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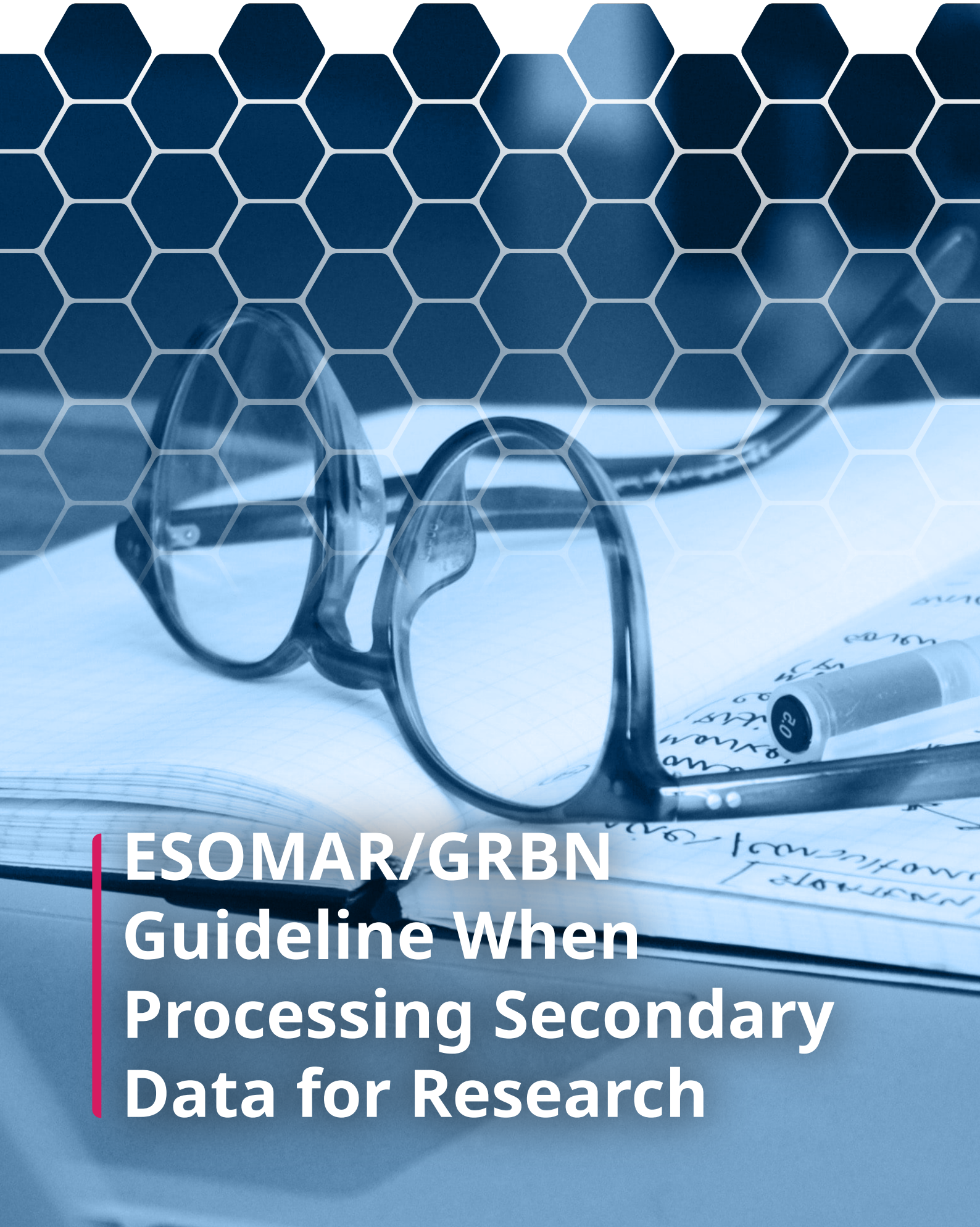

ESOMAR/GRBN Guideline When Processing Secondary Data for Research

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1 Introduction

Throughout its history market, opinion and social research and data analytics (hereafter "research") has delivered information and insights about people's behaviour, needs, and attitudes to inform decision making by providers of goods and services, governments, individuals, and society at large. In doing so they have relied primarily on data collected through direct interaction with and/or observation of participating individuals.

