is intrinsically linked to another service” (Art. 2(5) EECC) and do not fall under the definition of interpersonal electronic communication services in the EECC. Conversely, according to Art. 4(2) of the ePR “the definition of ‘interpersonal communications service’ [...] shall include services which enable interpersonal and interactive communication merely as a minor ancillary feature that is intrinsically linked to another service.”

Delegations have argued that the inclusions of ancillary services within the material scope of the ePR will broaden the definition of electronic communication services’ providers to a number of organisations that would otherwise not be covered by the EECC.

#### **Applicability of confidentiality protections to M2M communication**

Both the ePrivacy Regulation and the European Electronic Communication Code include in the definition of electronic communication services those services consisting wholly or mainly in the

conveyance of signals for the provision of machine-to-machine services. In this context, the EEC and the ePR distinguish between the transmission services used for the provision of machine-to-machine services which, constituting an electronic communication services, fall under the material scope of the Regulation/Code and the application layer of these machine-to-machine services that is not covered.

Concerns on the inclusion of machine-to-machine services under the material scope of the ePR has been expressed during the interinstitutional negotiations by a number of delegations who argued that the number of events when such M2M communications may reveal personal information is limited and therefore does not constitute a danger for the privacy of the end-user. Further, the delegations inquired into the practical applicability of the consent requirements in such context (for instance, raising questions on how the consent can be lawfully expressed by legal persons).

### **Absence of legitimate interest and contractual necessity as legal ground for processing of electronic communications data (Art. 6 ePR) and relationship between the ePrivacy Regulation and the GDPR**

Some delegations have highlighted the absence of legitimate interest and contractual necessity as legal ground for the processing of electronic communications data and have proposed to align the legal framework established in the ePrivacy Regulation with the GDPR by including these consent-exemptions.

- In particular, according to Art. 6(1)(f) of the GDPR the processing of personal data for the legitimate interest pursued by the controller or by a third party is allowed whenever the processing does not override the interests or the fundamental rights of the data subject; and
- the controller has, at the time when personal data are obtained, provided the data subject with information of the legitimate interests pursued by the controller (Art. 13(1)(d); and
- the personal data does not constitute “sensitive data” according to the definition at Art. 9(1) GDPR.

Processing of personal data in the GDPR is also allowed for contractual necessity. Contractual necessity is defined at Art. 6(1)(b) GDPR as the necessity “for the entry into, or performance of, a contract with the data subject or in order to take steps at his or her request prior to the entry into a contract”.

### **Cookies acceptance discrimination for access to website and mobile apps content**

Art. 8 of the ePrivacy Regulation deals with the protection of the end-users’ terminal equipment and in this regard it imposes limitations to the use of cookies and other tracking techniques in absence of the end-user consent. Cookies that would not be exempted from consent requirements include:

- Social plug-in tracking cookies; and
- Third party cookies used for behavioural advertising; and
- Third party analytics.

In the course of the discussions, some delegations have raised the question of whether the website provider is obliged to provide access to the website content in case the end-users refuse consent

for her data to be processed and they have asked for clarifications about Recital 245 of the ePR which imposes the obligation for the website and mobile apps provider to propose to such end-users another option for access (for instance subscription or payment).

### **The use of browser as gate-keepers**

Art. 10(1) of the ePrivacy Regulation establishes the obligation for browser providers and providers of other softwares allowing electronic communications to offer the option to prevent the storage of third parties cookies. Further, providers of software allowing electronic communications will face the obligation to inform the end-user about the privacy settings options and to require consent for these settings. In the course of the negotiation process, some delegations have raised questions on the impact on the increased role of browser for the Web and on the value-added of this provision for the end-user.

## **2 This study**

### **Box 2 Summary: methodological approach**

Information for this study was collected through consultations with 11 industry associations and businesses and an online survey of 121 industry professionals (107 in a cross-sector survey and a further 14 in a supplementary survey aimed at telecoms industry). The information was collected between December 2017 and February 2018.

To assess the economic impact of the ePrivacy Regulation, information was collected through:

- Consultations with business associations and companies;
- An online-survey of professionals in the telecoms and ICT sectors.

### **2.1 Consultations with business associations and companies**

Relevant industry organisations have been identified based on the list of ‘business types’ provided by the DA as part of the scope of work. Associations from a wide range of economic sectors have been contacted, including advertising, ICT, telecommunications and a Chamber of Commerce. The team contacted 28 business associations (excluding the DA) and two companies operating in the telecommunication and automotive sectors, respectively. Eight of the business associations agreed to be interviewed and to circulate the survey among their members. Two business associations agreed to distribute the online survey, but preferred not to be interviewed. A list of completed consultations is provided in Table 6.

In all cases interviewees have been previously contacted via email and a topic guide and a paper version of the survey were sent to explain the content of the consultation and the type of information the team was looking after. Nine out of ten consultations have been conducted over

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<sup>5</sup> Recital 24 of the ePR states that: “Where a business model is based on targeted advertising, consent should not be considered as freely given if access to the service is made conditional on data processing. In such cases, the end-user should be provided with other fair and reasonable options that do not process his or her communications data, such as i.e. subscription, paid access, or limited access to parts of the service”.

the phone; in one case the interviewee was not available for a phone call but sent to the team detailed written feedback on issues raised in the topic guide.

Consultations have provided insights on the mechanism through which the ePrivacy Regulation is likely to impact on the European Businesses. These insights have been used in the design of two online surveys.

**Table 6** List of completed consultations

| Sector                         | Association/company   |
|--------------------------------|---|
| Startups                       | Allied for Startups   |
| General                        | AmCham EU - American Chamber of Commerce to the European Union            |
| Advertising and Communications | EACA - The European Association of Communications Agencies                |
| Telecoms                       | ETNO - European Telecommunications Network Operators Association          |
| Telecoms' users                | INTUG - International Telecommunications Users Group                      |
| Advertising and Communications | IAB Europe - Interactive Advertising Bureau Europe                        |
| ICT                            | DIGITALEUROPE   |
| Healthcare (Pharmaceutical)    | EFPIA - European Federation of Pharmaceutical Industries and Associations |
| Advertising and Communications | WFA - World Federation of Advertisers                                     |
| Telecoms                       | BT  |
| Automotive                     | Anonymous (European HGV manufacturer)                                     |

Source: LE Europe

## 2.2 Case study

The Team has conducted one case study with a large European heavy goods vehicle (HGV) manufacturer to get better insights on the impact that the ePrivacy Regulation has on sectors other than telecommunication and ad-funded digital services. The interview covered questions on the foreseen impact, specific services provided by the company that will not be available anymore if the ePrivacy Regulation comes into effect and services that will face specific hurdles; and how and whether the company is taking any active measures to prepare for the ePrivacy Regulation.

## 2.3 Online surveys

The quantification the economic impact of the ePrivacy Regulation is based on primary data collected through two online surveys. The main survey was addressed to professionals without restrictions on economic sector. For telecoms professionals, a separate hoc survey to identify more accurately the impact of the Regulation. Both surveys have been alive from the 8<sup>th</sup> of January 2018 to the 15<sup>th</sup> of February 2018 for a total of 39 days. The survey instruments are provided in Annex 3. For a detailed description of the profile of survey respondents please refer to Annex 1. The survey was circulated widely to members of the DA and members of the associations listed in Table 6. Data obtained through the online survey have been weighted using Eurostat data on the "Digital Economy and Society" to reflect the effective penetration of technology for European businesses<sup>6</sup>.

<sup>6</sup><http://ec.europa.eu/eurostat/web/digital-economy-and-society/data/database>



### 3 Insights from consultations

#### Box 3 Summary: industry concerns about ePR

The key concern in all the consultations with industry associations and businesses is the legal uncertainty surrounding ePR. Areas for concern are the scope of the regulation and the relationship between ePR and GDPR. Specific concerns arise in M2M contexts, often exacerbated by the fact that the providers of the electronic communication service have no direct relationship with their 'data subjects'.

Telecoms providers are concerned about the ability to use pseudonymised communication metadata, for example for network planning and monitoring. The advertising industry has longstanding concerns about the ePR and its impact on consumer segmentation targeting, ad-blocking, and the practicalities of obtaining and managing consent in a complex advertising ecosystem with real-time auctions involving large numbers of parties. The practicalities of consent in a data-rich environment (e.g. in the context of a driver of a semi-autonomous vehicle) is another recurring concern.

To identify the potential impact of the ePrivacy Regulation on the European businesses, the team conducted 10 telephone interviews and a written interview with business associations and companies between December 2017 and February 2018. The consultations were performed with business associations operating in a wide range of economic sectors, including advertising, ICT, telecommunications and automotive.

To better understand the impact of the ePrivacy Regulation on businesses outside the obvious telecommunications and tech sectors, a consultation with a Chamber of Commerce was held. The key concern, confirmed by interviews across all different economic sectors, is the substantial legal uncertainty raising from the current draft of the ePrivacy Regulation. In particular, the majority of the interviewees agreed that there is substantial uncertainty on obligations that relates only to providers of electronic communications data and on the relationship between the ePR and the GDPR. Indeed, interviewees suggested that many applications that will fall under the scope of the ePR are already covered by the GDPR. However, the exemptions to consent established in the GDPR are wider than those in the ePR – crucially, unlike the ePR, the GDPR allows processing of data for legitimate interest and contractual necessity.

Substantial uncertainty also arises from the inclusion of machine-to-machine communications within the material scope of the ePR. Interviewees expressed unanimous agreement that the definition of machine-to-machine communications in the ePrivacy Regulation is insufficiently accurate and that it does not allow to identify which communications data are effectively subject to the Regulation. Further, one association highlighted that the current requirements for machine-to-machine communications will often be difficult to comply with. On the question whether the legal uncertainty will impact on the development of new services and products, the majority of associations agreed that the development of innovative products and services is stifled by uncertainty regarding compliance obligations.

Specific concerns were raised by business associations operating in the field of telecommunications and advertising.

