



Obligation in Finnish records and information management laws

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Abstract

This article examines the interaction between recordkeeping concepts and deontic modality in expressing obligations in selected Finnish records and information management (RIM) laws, translated into English by the authorities. It identifies which recordkeeping concepts appear in deontic contexts, their discoverability, and how their meanings differ between legal texts and terminologies. Using qualitative and quantitative methods, the study maps the frequency of relevant terms, codes legislative excerpts, and compares conceptual usage across legal and recordkeeping frameworks. Findings reveal inconsistent use of recordkeeping concepts and syntactic complexity that obscures their connection to modality expressions. The study recommends interdisciplinary collaboration in legislative drafting, development of nationally adapted yet internationally informed terminologies, machine-readable legal texts, and clearer distinctions between types of information—particularly in public authorities—to improve legal clarity, enforceability, and automation in multilingual digital systems. The study also elucidates structural and semantic factors that may hinder the interpretation and implementation of legal mandates. Although grounded in the Finnish context, the findings are transferable and offer insights for jurisdictions facing similar challenges in aligning legal language with digital recordkeeping practices.

Keywords Deontic modality · Law · Obligation · Recordkeeping · Records and information management

Introduction

The implementation of records and information management (RIM) legislation within information systems presents significant challenges, primarily due to the complexity and breadth of legal texts, which hinder the identification of specific

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obligations and their accurate mapping to information objects. Deontic modalities—linguistic structures that express rules, rights, prohibitions, and obligations—are central to the articulation of legal norms (Biel 2014; Li et al. 2016). These expressions are shaped by cultural and linguistic contexts, as well as by legislative drafting and translation practices (Kordić 2020; Koskinen 2000; Nurmi and Kivilehto 2019). This study is based on the premise that public authorities must fully comply with the binding provisions of RIM legislation. Accordingly, it is essential to understand how deontic expressions interact with core recordkeeping concepts.

Focusing on the Finnish context, this study investigates how recordkeeping-related terminology and expressions of obligation—particularly those reflecting deontic modality—are employed in selected records and information management (RIM) laws. It examines the frequency and syntactic function of key concepts and modality verbs, especially in constructions where recordkeeping terms serve as objects of obligation. The analysis also explores the detectability of such constructions in legislative texts and considers potential divergences in the use and interpretation of recordkeeping terminology between legislative language and professional discourse. Finland was selected as the case study due to its bilingual legal system, advanced digital governance infrastructure, and strong legislative emphasis on transparency and accountability. These features make it a particularly relevant setting for exploring how legal language and recordkeeping obligations are operationalized in information systems.

Language plays a critical role in both legal drafting and scientific communication, directly influencing information management practices. In Finland, laws are drafted in Finnish and translated into Swedish, with both versions holding equal legal authority (Language Act 423/2003; Nurmi and Kivilehto 2019). These versions are binding in courts and in official communications between citizens and authorities (The Constitution of Finland 731/1999). While some laws are unofficially translated into English, these translations are not legally binding. Nevertheless, English functions as the dominant *lingua franca* in international communication, is one of the working languages of the EU Commission and courts (Kordić 2020), and prevails in scientific discourse on RIM. For these reasons, English has been adopted as the language of this study, which analyzes the interaction between modality expressions and recordkeeping concepts in selected Finnish RIM laws.

Although the study is situated in Finland, its findings have broader international relevance. Many jurisdictions face similar challenges in aligning legal obligations with digital recordkeeping practices, particularly in multilingual or translation-dependent legal systems. The insights presented here may inform global efforts to enhance the clarity, consistency, and interoperability of legal and records management frameworks.

Ensuring that the original meaning of key concepts is preserved during legislative drafting and translation is essential. Obligations must be expressed clearly and precisely, especially regarding the information objects to be captured, preserved, destroyed, or archived. The differing requirements for paper-based and digitally born records further complicate the interpretation of recordkeeping terminology (Klareld and Gidlund 2017). The contextual nature of the archival domain is

often overlooked, leading to misinterpretations of core concepts such as “record” and “archive” (Foscarini et al. 2021; Kautto and Hotti 2024). In the Finnish context, ambiguity surrounding the concept of “archiving”—particularly with regard to the timing of archival actions—has led to uncertainty among public authorities concerning their responsibilities for the long-term preservation of digital records. Such cases highlight the risks of terminological inconsistency, particularly when legal texts are translated or adapted for digital environments.

Ambiguous terminology impedes effective communication between stakeholders (Borglund and Engvall 2014) and increases the risk of losing control over the implementation of legal requirements in information systems (Klareld and Gidlund 2017; Klett 2017). If left unaddressed, these issues can have far-reaching consequences (Foscarini et al. 2021). While previous studies have examined deontic expressions from linguistic and legislative perspectives (Li et al. 2016), there remains a lack of research specifically addressing their interaction with recordkeeping concepts in legislative contexts. This article seeks to fill that gap.