Over about the last 20 years we have seen a digital revolution—dramatic increases in the ability to collect, store, process, and analyse information, the global Internet, social media, mobile technology—that is radically changing the way people live and work. As a result, research is being transformed by an increased reliance on data already available in digital form. The role of the researcher is evolving from interviewer/ data collector to data curator, focusing more on organising and integrating data. The research and insight function is extending beyond primary data collection and analysis to managing, synthesizing and analysing data from a diverse range of sources, often evolving the use of new analytic concepts and techniques. The result is an entirely new approach to research wherein researchers assemble and analyse large databases to uncover patterns and deliver powerful new insights.

At the same time, there is increasing public concern about the importance of individuals (hereafter "data subjects") being able to determine when their personal data is collected, how it is used, and for what purposes, creating a pressing need for clear ethical and professional guidance on how to handle that data responsibly.

Despite these changes, researchers continue to have an ethical responsibility to decision-makers and other data users to be open and fully transparent about the specifics of the data processing and analysis. Such transparency is the only way for users of the research to judge its quality and determine whether it is fit for purpose.

2 Purpose And Scope

This guideline describes the ethical responsibilities of researchers, regardless of the type or organisation in which they work, when relying on secondary data, meaning data that already exists. This data may come from a wide variety of sources including transactional databases created when data subjects interact with companies and government agencies; social media networks; syndicated data; sensors and scanners that comprise the Internet of Things; data aggregations constructed from a variety of sources; and many other similar types of data. [1]

Although this guideline is primarily directed at researchers, the audience also includes their clients and other data users to ensure that they are fully aware of their responsibilities and to set expectations about what is and is not possible given established ethical and legal requirements.
The requirements and best practices described herein are not meant to reflect the legal requirements of any specific country or region. Rather, they are designed to complement the ICC/ESOMAR International Code on Market, Opinion, and Social Research and Data Analytics, existing ESOMAR/GRBN guidance documents, and the codes and guidelines of national associations worldwide. As such, they should not be consulted in isolation.

[1] *Not included are forms of passive data collection in which a researcher interacts with data subject, for example, to gain their consent to observe and record behavior. See the ESOMAR/GRBN Guideline for Researchers and Clients Involved in Primary Data Collection.*

This ESOMAR/GRBN guidance also does not take precedence over national law. Researchers responsible for international projects should take this guideline's provisions as a minimum requirement and fulfil any other responsibilities set down in law or by nationally agreed standards. It is not legal advice and must not be relied upon as such. It remains the responsibility of researchers to keep abreast of any legislation which might affect their research and to ensure that all those involved are aware of and agree to abide by its requirements.

Throughout this document the word "must" is used to identify mandatory requirements. We use the word "must" when describing a principle or practice that researchers are obliged to follow. The word "should" is used when describing implementation. This usage is meant to recognise that researchers may choose to implement a principle or practice in different ways depending on the design of their research.

3 Definitions

For the purpose of this document these terms have the following specific meanings:

API (application programming interface)
A set of definitions on the basis of which a computer programme can communicate with another programme or component, and which can also support access/data exchange internally or externally.

Automated decision-making systems
A rules-based systems that make repetitive management decisions without human intervention.

Children
Individuals for whom permission to participate in research must be obtained from a parent, legal guardian, or responsible adult. Definitions of the age of a child vary substantially and are set by national laws and self-regulatory codes. In the absence of a national definition, a child is defined as being 12 and under and a "young person" as aged 13 to 17.

Client
Any individual or organisation that requests, commissions, or subscribes to all or any part of a research project.