#### Telecommunication services

A major concern raised by business associations operating in the telecommunications sector is the absence of legal grounds for processing of electronic communication metadata for **improvements/roll-out of the electronic communications network** and the resulting impact on the quality of the telecommunication network and the investment planning decisions. Indeed, network engineers need to monitor and process metadata (e.g. measure the usage or throughput per mobile cell, usage habits in a certain fixed network area) in order to be able to efficiently manage traffic, and to take rational investment decisions (where to install more mobile antennas or “gap fillers”, when/where to acquire network nodes, which agreements to be made with app providers whose applications slow down throughput, etc.). In this regard, unanimous agreement has been expressed by the interviewees on the necessity of processing pseudonymised metadata. Indeed, where a mobile network operator establishes problems at a certain location but is not able to detect the root cause on a statistical basis, it is necessary to concretely monitor the usage of the users on that location, in order to detect e.g. which usages or types of phones suffer problems and what can be done to solve them. Further, pseudonymisation allows to identify the volume of users benefiting from the investment and to evaluate the real customer-value behind it. In addition, currently, telecom operators carry out **location analysis** based on communications metadata that benefit a wide range of sectors, such as transport, tourism, urban planning, etc. One interviewee cited the example of a telecom operator working on developing a smart city tool for local government customers, which will help them monitor traffic congestion. Other examples of smart services requiring location analyses are described in Box 2 and were provided by the same business association. All these services require pseudonymised data and cannot be provided if the metadata have to be made anonymous.

#### Uncertainty of ePR scope in relation to M2M communications – An example

A construction company wishes to use M2M sensors to monitor the security on its construction sites. This could be done by applying sensors to the helmets of workers or the construction machines (if the sensors register no or unusual movements, then this could indicate a security/safety risk). Helmets or machines could reveal personal information if they can be linked to the employees working on the site. In practice, it is not realistic that the M2M/telecom operator (who likely has no relationships with the workers on site) has to obtain & manage individual consents from the employees working on the site. A further issue is that the employer is already bound under the GDPR to obtain and manage consent from employees.

**Examples of location analysis for smart services**

**Network failure notification:** Operators process the location metadata of end-users residing in the area where network failure has occurred. Customers could receive a non-individual general alert (using pseudonymised identifiers), informing them about the network failure, including further information about duration, etc., and when the network will be back working.

**Intelligent infrastructure-telematics warning of “ghost drivers”:** on specific freeway interfaces, telematics systems could automatically determine drivers that are taking the wrong direction/lane and could be warned by an alert, while using a pseudonym. Real-time processing would be necessary and the service only functions well with a critical mass participating.

**Real time train monitoring for better connections:** Operator data can help railway companies analyse real time counts of train passengers. Currently railway companies do not have information on the number of passengers on each regional train. In case of a delay, an entire train full of passengers will miss a connection to the other train/bus departing on time. With real-time data, the railway company would be able to hold the connecting train/bus in order to provide the best connection to most passengers even in case of a delay. In this case, anonymized information would not be precise enough, as they would only cover aggregated data sets of a minimum of 30-50 persons in the cluster.

**Advertising**

The interviewees in the advertising sector unanimously agreed that the restrictions established for third-party web and mobile analytics will affect the current business model in the online advertising industry. Indeed, if third-party data processing can only be done with explicit consent, some of the businesses will move to in-house analytics, losing the benefits from specialisation and resulting in less precise consumer segmentation. A less precisely targeted audience implies less effective marketing and could result in a contraction of the overall market for advertising and the development of alternative business models. The contraction in the overall market for advertising has negative spillover effects on online businesses that depend on advertising to fund their services. Advertisers are prepared to pay more to place ads which are likely to be registered and/or acted upon by consumers. That in turn means that websites will be able to charge more for those advertising slots which are more likely to attract consumers, that is to say for slots filled by behavioural advertising, rather than irrelevant ads.

Contraction in the revenues from advertising are also likely to occur as a result of the prohibition for online businesses from banning users who use ad-blockers<sup>7</sup>. As the percentage of web-visitors sky-rocketed<sup>8</sup>, online businesses have protected their revenues from advertising requiring ad-blockers to be disabled in order to gain access the web-site content. This practice will not be allowed once the ePrivacy Regulation comes into effect and online businesses will not be allowed to discriminate against users of ad-blocker. The long-term effect of ad-blocking for online businesses has been studied recently by Shiller et al. (2018), who have estimated the impact of site-level ad-blocker usage on site traffic and revenue from advertising. The usage of ad-blockers impacts on revenue from advertising both directly and indirectly. The direct effect is the contraction in revenues due to the fact that only non-ad-blocker visitors are counted from advertisers and hence generate revenues. Further, on a long term perspective, a decline in revenue appears to be associated to a reduction in web-content investment and as a result in the number of (non-ad-blocking) visitors. Under the assumption that only a constant fraction of the whole web-users use ad-blockers (12%) and that revenues are proportional to site traffic, the study estimates a long-term impact of ad-blocking at the average online businesses of about 20%.

## Semi-autonomous vehicles

As penetration of technology increases across all industrial sectors, the impact of legal provisions set up on processing and transmission of electronic telecommunication data is likely to impact also traditional businesses. This is the case for the trucking industry - which in recent years has been developing a set of semi-automatic technologies.

A major concern raised by the interviewee regards the impact the ePrivacy Regulation on the development of technologies for the automation of the trucking industry, and in particular on the development of autonomous truck platoon operations.

The term truck platooning refers to the linking of two or more trucks in convoy, using connectivity technology and automated driving support systems. The vehicles that form part of the platoon are equipped with state-of-the-art driving support systems that allow to automatically maintain a pre-set distance between each other during a journey. Truck platooning has the potential to deliver many business and societal benefits. In a recent whitepaper, the TNO<sup>9</sup> has quantified the impact of truck platooning technology on the economy and the society. They estimate:

- A fuel reduction of about 2-8% for the leading vehicle and of approximately 8-13% for the following vehicles— in monetary terms, it can lead to a saving of about €3,000 for each platooning truck driving 100,000 kilometres for a logistic company compared to a truck driving with cruise control<sup>10</sup>.
- A decrease in labour cost for logistic companies. According to the estimates about 15% to 25% of labour time can be saved by platooning in a 1 driver and 2 truck scenario.

Additional benefits for the society are in the form of:

- Reduction of CO2 emissions due to the drop in fuel consumption;
- Increase in road safety. Indeed as argued in the TNO paper “Platooning technology will only be introduced and accepted by society if it is (close to) fail-safe. Since more than 90% of the accidents are caused by human error, this implies a drastic decrease in accidents.”

The introduction of the ePR is likely to affect the development of the platoon trucking technology. The interviewee argued that machine-to-machine communications required for the implementation of the truck platoon technology will fall under the provision of the ePR. The data also qualify as personal data as driver-related location information will be transmitted and therefore consent from the driver will be required.

On the question whether the employment contract of the driver would be considered enough to infer consent the interviewee denies this. It is the case because the employee-employer relationship only exists between the driver and the logistic company but does not involve the vehicle

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<sup>7</sup> Recital 24 of the ePR (European Parliament Version) states that “Where a business model is based on targeted advertising, consent should not be considered as freely given if access to the service is made conditional on data processing. In such cases, the end-user should be provided with other fair and reasonable options that do not process his or her communications data, such as i.e. subscription, paid access, or limited access to parts of the service”.

<sup>8</sup> The number of ad-blocker users has increased of about 300% between 2010 and 2015 (from less than 50 million in January 2010 to about 200 millions in January 2015 – Schiller et al 2018).

<sup>9</sup> Netherlands Organisation for Applied Scientific Research

<sup>10</sup> Estimate computed assuming a diesel price of € 1.20 per litre and a usage of 0.25 litre per kilometre 14.

manufacturer which control the transmission process and that, in this context, qualifies as the electronic communication provider. A further practical challenge for the manufacturer is how granular consent from the driver can be obtained in practice without impacting vehicle safety. Furthermore, the ePR provides no guidance as to what happens if the drivers withholds consent. This highlights another recurrent criticism of the ePR, namely that it seems to be written with a B2C relationship in mind (a consumer/service user providing personal data to a service provider). In the case of semi-autonomous driving, the data subject is a service provider, has no direct relationship with the manufacturer, and provides personal data as part of a service to an end user (the shipper).

## 4 Exploratory quantification of ePR impacts

### Box 4 Summary: quantified impacts

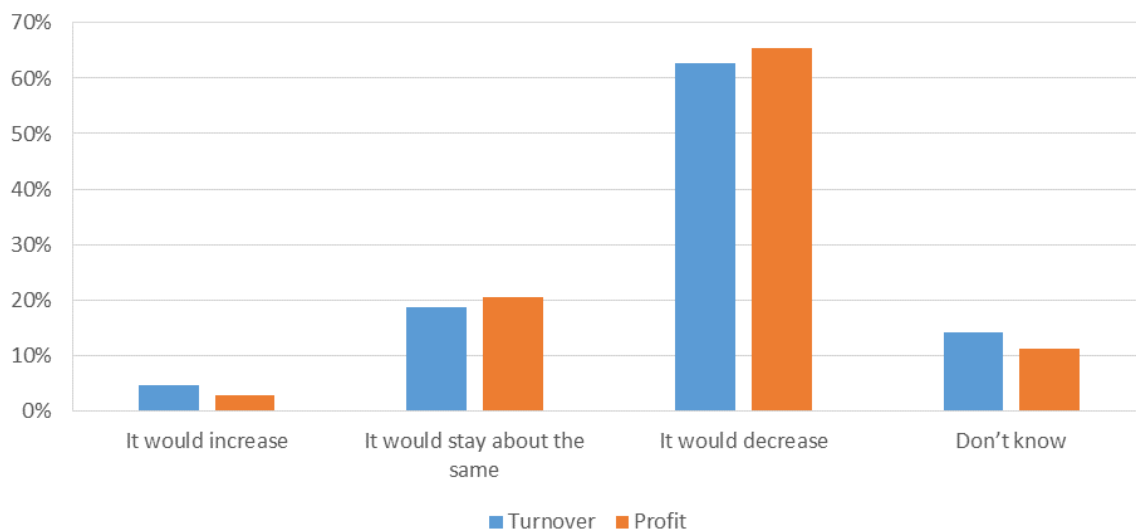
Extrapolation from a survey of 107 individuals from a sample of business associations affected by the proposed ePR suggests that profits dependent – directly or indirectly – on electronic communication are expected to fall by around 30%. The potential economic impact within the EU of this is significant. Across all sectors, the ePR might introduce a **reduction of annual turnover** of up to **€551.9 billion** and a **reduction of annual profit** of up to **€58 billion** EU wide.