Consent
Freely given and informed indication of agreement by a person to the collection and processing of their personal data.

Data analytics
Means the process of examining data sets to uncover hidden patterns, unknown correlations, trends, preferences, and other useful information for research purposes.

Data provenance
The origin of a piece of data and tracking of its movement across databases.

Data subject
Any individual whose personal data is used in research.

Deductive disclosure
The inference of a data subject's identity via cross-analysis, small samples or through combination with other data (such as a client's records or secondary data in the public domain).

Harm
Tangible and material harm (such as physical injury or financial loss), intangible or moral harm (such as damage to reputation or goodwill), or excessive intrusion into private life, including unsolicited personally targeted marketing messages).

Non-research activity
Taking direct action toward an individual whose personal data was collected or analysed with the intent to change the attitudes, opinions or actions of that individual.

Passive data
The collection of personal data by observing, measuring or recording an individual's actions or behaviour.

Personal data (sometimes referred to as personally identifiable information or PII)
Any information relating to a natural living person that can be used to identify an individual, for example by reference to direct identifiers (such as a name, specific geographic location, telephone number, picture, sound, or video recording) or indirectly by reference to an individual's physical, physiological, mental, economic, cultural or social characteristics.

Primary data
Data collected by a researcher from or about a data subject for the purpose of research.

Privacy
The right of an individual to be free from intrusion or interference and assumes that the individual has the ability to control, edit, manage and delete information about themselves, and to decide how and to what extent such information is communicated to others.

Privacy impact assessment (sometimes referred to as PIA or DPIA)
A process to identify and mitigate data subjects' privacy risks.

Profiling
The collection and processing of personal data with the intent to analyse or predict a data subject's performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements in order to take direct action toward the data subject for a non-research purpose.

Research, which includes all forms of market, opinion and social research and data analytics
The systematic gathering and interpretation of information about individuals and organisations. It uses the statistical and analytical methods and techniques of the applied social, behavioural and data sciences to generate insights and support decision-making by corporations, governments, non-profit organisations and the general public.

Researcher
Any individual or organisation carrying out or acting as a consultant on research, including those working in client organisations and any subcontractors used.

Secondary data
Data that has already been collected and is available from another source.

Segmentation
An analytic technique aimed at dividing a broad target population into subsets or groups of individuals or organisations who have, or are perceived to have, common needs, interests, behaviours, and priorities,

and then designing and implementing strategies to interact with them. Segmentation differs from profiling in that its focus is on well-defined groups of people with shared characteristics rather than individual data subjects.

Sensitive data ("Special Category data" in some jurisdictions)

Specific types of personal data that local laws require be protected at the highest possible level from unauthorized access in order to safeguard the privacy or security of an individual or organisation, and which may require additional explicit permission from the data subject before processing. The designation of sensitive data varies by jurisdiction and can include but is not limited to a data subject's racial or ethnic origin, health records, biometric and genetic data, sexual orientation or sexual habits, criminal records, political opinions, trade union membership, religious or philosophical beliefs. It can also include other types of data (not necessarily legally defined) such as location, financial information, and illegal behaviours such as the use of regulated drugs or alcohol.

Vulnerable individuals

Individuals who may have limited capacity to make voluntary and informed decisions, including those with cognitive impairments or communication disabilities.

Web scraping (sometimes called crawling or spidering)

The use of software to extract data from websites.

4 Key Principles

Throughout the long history of market, opinion, and social research and data analytics researchers have recognized that individual data subjects have an inherent right to determine when and how their personal data is collected and used. To this end our work has been governed by three overriding principles:

- *When collecting personal data from data subjects for the purpose of research, researchers must be transparent about the information they plan to collect, the purpose for which it will be collected, with whom it might be shared, and in what form.*
- *Researchers must ensure that personal data collected and used in research is thoroughly protected from unauthorised access and/or use and not disclosed without the consent of data subjects.*
- *Researchers must always behave ethically, comply with all applicable laws and regulations, and not do anything that might harm data subjects or damage the reputation of market, opinion and social research and data analytics.*

These principles[2] form a foundation of trust on the part of the general public, whose data researchers rely on, and the clients who commission research to help them make better business decisions.They remain as important today as at any time in our long history.