Since the ePR is not yet in place and, the quantification of impacts relies is necessarily based on assumptions regarding the scope of the regulation, the cost of compliance and the impact on business models. The consultations revealed a consistently high level of uncertainty regarding the scope of the proposed regulation. This means that any quantification based on survey results represents an approximation that depends on respondents understanding for the Regulation and the impacts in question. With this qualification, the survey represents an attempt to capture a) the key mechanisms through which the ePR affects digitally enabled business across different sectors of the economy and b) the magnitude of the impact on turnover and profits of the affected businesses.

### 4.1 Turnover and profit

Turnover and profits that depend on electronic transfers of data are likely to fall in response to the ePR. Both Figure 1 shows that the majority of respondents believe this to be the case. Only a minority believe that turnover and profits will remain about the same if not increase.

**Figure 1** How would the ePR impact turnover/profit dependent on electronic communication?



Note: based on 107 observations.

Source: LE Europe survey

Overall, turnover and profits dependent – directly or indirectly – on electronic communication are expected to fall by around 30%. The potential economic impact within the EU of this is significant. Across all sectors, the ePR might introduce a **reduction of annual turnover** of up to **€551.9 billion** and a **reduction of annual profit** of up to **€58 billion** EU wide.<sup>11</sup>

To put this into perspective, the impact of other regulations should be looked at. The impact of the General Data Protection Regulation (GDPR) provides the most direct comparison. Deloitte (2013)<sup>12</sup> estimates the loss of GDP due to the GDPR at €173 billion across the EU27, for the following four sectors only:

- Direct Marketing;
- Online Behavioural Advertising;
- Web Analytics; and,
- Credit Information.

Wider comparison may include the cost of environmental or employment regulation. The cost of US environmental regulation has been estimated at \$394 billion (€445 billion) in 2014 (CEI, 2017). UK impact assessments in support of EU law transposition<sup>13</sup> estimate annual expected cost of EU climate and energy directives at £3.4 billion (€2.7 billion) and of the working time directive at £4.2 billion (€3.4 billion) for the UK only (Open Europe, 2015).

<sup>11</sup> See Annex 2 for details.

<sup>12</sup> Note that the economic impact was assessed based on an early draft of the GDPR.

<sup>13</sup> Note that these impact assessments are provided before new law comes into effect and are rarely verified ex post.

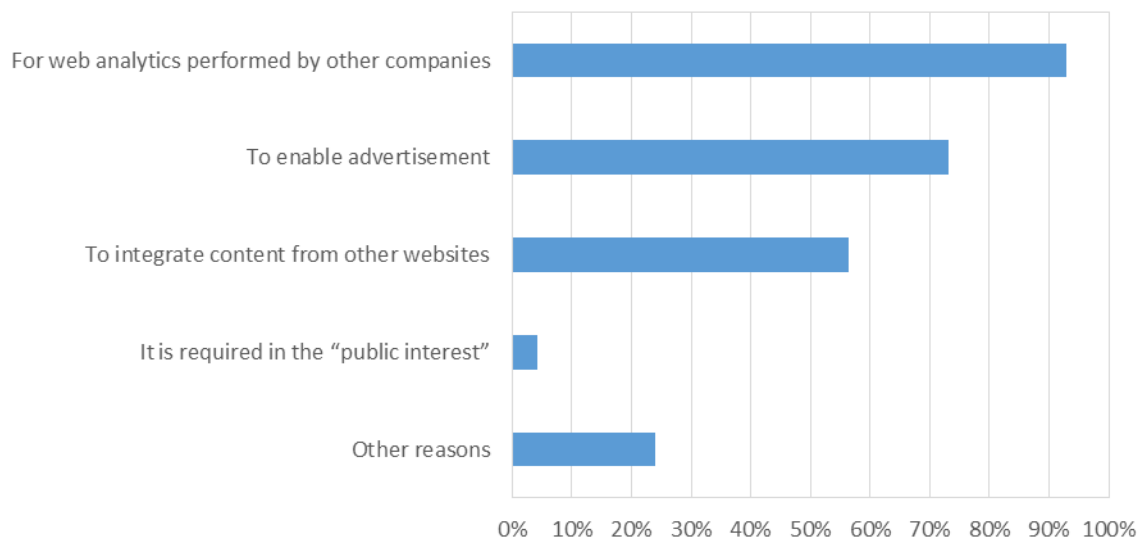
## 4.2 Detailed look into the causes of the impact of the ePR

A more detail look into specific impacts of the ePR can give a better understanding why turnover and profits are expected to fall with the introduction of the ePR.

### 4.2.1 Websites: cookies and features

The majority of enterprises have a website; 77% in the EU with over 90% in Scandinavian countries<sup>14</sup>. The majority of these websites use cookies, and more importantly, third-party cookies (67% according to the survey). As shown in Figure 2, 3<sup>rd</sup> party cookies have multiple uses, including web analytics, advertisement and content integration.<sup>15</sup>

**Figure 2 Purpose of 3<sup>rd</sup> party cookies**



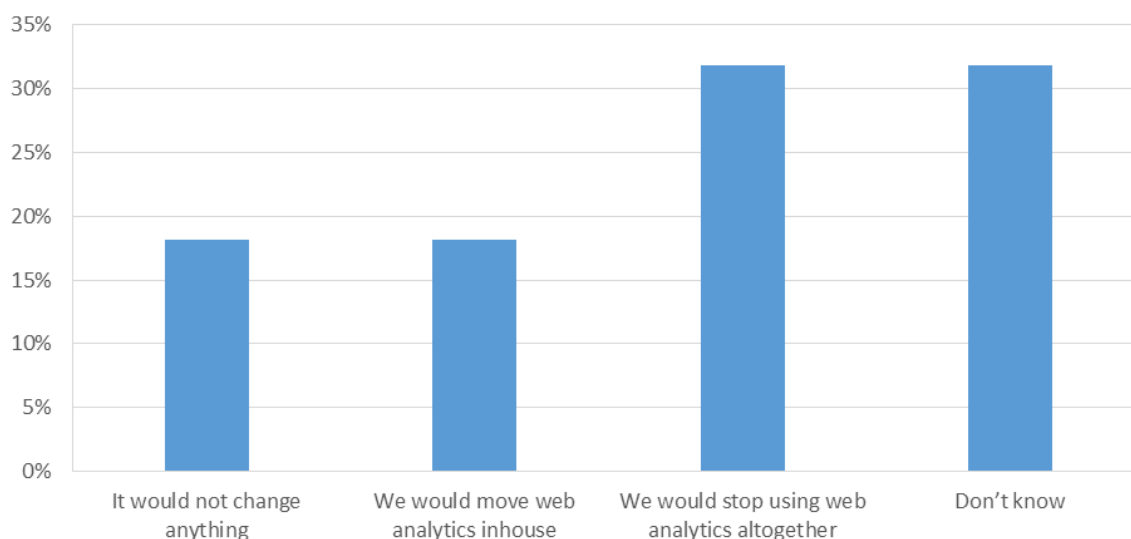
Note: based on 71 observations. 3<sup>rd</sup> party cookies can be used for multiple reasons, so the sum over all categories does not need to equal 100%.

Source: LE Europe survey

The ePR proposes to restrict the use of 3<sup>rd</sup> party cookies, only allowing them if consent is given or if there is a public interest (e.g. crime prevention). This is problematic for enterprises using 3<sup>rd</sup> party cookies for web analytics. There is no public interest, and consent for these cookies is difficult to obtain. Likely responses would be to either move web analytics in-house or to stop using this altogether. As Figure 3, both of these responses are realistic.

<sup>14</sup> Eurostat, Digital economy and society database

<sup>15</sup> The "public interest" derogation is a recurring derogation which is not strictly defined within the ePR. It tends to pertain to processing of data for reasons of national security, defence, public security and related topics. Public interest may also include data processing for scientific purposes.

**Figure 3** Response to ePR for web analytics currently based on 3<sup>rd</sup> party cookies

Note: based on 66 observations.

Source: LE Europe survey

Without web analytics, websites can no longer be effectively tailored to visitors. Stopping with web analytics therefore will have a negative effect on turnover and profit. Moving web analytics in-house would not be beneficial either. 50% of respondents believe that insights from in-house analytics would be worse whereas only 16.7% believe they would be better.

Restrictions on cookies, as well as other provisions in the ePR, will likely impact website features available to customers. 58% of enterprises offer some form of sophisticated functionality on their website<sup>16</sup>; these being:

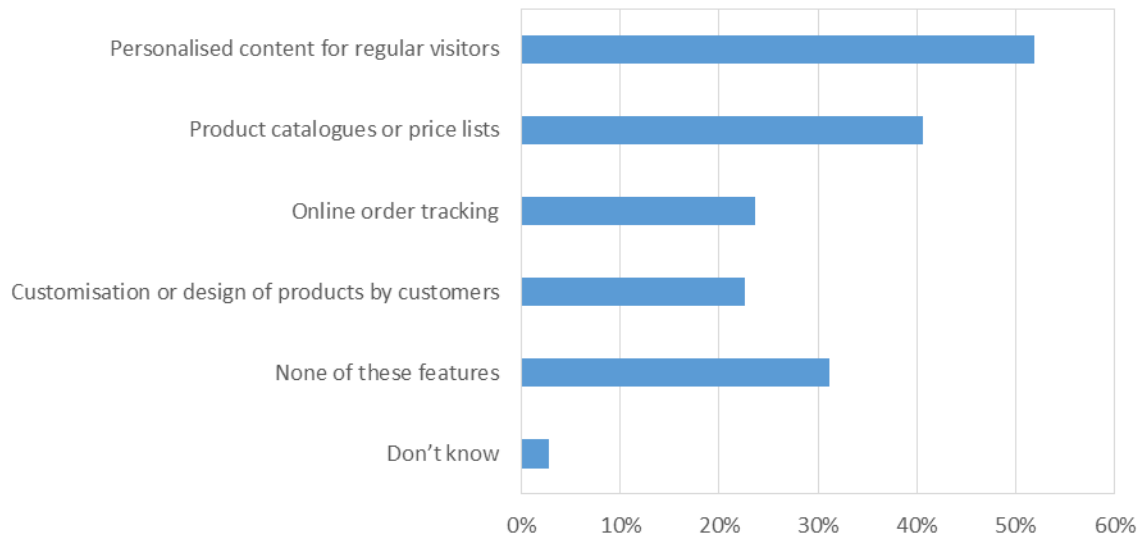
- product catalogues or price lists;
- customisation or product design by customers on the websites;
- online order tracking; or,
- personalised content for regular visitors.