Secondary data challenges researchers to adapt to a changing environment in which they have less control over the terms of collection and the consent mechanism used may not be sufficiently robust or not present at all. At the same time, they also must ensure that any personal data contained in secondary data and used in research is not disclosed without a legal basis and that the use of personal data does not result in harm or other adverse consequences.

[2] *The Organisation for Economic Cooperation and Development (OECD) espouses a similar set of privacy principles that comprise a privacy framework reflected in many existing and emerging privacy and data protection laws worldwide. See OECD Privacy Framework for details.*

Responsibilties To Data Subjects

5 Study Design

Researchers have ethical responsibilities to those data subjects whose personal data they rely on and fulfilling those obligations as members of a self-regulated sector begins at the design stage. Some guidance may be provided by the regulatory and data protection requirements of those countries where research will be conducted. However, there is considerable variation in regulatory requirements from country to country, with some being more restrictive than others and some having no data protection laws at all. While researchers must be aware of and adhere to the laws in those countries where they collect or process data, meeting their ethical responsibilities requires more than simply complying with applicable laws. One effective way of doing so is through practices often described as "privacy by design."

5.1 Privacy by Design

The essence of privacy by design is implementation of a process that emphasises an upfront, proactive, end to end project design process in which privacy is the default setting. As applied here it has three main components: (a) a foundation of clearly-articulated privacy principles; (b) a process (e.g., a privacy impact assessment) for assessing the privacy risks in a specific project design; and (c) an infrastructure of information security practices and privacy protection approaches, policies and procedures that mitigate those risks.

One of the foundational principles of privacy by design and global privacy frameworks worldwide is data minimization, loosely defined as the practice of limiting the collection of personal data to that which is directly relevant and necessary to accomplish a specific purpose. Practical considerations of time and money encourage data minimization in primary data collections. When working with secondary data, the often vast amounts of data available and the computing power to process it sometimes leads researchers to focus on amassing "all the data," leaving judgments about what data is relevant to the analysis stage. As a consequence, the need for well-thought out and robust data protection practices increases substantially when working with large amounts of secondary data. A rigorous privacy impact assessment is an essential tool for doing so.

5.2 Privacy Impact Assessments

A carefully conducted privacy impact assessment or PIA (also referred to as Data Protection Impact Assessment-DPIA) ensures that a specific study design includes required protections of data subjects' personal data and privacy so that they do not experience adverse consequences or harms as a result of their personal data being used for research. Simply stated, a PIA is a process to systematically identify and mitigate risks to data subjects' personal data and privacy over a project's life cycle. It typically involves four steps:

1. *Chart the planned flow of information through the project and all organisations involved.*
2. *Identify risks and assess their severity and likelihood.*
3. *Develop and evaluate solutions that mitigate any identified risks.*
4. *Integrate risk mitigation solutions into organisational processes and plans.*

5.3 Additional Guidance

For a more detailed treatment of PIAs consult the ESOMAR/GRBN guideline, Duty of Care: Protecting Research Data Subjects from Harm. In addition, the ESOMAR Data Protection Checklist provides a step-by-step evaluation process to identify gaps and develop solutions in an organisation's information security infrastructure and practices. Researchers should consult it as part of the risk mitigation phase of a PIA.

6 Establishing Grounds For Processing Personal Data

Data protection frameworks worldwide increasingly require that individuals and organizations of all kinds establish clear and compelling grounds before collecting and/or processing personal data. These requirements apply to researchers as well. Even in jurisdictions where no legal requirements exist, researchers have a responsibility to respect the privacy and rights of data subjects. This requires that they establish some basis for collecting and/or processing any personal data.