As Figure 4 shows, personalised content for regular visitors are an often offered feature. This feature requires the use of cookies and personal information and is therefore within the scope of the ePR.

<sup>16</sup> Eurostat, Digital economy and society database



**Figure 4** Percentage of enterprises using particular sophisticated website features



Note: based on 106 observations. Websites can have more than one sophisticated feature, and therefore the sum over all categories does not need to equal 100%.

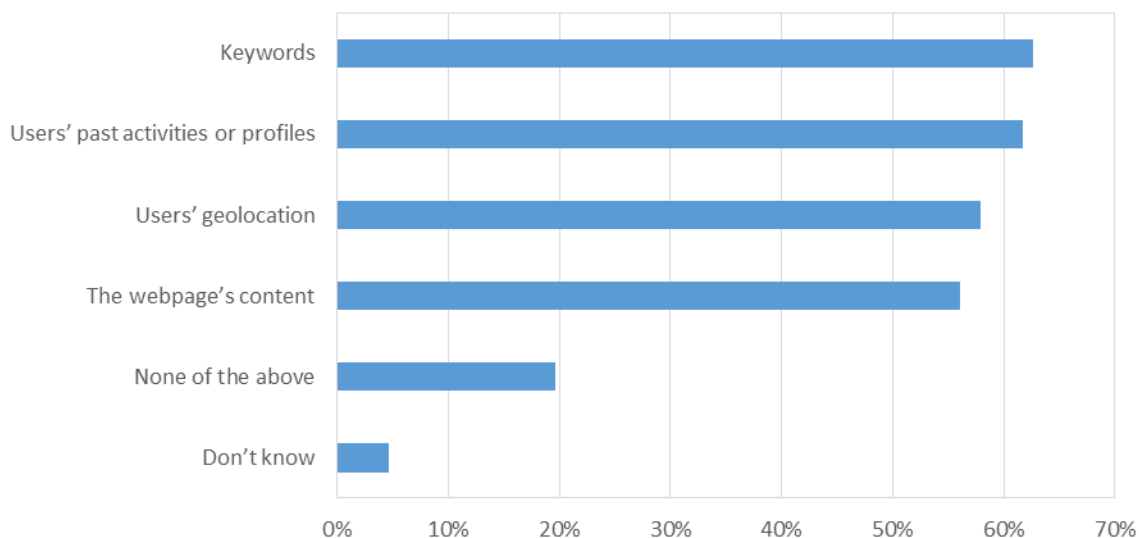
Source: LE Europe survey

Sophisticated website features are important to generate profit – respondent estimate that 42.6% of profits can be linked to them – and they are threatened by the ePR. 60% of respondents whose enterprise use these features, think they are less likely to use the features if the ePR is enacted. Only 17.1% of these respondents believe that they are more likely to use sophisticated features under the ePR.

It is unlikely that the ePR will stimulate enterprises to start using sophisticated features on their website if they do not do so already. Only 12.1% of respondents working for enterprises not yet using such features, say they would be more likely to use sophisticated website features under the ePR.

#### 4.2.2 Online advertisement

Business models could be threatened by the ePR. A significant portion of enterprises pay for advertisement based on user data, such as user profiles or geolocation, as shown in Figure 5. Advertisements based on this user data (as well as the webpage's content or keywords) can be linked to 43.5% of profits.

**Figure 5** Does your organisation pay for advertising based on any of the following?

Note: based on 107 observations. Note that enterprises can pay for online advertisement based on multiple dimensions, therefore the sum over all categories does not need to be equal to 100%.

Source: LE Europe survey

Under the ePR, this advertisement stream is likely to shrink. 61.7% of respondents currently paying for user-or content-driven advertisement say they are less likely to pay for such advertisement under the ePR. Only 27.2% say they are more likely to pay for user- or content-driven advertisement under ePR.

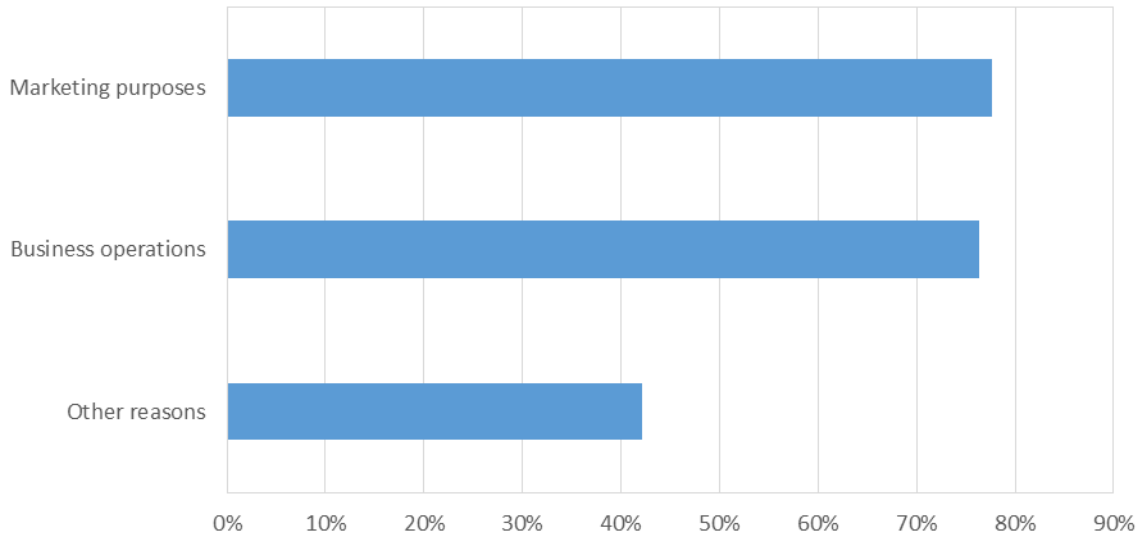
#### 4.2.3 Customer Relationship Management

Customer Relationship Management (CRM) systems can be defined as systems that help manage and analyse customers data (contact details, transactions, etc.), to foster relationships with customers with the aim to drive sales.

Around 71% of respondents use CRM in their enterprise, with around 40.6% of profits being dependent on CRM. Different reasons to use CRM exist, but Figure 6 shows two important ones:

- CRM to capture customer information to be used in the business operation, and
- CRM for marketing purposes.

**Figure 6 The purpose of CRM use**

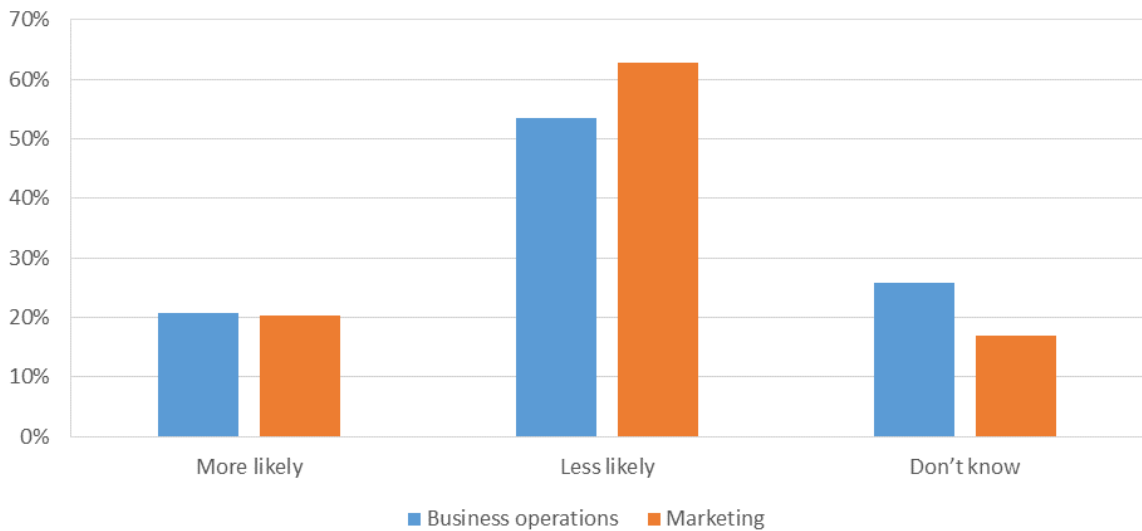


Note: based on 76 observations. CRM can be used for multiple purposes, so the sum over all categories does not need to add up to 100%.

Source: LE Europe survey

It can be argued that the ePR will likely have a different impact on the different use cases for CRM. CRM for business operations can be seen as more legitimate by customers, which makes obtaining consent easier. The respondents recognise this difference. Figure 7 shows that respondents think that the use of CRM will be less likely under the ePR, but the impact for marketing purposes is stronger.

**Figure 7 Will your organisation be more or less likely to use CRM if the ePR is enacted?**



Note: based on respectively 58 (business operations) and 59 (marketing) observations. Questions were asked of respondents working for enterprises who use CRM for the respective purpose.

Source: LE Europe survey

#### 4.2.4 Big data analytics

Extremely large, multi-user datasets are commonly known as “big data”. Big data can be generated from different sources, many of which are within the scope of the ePR.

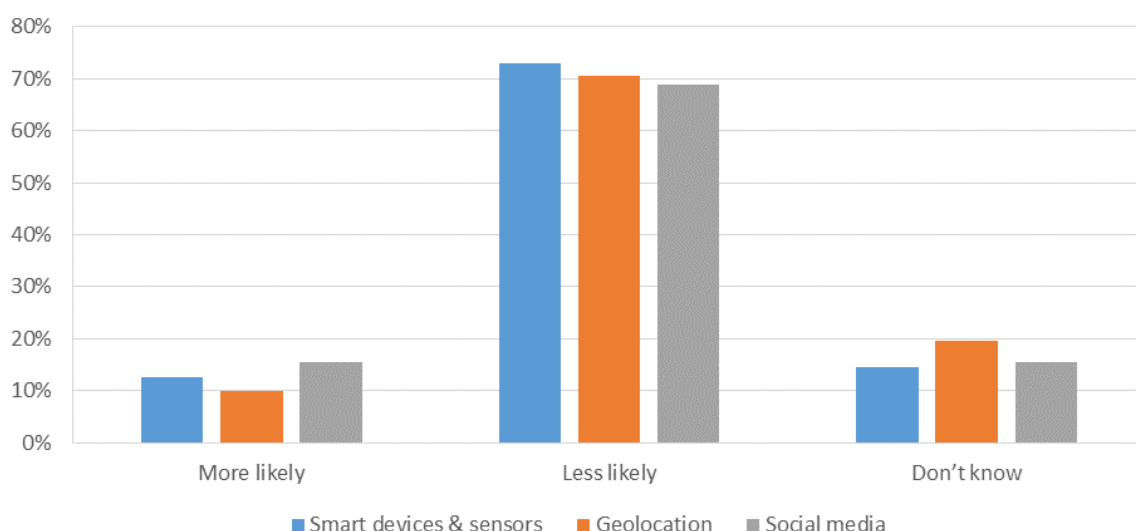
64.5% of respondents analyse these extremely large datasets, and this analysis can be linked to 47.2% of profits.

Major areas of big data analysis involve personal data, such as analysis of:

- data from smart devices or sensors;
- data from geolocation from mobile devices; and,
- data from social media.

The number of enterprises analysing extremely large datasets is likely to fall if the ePR is enacted. Figure 8 shows that, across the three sources outlined above, most enterprises would decrease or even stop analysing data from sources under the scope of the ePR.

**Figure 8 Will your organisation be more or less likely to analyse big data from the following source?**



Note: based on respectively 48 (smart devices), 51 (geolocation) and 45 (social media) observations. Questions asked of respondents working for enterprises analysing big data from the respective source.

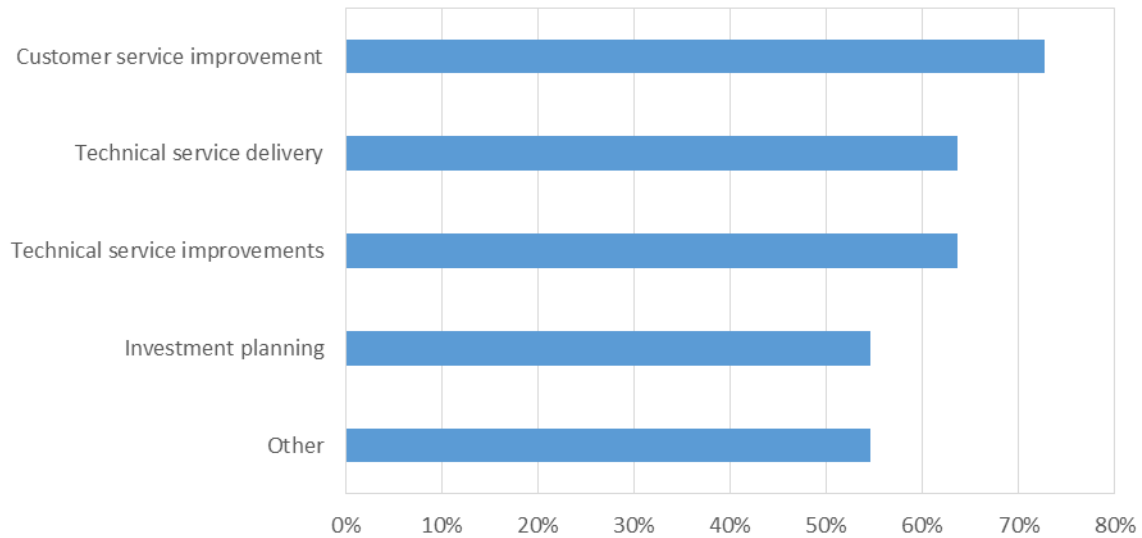
Source: LE Europe survey

### 4.3 Telecommunication sector

The impact of the ePR on the telecommunication sector differs from other sectors. The ePR has provisions on metadata processing which do not affect other sectors in the same way as telecommunications. To get a better grasp on the effect of the ePR on the sector, a separate survey of the telecommunication sector was run.

Telecom operators process metadata for different reasons; some are shown in Figure 9. Some reasons are crucial for the provision or continuation of service, such as processing for service delivery or investment planning. Others are related to improvement of service.

**Figure 9 Purpose of processing metadata in the provision of electronic communication services**



Note: based on 11 observations. Telecom providers can process metadata for different reasons, therefore the sum over all categories does not need to equal 100%.

Source: LE Europe telecom survey

It is unlikely that the purpose of processing metadata can be fulfilled if metadata is fully anonymised, as required by the ePR. 81.8% of respondents believe that at least some of the purposes shown above could not be fulfilled. Customer service improvement would be the purpose most impacted; 66.7% of respondents believe that this cannot be delivered with fully anonymised metadata.

The economic impact of the ePR on the telecom sector can be estimated as potentially lost turnover and profits, similarly to section. 4.1. Processing of metadata is – directly or indirectly – related to 40% to 45% of turnover and profits in the sector. The ePR is estimated to reduce turnover by around 23% and profit by around 43%.

Across the sector and across the EU, the estimate **reduction of annual turnover** can be up to **€37.6 billion** and the **reduction of annual profit** can be up to **€21.6 billion**<sup>17</sup>.

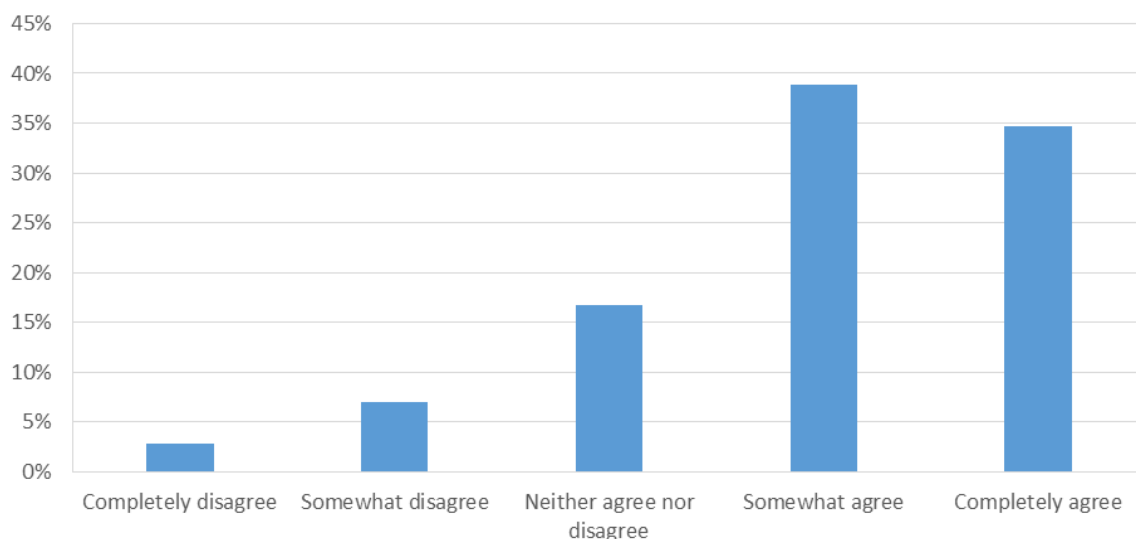
#### 4.4 ePR and GDPR

The economic impact of the ePR might be partly alleviated by aligning it better with the GDPR. As Figure 10 shows, the majority of respondents agree or completely agree that the ePR and the GDPR are not aligned, leading to uncertainty<sup>18</sup>. This uncertainty can stifle the development of new technologies. 88.7% of respondents believing that the ePR creates uncertainty, agree that this stifling of innovation will happen.

<sup>17</sup> See Annex 2 for details.

<sup>18</sup> Data from the main survey. In the telecom survey, 90% of respondents agree or completely agree with the statement.

**Figure 10** The ePR is not in line with the GDPR and creates uncertainty about data protection rules

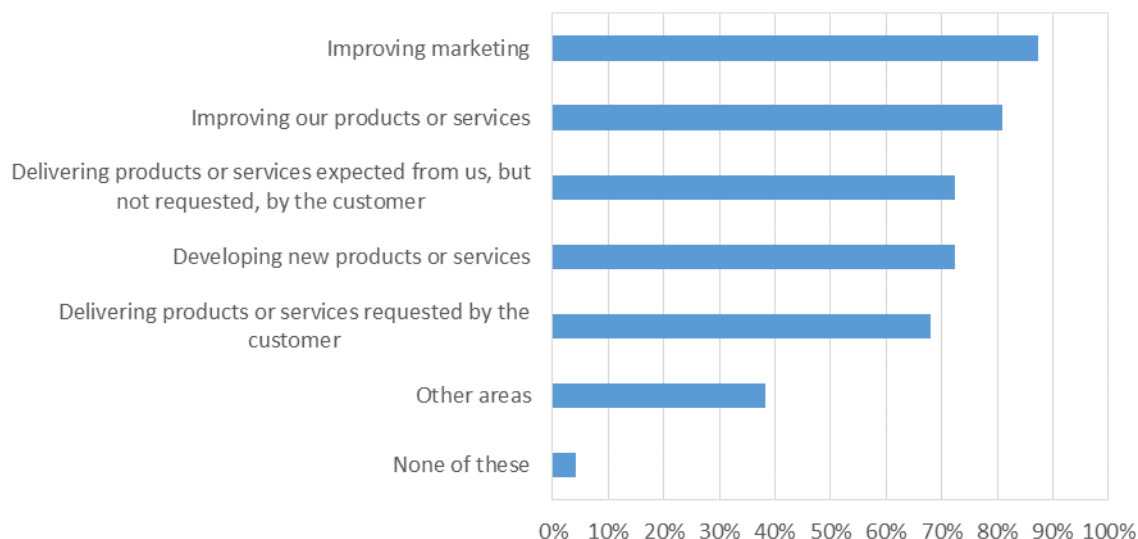


Note: based on 72 observations.

Source: LE Europe survey

One way in which the ePR and the GDPR are not aligned is on the concept of legitimate interest. This is available as a legal ground for processing in the GDPR but not in the ePR. Only 4.3% of respondents would not prefer to use legitimate interest for some purposes over the options already available in the ePR. Some of the purposes shown in Figure 11 are obvious areas of innovation and value creation, such as product improvement and development.

**Figure 11** In what areas might your organisation prefer to rely on legitimate interest, if it were available in the ePR?



Note: based on 47 observations. Enterprises might want to use legitimate interest for multiple reasons, so the sum over all categories does not need to equal 100%.