Implicit in this requirement is the need to identify the holder of the data to be processed and to secure permission to process the data. Researchers must not access or scrape personal data from websites or other online sources without the knowledge and consent of the data holder.

6.1 Determining provenance

Before accessing any secondary data source containing personal data researchers must first determine the provenance of individual data items, i.e., the origins of data and its subsequent processing, in as much detail as possible. This can be difficult when using a database constructed from multiple sources, where a number of merging, linking, transforming, or aggregating steps may already have been performed. The difficulty will vary depending on whether the data is first, second or third party. For example, when dealing with first and second party data the holder of the data is often easy to identify and the circumstances of collection determined. When working with third party data, which generally is multi-sourced, even establishing provenance can be a major undertaking. Data brokers, for example, typically build profiles of individual consumers from dozens of sources, making it difficult to verify what data subjects were told at the time of collection and what limitations may have been placed on its use.

One straightforward method for doing so is to acquire and review for each data source the Terms of Use (ToU), privacy notice, or other similar document provided to data subjects at the time of collection. Researchers must only use secondary data sources containing or constituting personal data that are adequately supported by information that specifies how the data was collected, under what terms, and for what purpose. Above all else, researchers must verify that the personal data was collected legally and with the knowledge of the data subject. Only then can the researcher determine whether the data can be processed for a research purpose.

6.2 Choosing specific grounds

While the requirement to establish grounds for processing personal data is increasingly common worldwide there are often significant differences across jurisdictions in terms of available grounds, how to qualify, and what specific data collection and/or processing activities are permitted. Therefore, researchers must fully understand the requirements within all jurisdictions applicable to the personal data being processed and ensure that they comply with the relevant law.

6.2.1 Notification and consent

When engaged in primary data collection researchers have generally relied on consent from data subjects before collecting and processing any form of personal data. This includes being transparent about the information they plan to collect, the purpose for which it will be collected, how it will be protected, with whom it might be shared and in what form.

When dealing with secondary data, the rigour of consent practices as expressed in ToU varies widely. Some may have many of the same elements as the classic research consent process, while others may have important missing elements. In addition, data subjects may have agreed to ToU without carefully reading prior to indicating their agreement.

If a researcher intends to rely on consent as grounds for processing there must be sufficient information to determine that:

- *The data was legally and transparently collected without deception or in ways not obvious or reasonably discernible and anticipated by the data subject.*
- *The data subject was required to opt-in to sharing personal data.*
- *The purpose or purposes to which the data would be put was clearly specified.*
- *Use of the data for research was not specifically excluded in either the ToU or privacy notice provided at the time of collection.*
- *Any requests from individual data subjects that their data not be used for purposes other than those described at the time of collection are honored.*

Failing to meet any one of these five conditions requires that researchers consider other grounds.

6.2.2 Legitimate Interest

Legitimate interest provides an alternative ground to consent that can be used for processing personal . Legitimate interest can be a suitable ground for processing where the personal data is being used in a manner that data subjects would reasonably expect, and the processing is unlikely to have a significant impact on their privacy.

Legitimate interest explicitly considers a balancing of the interests of all stakeholders – the data subjects, the data holder, the client or other end user and even society at large. Individual stakeholders may have differing interests in processing the data to discover new and potentially useful insights, and those interests may conflict. As a consequence, researchers must balance these competing interests with the greatest weight being given to the interests of data subjects. This translates to a requirement for an especially rigorous PIA and strong privacy and data protection measures to guard against any potential harm to data subjects.

When determining whether legitimate interest can be used, researchers must ensure that their interests or those of their client are not being given priority over the fundamental rights and freedoms of data subjects. When considering using legitimate interest as a basis for processing, researchers must follow and document a three-stage approach addressing these criteria:

- *Purpose – is a legitimate interest being pursued?*
- *Necessity – is the processing necessary to fulfill the purpose?*
- *Balancing – do the data subjects' rights and interests override the stakeholders' interest?*

The process of considering and weighing the interests of data subjects when considering the use of legitimate interest must be documented in some way, for example, as a Legitimate Interest Assessment. Legitimate interest must not be used for processing of sensitive (sometimes called 'special category of personal data) or when automated decision making is used.