Source: LE Europe survey

Allowing legitimate interest as legal basis for data processing, therefore, could be one way to alleviate the reduction in turnover and profit expected from the ePR.

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## Annex 1 Respondent profile

### A1.1 Respondents of the main survey

141 responses to the main survey were received. Respondents were filtered on whether their organisation operated in the EU and whether they were at least somewhat familiar with ePR. Respondents who did not satisfy both conditions did not complete the survey. A total of **107 respondents** completed the survey.

The majority of respondents (96.3%) worked for enterprises registered in the EU<sup>19</sup>. Furthermore, most respondents worked in the Information and communication or ICT sector (54.2%).

The majority of respondents worked for small enterprises. Based on the number of employees only, 58.9% of enterprises would be classified as small or medium-sized (SME), whereas 38.3% would be classified as large (2.8% could not provide an estimate of the number of employees).

Based on turnover only, 52.3% of enterprises would be classified as an SME, and 26.2% as a large enterprise (21.5% could not provide an estimate of turnover).

### A1.2 Respondents of the telecommunication survey

14 responses to the telecommunication survey were received. As in the main survey, respondents were filtered on whether their organisation operated in the EU and whether respondents were at least somewhat familiar with the ePR **11 respondents** completed the survey.

As in the main survey, the majority (90.9%) of respondents worked for organisations registered in the EU.

The majority of respondents worked for large companies. All but two respondents worked for organisations with 1,000 or more employees and all respondents worked for organisations with 250 employees or more.

63.6% of employees worked for organisation classified as large based on turnover, whereas the other 36.4% could not provide an estimate of turnover.

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<sup>19</sup> Note that respondents were filtered out based on whether their organisation operated in the EU, not whether it was registered in the EU.

## Annex 2 Methodology of economic impact of the ePR

### A2.1 Main survey

This annex provides the methodology used to calculate the expected overall loss of turnover and profit as provided in section 4.1.

#### A2.1.1 Turnover

The loss of turnover is based on turnover and gross premiums written within the EU28 for the total business economy (excluding financial and insurance service). This is reported by Eurostat in the Structural Business Statistics and was equal to €26.6 trillion in 2014 – the latest available data.

Total turnover is multiplied by the proportion of turnover dependent on electronic transfers of data (and therefore related to the ePR) and the estimated reduction of this turnover attributable to the introduction of the ePR.

The survey respondents estimate that, on average, 46.7% of turnover is dependent on electronic transfers of data. However, information and communication enterprises are overrepresented in the survey. This has the effect of overstating the importance of data transfers in the average turnover. The average “data transfer dependent” turnover is, therefore, adjusted.

To illustrate the methodology of the adjustment, consider the proportion of enterprises that claim to analyse big data from smart devices and sensors. 45.8% of respondents claim to analyse this type of data, whereas Eurostat reports that in 2014 only 3%<sup>20</sup> enterprises analysed such data.

Given the number of respondents claiming to analyse smart device and sensor data, we can calculate the number of survey responses needed to find the same proportion as published by Eurostat. This number is calculated for the following types of technologies used by enterprises:

- sophisticated website functionality (see section 4.2.1);
- payment for user- or content-driven advertisement (see section 4.2.2);
- CRM used for business operations (see section 4.2.3);
- CRM used for marketing (see section 4.2.3);
- big data analysis of smart devices or sensors (see section 4.2.4);
- big data analysis of geolocation of portable devices (see section 4.2.4); and,
- big data analysis of social media (see section 4.2.4).

The number of “required responses” based on the list above is, on average, 685.

The proportion of turnover dependent on data transfers is then adjusted as follows. The 107 responses to the survey are recorded as normal. We assume that there are 578 “missing responses” that complete the 685 required given the calculation above, and we assume that 0% of their turnover depends on data transfers. We calculate the average turnover dependent on data transfers based on all 685 assumed responses. This rate is equal to 7.3%.

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<sup>20</sup> Digital economy and society database, latest available data.

The estimated reduction of turnover attributable to the ePR is calculated as the average reduction as estimated by the survey respondents. This is equal to 28.5%.

The estimated loss of turnover is then calculated as follows:

$$\text{Estimated loss of turnover} = \text{Total turnover} \times \text{Estimated reduction of turnover} \\ = \text{€2.7 trillion} \times 28.5\% = \text{€771.5 billion}$$

### A2.1.2 Profit

The loss of profit is based on gross operating surplus within the EU28 for the total business economy (excluding financial and insurance services), also reported by Eurostat in the Structural Business Statistics. Total gross operating surplus was equal to at €2.7 trillion in 2014 – the latest available data.

Gross operating surplus is multiplied with the proportion of profit dependent on electronic transfers of data and with the estimated reduction in this profit attributable to the ePR.

Survey respondents estimate that, on average, 45.3% of profits are attributable to electronic data transfers. This proportion is adjusted in similar fashion as for turnover. Applying this adjustment leads to an adjusted percentage of 7.1%.

The survey respondents estimate that profits dependent on electronic data transfers decrease by, on average, 30.6%.

The estimated loss of profit is then estimated as follows:

$$\text{Estimated loss of profit} = \text{Total gross operating surplus} \times \text{Adjusted proportion of profits} \\ \times \text{Estimated reduction in profit} \\ = \text{€2.7 trillion} \times 7.1\% \times 30.6\% = \text{€59.5 billion}$$

## A2.2 Telecommunication survey

This annex provides the methodology of the expected loss in turnover and profits for the telecommunication sector as outlined in section 4.3.

### A2.2.1 Turnover

The loss of turnover is based on turnover and gross premiums written within the EU28 for the telecommunication sector. As before, this is reported in the Structural Business Statistics, and was equal to €386 billion in 2016 – the latest available data.

Total turnover is multiplied with the proportion of turnover dependent on processing of metadata, and the estimated reduction of this turnover due to the ePR.

The average proportion of turnover dependent on the processing of metadata is estimated at 41.5% according to the survey respondents. In contrast to the main survey, this proportion is not further adjusted. Since the telecommunication survey focused on a single sector, it is not possible that overrepresentation of any sector biases the results.

The respondents estimate the reduction of turnover dependent on metadata processing due to the ePR at an average 23.4%.

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The estimated loss of turnover is then calculated as follows:

$$\frac{\text{Estimated loss of turnover}}{\text{Total turnover}} = \frac{\text{Estimated loss of turnover}}{\text{Total turnover}} \times \frac{\text{Estimated loss of turnover}}{\text{Total turnover}}$$

### A2.2.2 Profit

The loss of profit is based on gross operating surplus within the EU28 for the telecommunication sector, also reported by in the Structural Business Statistics. It was equal to €110 billion in 2015 – the latest available data.

Total profit is multiplied with the proportion of profit dependent on processing of metadata, and the estimated reduction in profit due to the ePR.

The survey respondents estimate that 45.2% of their profits are dependent on processing of metadata. As for turnover, this rate is not further adjusted.

The average reduction of this profit due to the ePR is estimated at 43.4%.

The estimated loss of profit is then calculated as follows:

$$\frac{\text{Estimated loss of profit}}{\text{Total profit}} = \frac{\text{Estimated loss of profit}}{\text{Total profit}} \times \frac{\text{Estimated loss of profit}}{\text{Total profit}}$$

## A2.3 Interpretation of the results

The loss in turnover or profit derived in the main survey and the telecommunications survey are based on three elements:

- turnover or profit across the EU28 as reported by Eurostat;
- the percentage of turnover or profit dependent on electronic data transfers; and,
- the percentage reduction of turnover or profit due to the ePR.

The interpretation of the results can be separated into two elements: period and scope. The former determines whether to interpret results as, for instance, weekly or monthly. The latter determines the cause of the losses.

Period is determined by the data derived from Eurostat. Turnover and profit are reported by Eurostat on a yearly basis and in nominal terms, i.e. not accounting for inflation. The most recent data available in the analysis of the main survey come from 2014. The most recent data available for the telecommunications survey come from 2015 (profit) and 2016 (turnover). Therefore, the losses as derived from the **main survey** should be interpreted as **annual losses at the 2014 price level**. Losses in the **telecommunications survey** should be interpreted as **annual losses at the 2015 (profit) or 2016 (turnover) price level**.

Scope is determined by the percentages applied to the Eurostat data. These percentages determine that the losses that have been calculated are potential losses in profit and turnover due to the enactment of the ePR.

## Annex 3 Survey instruments

This Annex reproduces the survey instruments used for the quantification of economic impacts.

### A3.1 General survey

Note on colour coding:

- Text in italics is text seen by respondents but not related to questions directly
- Text in bold are the questions
  - Question names in yellow highlighter are specifically created to address quantification of costs based on Eurostat's Digital Economy and Society database.
- Text in red are scripting instructions
- Text in normal font are question options

#### Introduction

*A new regulation concerning protection of data transmitted through electronic communication, the ePrivacy Regulation, is currently being debated in European Parliament. If enacted according to the current timeframe, it will come into effect on May 25<sup>th</sup> 2018, as a companion to the General Data Protection Regulation (GDPR) and will repeal the Current ePrivacy Directive (2002/58/EC).*

*This survey investigates the impacts that the ePrivacy Regulation can have on European businesses.*

*For more information on the proposed ePrivacy Regulation, click [HERE](#).*

*For more information on London Economics, click [HERE](#).*

#### Filtering questions

**F1 (ask all) Does your organisation operate in the European Union?**

- 1) Yes
- 2) No (close survey)
- 3) Don't know (close survey)

**F2 (ask all) How familiar are you with the proposed ePrivacy Regulation?**

- 1) Not at all familiar (close survey)
- 2) Somewhat familiar
- 3) Reasonably familiar
- 4) Very familiar

#### Websites

**W1 (ask all) Does your organisation have a website?**

- 1) Yes

- 2) No
- 3) Don't know

**W2 (ask if W1=1) Does your website use cookies?**

- 1) Yes
- 2) No
- 3) Don't know

**W2.1 (ask if W2=1) Does your website use 3<sup>rd</sup> party cookies?**

- 1) Yes
- 2) No
- 3) Don't know

**W2.2 (ask if W2.1=1) For what purpose does your website use 3<sup>rd</sup> party cookies?**

(multiple answers possible)

- 1) For web analytics performed by other companies, e.g. Google Analytics
- 2) To enable advertisement
- 3) To integrate content from other websites, e.g. a twitter feed or content from Facebook
- 4) It is required in the "public interest", e.g. national security, or prevention, investigation or prosecution of criminal offences.
- 5) Other reasons
- 6) Don't know (exclusive)