6.2.3 Compatible Purpose

Compatible purpose also provides alternative grounds. The use of secondary data often involves a change of purpose from what was presented to data subjects at the time of collection. In some jurisdictions, a change in purpose may require the consent of those whose data was collected. This can be challenging and may require that the researcher contact data subjects with the details of the new purpose. In others, it may only be necessary to post a notice on the data controller's website, providing data subjects with the opportunity to withdraw consent.

There are instances in which a change of purpose may not require gaining consent for the new purpose. One is straightforward: "by the authority of law." Compatible purpose, where the new purpose is similar, i.e. compatible, is another.

Establishing compatible purpose requires careful consideration of the relationship between the original purpose at the time of collection and the new purpose, balanced by the reasonable expectations of data subjects about potential future uses of the data. It also assumes that appropriate mitigating measures are in place to ensure fair processing and limiting any impacts on the privacy of data subjects.
As an example, online retailers typically collect information about customer purchase behaviour, payment methods, response to promotions, and other personal data needed for product delivery and support. It is reasonable to assume that the retailer will use that data to improve its understanding of what products to offer, at what price, how to best to promote them, etc. In this instance use of the data is compatible with the original purpose of collection. This may include the delivery of targeted marketing messages to individual customers who have opted in to receive them.

In some jurisdictions, statistical research is considered a compatible purpose. Even in such cases, researchers must observe the privacy protection safeguards described in this guideline.

6.2.4 Contract

Contract also can be used as a basis for processing personal data. Researchers can use this basis if they need to process a data subject's personal data in order to fulfill contractual obligations they have towards the data subject. While this has limited application in the research context it can be applicable for the administration and management of access panels.

6.2.5 Public Task and Interest

Processing of personal data that is necessary for the performance of a task in the public interest or for official functions is another basis that researchers may consider. The conditions for using this basis tend to be tightly defined and vary between countries. As a result, it is primarily used for public sector research and/or to a lesser extent private sector research which clearly demonstrates public interest.

7 Data Security

Researchers must ensure that during processing (a) the privacy of data subjects is fully protected and (b) no errors are introduced during processing and analysis. In both cases researchers must have in place a set of procedures and standards designed to accomplish these goals.

7.1 Privacy Protection

The ESOMAR Data Protection Checklist provides a road map to an infrastructure of technologies, standards and processes designed to prevent the inadvertent disclosure or loss of personal data. Researchers should use it as an assessment tool of their privacy protection program to identify gaps and develop solutions.

A key concern is that personal data is not disclosed to clients. Unless applicable privacy laws and/or regulations stipulate a higher requirement, researchers must only communicate a data subject's personal data to a client under the following conditions:

- *the data subject has given explicit consent and*
- *the purpose is for research only.*

Further, it is essential that researchers obtain from clients a written guarantee that the client will not

attempt to re-identify participants unless the above conditions are met. For further discussion consult the ESOMAR/GRBN Guideline on Duty of Care: Protecting Research Data Subjects from Harm.

Researchers also must ensure that any personal data shared with a subcontractor be limited to what is required to perform the subcontracted task(s) and that the subcontractor has the necessary information security procedures in place to protect the data. The subcontractor's responsibility for data protection must be clearly documented and agreed.

7.2 Documentation

Researchers must fully document the specific processing steps performed including any cleaning, merging with other data sources, weighting, imputation (if used) and specific analyses undertaken. The documentation should be specific enough for a data user to understand how the data may have been altered in the course of processing. For further discussion see section 8.3 below.