**W2.3 (ask if W2.2=1 is selected) In the proposed Regulation, 3<sup>rd</sup> party cookies are only allowed if end users provide consent or if use is in the public interest. How would this effect your organisation's use of web analytics using 3<sup>rd</sup> party cookies?**

- 1) It would not change anything
- 2) We would move web analytics in-house
- 3) We would stop using web analytics altogether
- 4) Don't know

**W2.4 (ask if W2.3=1) How would moving web analytics in-house affect the insights you can obtain from analytics?**

- 1) Our insights would be better (e.g. better targeting or modelling of customers)
- 2) Our insights would be of similar quality
- 3) Our insights would be worse (e.g. worse targeting or modelling of customers)
- 4) Don't know

**W2.5 (ask if W2=1) The current proposal for the ePrivacy Regulation shifts the process of obtaining consent for certain cookies from websites to web browsers. How do you think this will change the number of people that will provide consent to enable such cookies?**

- 1) It will increase (**prompt w2.5\_up**: Can you estimate how much percent more people will provide consent? Don't worry about being precise. \_\_\_\_%)
- 2) It will stay about the same
- 3) It will decrease (**prompt w2.5\_down**: Can you estimate how much percent fewer people will provide consent? Don't worry about being precise. \_\_\_\_%)
- 4) Don't know

**W3 (ask if W1=1) Which of the following features does your organisation's website have? Please select all that apply.**

(Multiple responses possible)

- 1) Product catalogues or price lists
- 2) Customisation or design of products by customers
- 3) Online order tracking
- 4) Personalised content for regular visitors
- 5) None of the above (**exclusive**)
- 6) Don't know (**exclusive**)

**W3.1 (ask if W3≠5 OR W3≠6) What proportion of your organisation's profit is dependent on your website having these features? Don't worry about being precise.**

\_\_\_\_\_%

**W3.2 (ask if W3≠6) Will your organisation be more or less likely to (**if W3=5 use**: start offering, **otherwise use**: offer) these features on your website if the ePrivacy Regulation is enacted?**

- 1) More likely
- 2) Less likely
- 3) Don't know

**W4 (ask all) Does your organisation pay for online advertisement based on any of the following? Please select all that apply.**

(Multiple responses possible)

- 1) The webpage's content
- 2) Keywords
- 3) Users' past activities or profiles
- 4) Users' geolocation
- 5) None of the above (**exclusive**)
- 6) Don't know (**exclusive**)

**W4.1 (ask if W4≠5 OR W4≠6) What proportion of your organisation's profit is dependent on such advertisement? Don't worry about being precise.**

\_\_\_\_\_%

**W4.2 (ask if W4≠6) Will your organisation be more or less likely to (if W4=5 use: start paying, otherwise use: pay) for such advertisement if the ePrivacy Regulation is enacted?**

- 1) More likely
- 2) Less likely
- 3) Don't know

## E-Business

**B1 (ask all) Customer Relationship Management (CRM) systems help manage and analyse customers data (contact details, transactions, etc.), to foster relationships with customers with the aim to drive sales.**

**Does your organisation use such CRM systems?**

- 1) Yes
- 2) No
- 3) Don't know

**B1.1 (ask if B1=1) What proportion of your organisation's profit is dependent on CRM systems? Don't worry about being precise.**

\_\_\_\_\_ %

**B2 (ask if B1=1) For what purpose does your organisation use CRM?**

(Multiple answers possible)

- 1) To capture customer information and share it with other business function
- 2) To analyse customer data for marketing purposes
- 3) Other reasons
- 4) Don't know (exclusive)

**B2.1 (ask if B2≠4) Will your organisation be more or less likely to (if B2=1 is selected use: use, otherwise use: start using) CRM to capture and share information if the ePrivacy Regulation is enacted?**

- 1) More likely
- 2) Less likely
- 3) Don't know

**B2.2 (ask if B2≠4) Will your organisation be more or less likely to (if B2=2 is selected use: use, otherwise use: start using) CRM for marketing purposes if the ePrivacy Regulation is enacted?**

- 1) More likely
- 2) Less likely
- 3) Don't know

**B3 (ask all) Does your organisation analyse extremely large, multi-user data sets, commonly referred to as "big data"?**



- 1) Yes
- 2) No
- 3) Don't know

**B3.1 (ask if B3=1) What proportion of your organisation's profit is dependent on analysis of big data? Don't worry about being precise.**

\_\_\_\_\_ %

**B4 (ask if B3=1) Which sources of big data does your organisation analyse?**

(multiple answers possible)

- 1) Data from its own smart devices or sensors
- 2) Geolocation of portable devices
- 3) Social media
- 4) Other sources
- 5) Don't know (exclusive)

**B4.1 (ask if B4≠5) Will your organisation be more or less likely to (if B4=1 is selected use: analyse, otherwise use: start analysing) big data from smart devices & sensors if the ePrivacy Regulation is enacted?**

- 1) More likely
- 2) Less likely
- 3) Don't know

**B4.2 (ask if B4≠5) Will your organisation be more or less likely to (if B4=2 is selected use: analyse, otherwise use: start analysing) big data from geolocation of portable devices if the ePrivacy Regulation is enacted?**

- 1) More likely
- 2) Less likely
- 3) Don't know

**B4.3 (ask if B4≠5) Will your organisation be more or less likely to (if B4=3 is selected use: analyse, otherwise use: start analysing) big data from social media if the ePrivacy Regulation is enacted?**

- 1) More likely
- 2) Less likely
- 3) Don't know

### Turnover and profit

**T1 (ask all) Can you estimate what percentage of your organisation's turnover is dependent, either directly or indirectly, on electronic transfers of data? Don't worry about being precise.**

\_\_\_\_\_ %

**T2 (ask all) How would the ePrivacy Regulation impact turnover that is dependent on electronic communication?**

- 1) It would increase (prompt T2\_up: Can you estimate by how much percent turnover would increase? Don't worry about being precise. \_\_\_\_%)
- 2) It would stay about the same
- 3) It would decrease (prompt T2\_down: Can you estimate by how much percent turnover would decrease? Don't worry about being precise. \_\_\_\_%)
- 4) Don't know

**T3 (ask all) Can you estimate what percentage of your organisation's profit is dependent, either directly or indirectly, on electronic transfers of data? Don't worry about being precise**

\_\_\_\_%

**T4 (ask all) How would the ePrivacy Regulation impact profit that is dependent on electronic communication?**

- 1) It would increase (prompt T4\_up: Can you estimate by how much percent profit would increase? Don't worry about being precise. \_\_\_\_%)
- 2) It would stay about the same
- 3) It would decrease (prompt T4\_down: Can you estimate by how much percent profit would decrease? Don't worry about being precise. \_\_\_\_%)
- 4) Don't know

**Legal aspects**

**L1 (ask all) How familiar are you with the General Data Protection Regulation (GDPR)?**

- 1) Not at all familiar
- 2) Somewhat familiar
- 3) Reasonably familiar
- 4) Very familiar

**L2 (ask if L1=3 OR L1=4) To which extent do you agree with the following statement.**

**"The ePrivacy Regulation is not in line with the GDPR and creates uncertainty about data protection rules."**

- 1) Completely disagree
- 2) Somewhat disagree
- 3) Neither agree nor disagree
- 4) Somewhat agree
- 5) Completely agree

**L2.1 (ask if L2=4 OR L2=5) To what extent do you agree with the following statement.**

**"Uncertainty created by the ePrivacy Regulation will stifle development of new technology."**

- 1) Completely disagree
- 2) Somewhat disagree
- 3) Neither agree nor disagree
- 4) Somewhat agree
- 5) Completely agree

**L2.2 (ask if L2.1=4 OR L2.2=5) What technologies are most impacted by the ePrivacy Regulation?**

[\_\_\_\_\_]

**L3 (ask if L1=3 OR L1=4) How familiar are you with the concept of “legitimate interest” in the GDPR?**

- 1) Not at all familiar
- 2) Somewhat familiar
- 3) Reasonably familiar
- 4) Very familiar

**L3.1 (ask if L3=3 OR L3=4) The ePrivacy Regulation does not allow processing based on legitimate interest. In what areas might your organisation prefer to rely on legitimate interest, if it were available in the ePrivacy Regulation? Select all that apply.**

**(Multiple answers possible)**

- 1) Delivering products or services requested by the customer
- 2) Delivering products or services expected from us, but not requested, by the customer
- 3) Developing new products or services
- 4) Improving our products or services
- 5) Improving marketing to the customer
- 6) Other
- 7) None of the above (exclusive)
- 8) Don't know (exclusive)

**L4 (ask all) Does your organisation use electronic transfer of data in a business-to-business (B2B) setting?**

- 1) Yes
- 2) No
- 3) Don't know

**L4.1 (ask if L4=1) Do you think that this communication will be impacted by the ePrivacy Regulation?**

- 1) Yes
- 2) No
- 3) Don't know

**L4.2 (ask if L4.1=1) Will the ePrivacy Regulation make electronic B2B communication more or less difficult compared to the situation now?**

- 1) More difficult
- 2) About equally difficult
- 3) Less difficult
- 4) Don't know

**General enterprise information**

**G1 (ask all) Is your organisation registered in the European Union?**

- 1) Yes
- 2) No
- 3) Don't know

**G1.1 (ask if G1=1) In which Member State is organisation registered?**

- |                   |                 |                    |
|-------------------|-----------------|--------------------|
| 1) Austria        | 11) Germany     | 21) Poland         |
| 2) Belgium        | 12) Greece      | 22) Portugal       |
| 3) Bulgaria       | 13) Hungary     | 23) Romania        |
| 4) Croatia        | 14) Ireland     | 24) Slovakia       |
| 5) Cyprus         | 15) Italy       | 25) Slovenia       |
| 6) Czech Republic | 16) Latvia      | 26) Spain          |
| 7) Denmark        | 17) Lithuania   | 27) Sweden         |
| 8) Estonia        | 18) Luxembourg  | 28) United Kingdom |
| 9) Finland        | 19) Malta       |                    |
| 10) France        | 20) Netherlands |                    |

**G2 (ask all) In what sector does your organisation operate?**

- |  |  |
|--|--|
| 1) Accommodation                                 | 8) Professional, scientific and technical activities                       |
| 2) Administrative and support service activities | 9) Real estate activities  |
| 3) Construction                                  | 10) Transportation and storage   |
| 4) Food and beverage service activities          | 11) Utilities (Electricity, gas, steam, air conditioning and water supply) |
| 5) ICT   | 12) Wholesale and retail trade   |
| 6) Information and communication                 | 13) Other  |
| 7) Manufacturing                                 |  |

**G3 (ask all) Including yourself, approximately how many full-time employees are employed by your organisation in total in the EU?**

- |                |                |                   |
|----------------|----------------|-------------------|
| 1) 1 (just me) | 6) 20 to 34    | 11) 500 to 999    |
| 2) 2           | 7) 35 to 49    | 12) 1,000 or more |
| 3) 3 to 5      | 8) 50 to 99    | 13) Don't know    |
| 4) 6 to 9      | 9) 100 to 249  |                   |
| 5) 10 to 19    | 10) 250 to 499 |                   |

**G4 (ask all) What was the turnover of your company in the last financial year? Please give your best estimate if you are unsure.**

- |                                |                                    |
|--------------------------------|------------------------------------|
| 1) First year of trading       | 12) €10 million to €19.9 million   |
| 2) Less than €25,000           | 13) €20 million to €34.9 million   |
| 3) €25,000 to €49,999          | 14) €35 million to €49.9 million   |
| 4) €50,000 to €99,999          | 15) €50 million to €99.9 million   |
| 5) €100,000 to €249,999        | 16) €100 million to €249.9 million |
| 6) €250,000 to €499,999        | 17) €250 million to €499.9 million |
| 7) €500,000 to €999,999        | 18) €500 million to €749.9 million |
| 8) €1 million to €1.9 million  | 19) €750 million to €999.9 million |
| 9) €2 million to €2.9 million  | 20) €1 billion or more             |
| 10) €3 million to €4.9 million | 21) Don't know                     |
| 11) €5 million to €9.9 million | 22) Prefer not to answer           |

**G5 (ask all) Do you wish to make any other comment?**

[\_\_\_\_\_]

## A3.2 Telecommunication survey

Note on colour coding:

- Text in italics is text seen by respondents but not related to questions directly
- Text in bold are the questions
- Text in red are scripting instructions
- Text in normal font are question options

### Introduction

*A new regulation concerning protection of data transmitted through electronic communication, the ePrivacy Regulation, is currently being debated in European Parliament. If enacted according to the current timeframe, it will come into effect on May 25<sup>th</sup> 2018, as a companion to the General Data Protection Regulation (GDPR) and will repeal the Current ePrivacy Directive (2002/58/EC).*

*This survey investigates the impacts that the ePrivacy Regulation can have on European businesses.*

*For more information on the proposed ePrivacy Regulation, click [HERE](#).*

*For more information on London Economics, click [HERE](#).*

### Filtering questions

**F1 (ask all) Does your organisation operate in the European Union?**

- 1) Yes
- 2) No (close survey)
- 3) Don't know (close survey)

**F2 (ask all) How familiar are you with the proposed ePrivacy Regulation?**

- 1) Not at all familiar (close survey)
- 2) Somewhat familiar
- 3) Reasonably familiar
- 4) Very familiar

**Metadata processing****M1 (ask all) Does your organisation process metadata obtained in the provision of electronic communication services?**

- 1) Yes
- 2) No
- 3) Don't know

**M2 (ask all) Will your organisation be more or less likely to (if M1=1 is selected use: process, otherwise use: start processing) metadata obtained in the provision of electronic communication services if the ePrivacy Regulation is enacted?**

- 1) More likely
- 2) Less likely
- 3) Don't know

**M3 (ask if M1=1) For what purposes does your organisation process metadata obtained in the provision of electronic communication services?**

(Multiple answers possible)

- 1) Technical service delivery
- 2) Technical service improvements
- 3) Customer service improvement
- 4) Investment planning
- 5) Other (please specify) [ \_\_\_\_\_ ]

**M4 (ask if M1=1) Could the same purposes be pursued by processing of metadata that were fully anonymised?**

- 1) Yes
- 2) No
- 3) Don't know

**M5 (ask if M4=2) Which of the purposes could not be pursued by processing of metadata that were fully anonymised?**

(Multiple answers possible)

- 1) Technical service delivery
- 2) Technical service improvements
- 3) Customer service improvement
- 4) Investment planning
- 5) Other (please specify) [ \_\_\_\_\_ ]

**M6 (ask if M3=4) Can you estimate what percentage of your organisation's investment is dependent, either directly or indirectly, on the processing of metadata obtained in the provision of electronic communication services?**

\_\_\_\_\_%

**M6 (ask if M3=4) How would the ePrivacy Regulation impact investment that is dependent on the processing of metadata obtained in the provision of electronic communication services?**

- 1) It would increase (prompt M6\_up: Can you estimate by how much percent investment would increase? Don't worry about being precise. \_\_\_\_%)
- 2) It would stay about the same
- 3) It would decrease (prompt TM6\_down: Can you estimate by much percent investment would decrease? Don't worry about being precise. \_\_\_\_%)
- 4) Don't know

### Turnover and profit

**T1 (ask all) Can you estimate what percentage of your organisation's turnover is dependent, either directly or indirectly, on the processing of metadata obtained in the provision of electronic communication services? Don't worry about being precise.**

\_\_\_\_\_%

**T2 (ask all) How would the ePrivacy Regulation impact turnover that is dependent on the processing of metadata obtained in the provision of electronic communication services?**

- 1) It would increase (prompt T2\_up: Can you estimate by how much percent turnover would increase? Don't worry about being precise. \_\_\_\_%)
- 2) It would stay about the same
- 3) It would decrease (prompt T2\_down: Can you estimate by much percent turnover would decrease? Don't worry about being precise. \_\_\_\_%)
- 4) Don't know

**T3 (ask all) Can you estimate what percentage of your organisation's profit is dependent, either directly or indirectly, on the processing of metadata obtained in the provision of electronic communication services? Don't worry about being precise.**

\_\_\_\_\_%

**T4 (ask all) How would the ePrivacy Regulation impact profit that is dependent on the processing of metadata obtained in the provision of electronic communication services?**

- 1) It would increase (prompt T4\_up: Can you estimate by how much percent profit would increase? Don't worry about being precise. \_\_\_\_%)
- 2) It would stay about the same
- 3) It would decrease (prompt T4\_down: Can you estimate by much percent profit would decrease? Don't worry about being precise. \_\_\_\_%)
- 4) Don't know

### Legal aspects

#### L1 (ask all) How familiar are you with the General Data Protection Regulation (GDPR)?

- 1) Not at all familiar
- 2) Somewhat familiar
- 3) Reasonably familiar
- 4) Very familiar

#### L2 (ask if L1=3 OR L1=4) To which extent do you agree with the following statement.

**"The ePrivacy Regulation is not in line with the GDPR and creates uncertainty about data protection rules."**

- 1) Completely disagree
- 2) Somewhat disagree
- 3) Neither agree nor disagree
- 4) Somewhat agree
- 5) Completely agree

#### L3 (ask if L1=3 OR L1=4) How familiar are you with the concept of "legitimate interest" in the GDPR?

- 1) Not at all familiar
- 2) Somewhat familiar
- 3) Reasonably familiar
- 4) Very familiar

**L3.1 (ask if L3=3 OR L3=4) The ePrivacy Regulation does not allow processing of metadata based on legitimate interest. In what areas might your organisation prefer to rely on legitimate interest, if it were available in the ePrivacy Regulation? Select all that apply.**

(Multiple answers possible)

- 1) Technical service improvements
- 2) Customer service improvement
- 3) Investment planning
- 4) Other (please specify) [ \_\_\_\_\_ ]
- 5) None of the above (exclusive)
- 6) Don't know (exclusive)



## General enterprise information

### G1 (ask all) Is your organisation registered in the European Union?

- 1) Yes
- 2) No
- 3) Don't know

#### G1.1 (ask if G1=1) In which Member State is organisation registered?

- |                   |                 |                    |
|-------------------|-----------------|--------------------|
| 1) Austria        | 11) Germany     | 21) Poland         |
| 2) Belgium        | 12) Greece      | 22) Portugal       |
| 3) Bulgaria       | 13) Hungary     | 23) Romania        |
| 4) Croatia        | 14) Ireland     | 24) Slovakia       |
| 5) Cyprus         | 15) Italy       | 25) Slovenia       |
| 6) Czech Republic | 16) Latvia      | 26) Spain          |
| 7) Denmark        | 17) Lithuania   | 27) Sweden         |
| 8) Estonia        | 18) Luxembourg  | 28) United Kingdom |
| 9) Finland        | 19) Malta       |                    |
| 10) France        | 20) Netherlands | I                  |

### G2 (ask all) Including yourself, approximately how many full-time employees are employed by your organisation in total in the EU?

- |                |                |                   |
|----------------|----------------|-------------------|
| 1) 1 (just me) | 6) 20 to 34    | 11) 500 to 999    |
| 2) 2           | 7) 35 to 49    | 12) 1,000 or more |
| 3) 3 to 5      | 8) 50 to 99    | 13) Don't know    |
| 4) 6 to 9      | 9) 100 to 249  |                   |
| 5) 10 to 19    | 10) 250 to 499 |                   |

### G3 (ask all) What was the turnover of your company in the last financial year? Please give your best estimate if you are unsure.

- |                                |                                    |
|--------------------------------|------------------------------------|
| 1) First year of trading       | 12) €10 million to €19.9 million   |
| 2) Less than €25,000           | 13) €20 million to €34.9 million   |
| 3) €25,000 to €49,999          | 14) €35 million to €49.9 million   |
| 4) €50,000 to €99,999          | 15) €50 million to €99.9 million   |
| 5) €100,000 to €249,999        | 16) €100 million to €249.9 million |
| 6) €250,000 to €499,999        | 17) €250 million to €499.9 million |
| 7) €500,000 to €999,999        | 18) €500 million to €749.9 million |
| 8) €1 million to €1.9 million  | 19) €750 million to €999.9 million |
| 9) €2 million to €2.9 million  | 20) €1 billion or more             |
| 10) €3 million to €4.9 million | 21) Don't know                     |
| 11) €5 million to €9.9 million | 22) Prefer not to answer           |

### G4 (ask all) Do you wish to make any other comment?

[\_\_\_\_\_]



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