Responsibilities To Clients And Other Data Users

8 Transparency

8.1 Project Design

They must design their research to meet the objectives, specifications and quality proposed and contractually agreed. Researchers must be transparent about the way in which research is to be executed from beginning to end. This information typically is communicated to clients at the proposal stage, and then modified as the work progresses. The ISO standard, ISO 20252:2019 - Market, opinion and social research, including Insights and Data Analytics -- Vocabulary and service requirements, provides a detailed list of project design features that should be disclosed to clients and other data users at the proposal stage and updated as the research unfolds. Adherence to the requirements set forth should be followed to ensure full transparency of the specific data used in the research and analyses to be performed.

8.2 Subcontracting

Researchers must inform clients, prior to work commencing, when any part of the work is to be subcontracted outside the researcher's own organisation. On request, clients must be told the identity of any such subcontractor.

Researchers are also required to ensure that any personal data shared with a subcontractor be limited to what is required to perform the subcontracting task(s); that the subcontractor has the necessary data security procedures in place to protect the data; and that the subcontractor's responsibilities for data protection are clearly documented and agreed.

8.3 Documentation

For research to have value it must be used and acted upon, and it only will be acted upon when a data user accepts the validity of the data, the analyses performed, and the accuracy of its outcomes. Researchers must fully document the specific processing and analysis steps performed including any cleaning, merging with other data sources, weighting, imputation (if used) and specific analyses undertaken. The documentation should be specific enough for a data user to understand how the data may have been altered in the course of the analysis.

When working with primary data collections such as surveys and focus groups, there are a broad set of familiar metrics that can be relied upon, coupled with a disciplined approach to measurement that researchers and clients alike mostly understand. The requirements laid out in ISO 20252 ensure a level

of transparency that enable clients and other data users to make informed judgements about validity and fitness to purpose in the traditional primary research setting. Those same requirements apply when traditional analytics are used with secondary data. See the ESOMAR/GRBN Guideline on Primary Data Collection for details on what researcher must share with clients at the conclusion of the research.

The increasing use of newer algorithmic analytics such as machine learning poses a new set of challenges. While these techniques are often described as "opaque" or "black box," many of the traditional metrics still apply.

At a minimum, researcher must document:

- *the name of the organization that funded the research, the organization that conducted it, and any subcontractors used;*
- *the research objectives;*
- *definition of the target population;*
- *the data sources used and why;*
- *a list of the data items included and their source, or, if imputed, the method used;*
- *methods of statistical analysis, where applicable;*
- *where data was combined from multiple sources, the techniques used and how their accuracy was assessed;*
- *where appropriate, methods used to edit or clean the data;*
- *an assessment of the level of missingness in the data; and*
- *the frequency and process for evaluating the reliability, accuracy, and validity of the analysis.*

Researchers also should consider the following::

- *identify, assess, and address the risks associated with any complexities and nature of the research undertaken;*
- *include a statement of substantive limitations affecting the validity of findings.*
- *identify the needs and expectations of interested parties, and assure them that their requirements are considered (e.g., clients, communities, regulators);*
- *provide clarity, transparency, identification, and traceability to enable audit and replication; and*
- *carefully document any methods that are known or suspected to produce bias.*

8.4 Machine Learning

There is an additional set of reporting requirements when machine learning is used. The typical goal of a machine learning exercise is to construct a model capable of classifying new incoming data, often to make predictions. The generally accepted method for assessing the accuracy of these classifications or predictions is to develop and submit a series of well-designed test samples from which accuracy metrics can be computed and evaluated. These metrics include but are not limited to classification accuracy, logarithmic loss, confusion matrix, area under curve, F1 score, and mean absolute error.

Responsibilities To The General Public

9 Publishing Results

When a client plans to publish the results of a research project, both the client and the researcher have a responsibility to ensure that the published results are not misleading. To that end, clients are strongly encouraged to consult with the researcher on the form and content of publication of the findings. Researchers also must be prepared to make available on request technical information sufficient to assess the validity of published findings.

Researchers must not allow their name to be associated with the dissemination of conclusions from a market research project unless those conclusions are adequately supported by the data.

10 References

11 Project Team