The article is organized in six sections. The introduction is followed by background and previous research in Sect. 2. Section 3 outlines the research context, material and methods (a.k.a., an approach), while Sect. 4 presents the findings. Section 5 discusses how recordkeeping concepts have been used in Finnish RIM laws, and whether the choices can be considered successful. Section 6 provides the main conclusions and suggests topics for further research.

Background and previous research

Laws that articulate obligations, prohibitions, and rights (i.e., deontic modality) within the information environment are influenced by the complexity of contexts, cultures, legal systems, languages, and translation scenarios. In Europe, since the era of Roman law, Latin, English, German, and French have significantly shaped the language of legislative texts translated into other languages (Kordić 2020). Legal terminology, including expressions of obligation, along with grammatical structures and the varied meanings of words (e.g., polysemy, synonymy), form a complex system that differs across legal systems, contexts, and time periods. While the legal systems of different countries may vary, their languages can be cognate. Conversely, legal systems may be similar, but linguistic differences exist, this can be when comparing Finland and Sweden, which share a common history (Foscarini et al. 2021; Gardner 2016; Kallberg 2013; Kordić 2020; Nurmi and Kivilehto 2019). Even among English-speaking countries, variations in the English language are evident.

In the EU context, the translation of laws is intrinsically linked to institutionalism and multilingualism. At the European Commission’s translation service, translation is a multi-level and collective process, with different language versions prepared simultaneously by anonymous translators, primarily in English, which can be either informative or authoritative (Biel 2014; Kordić 2020; Koskinen 2000). According to EU guidelines (e.g., DG Translation’s Guide to Documents 2024), all language versions are equally valid and should facilitate communication with the public and authorities, as well as ensure legal certainty in EU member states (Biel 2014; Kordić

2020). However, Koskinen (2000) identifies several paradoxes and challenges, which she terms the illusion of equality, multilingualism, and equivalence. Small languages, such as Finnish, hold only symbolic status, as they are rarely used as source languages, and the equivalence of different languages often pertains only to visual and technical aspects rather than important factors such as text quality, clarity, and comprehensibility. Additionally, some perspectives (e.g., Biel 2014) suggest that multilingualism and the hybridity of EU legislation have led to the emergence of a new language, “eurojargon.”

Deontic modality is a multifaceted concept that can be interpreted from various perspectives and emphases. The existing literature does not converge on a single, universally accepted definition of deontic modality, but rather presents a range of interpretations based on philosophical conceptions of truth or knowledge (see e.g., Li et al. 2016, p. 325). One interpretation posits that deontic modality encompasses patterns and quantifiers of context-sensitive truth conditions that articulate legal obligations, permissions, prohibitions, and rights through auxiliary and main verbs of varying stringency (Biel 2014; Rydzewska-Siemiątkowska 2023; Suikkanen 2018). Guidelines provide specific recommendations for verb usage. The English Style Guide (2014) suggests employing auxiliary verbs such as *would*, *should*, *could*, *must*, and *might*. Additionally, it recommends using the main verb *shall* for positive imperatives, *shall not* for negative imperatives, *may* for positive permissions, and *need not* for negative permissions. Outside the EU context, the verb *must* is more commonly used in place of *shall* (English Style Guide 2024). The Guide to Translating Finnish Statutes into English and Treaties into Finnish (2019, p. 13) also advises using the word *shall* [in Finnish: *tulee*] to express obligation, avoiding *must* or *is to be* expressions. Depending on the genre, Finnish legal texts sometimes replace the positive imperative *shall* with the expression *it has to be done*, which is considered a strong expression (Rydzewska-Siemiątkowska 2023). According to Nurmi and Kivilehto (2019), Finland lacks comprehensive guidelines for the use of auxiliary and main verbs, leading Finnish translators to rely on EU texts as models and frequently use the verb *shall*.

This study focuses on imperative expressions related to obligation, utilizing deontic modality as a tool to “tag” what the law mandates or prohibits for specific record-keeping objects.

Examples of the Use of Recordkeeping Concepts

Several studies have examined the use of recordkeeping concepts within the context of European e-government. A recurring theme across these investigations is the inconsistent application of key recordkeeping terminology, often shaped by varying stakeholder needs and contextual factors. However, these studies generally do not explore how such conceptual usage relates to expressions of modality.

Sundqvist (2015) emphasized the significance of record use as a fundamental archival function, complementing the traditional focus on record creation and preservation. Drawing on empirical research in Swedish public sector organizations, she identified four dimensions that influence the interpretation and application of

recordkeeping concepts: (1) user motivations, shaped by cognitive, emotional, or social factors; (2) purposes of use, including administrative, legal, personal, and cultural objectives; (3) objects of use, such as documents and information types; and (4) applications, including verification and contextual understanding.

Klareld and Gidlund (2017) investigated the conceptual ambiguity surrounding the notion of the e-archive. Their findings revealed a lack of definitional consensus, with interpretations ranging from encompassing all digital records to only those preserved long-term or being viewed as the final stage in administrative processes. This ambiguity, often rooted in analog-era paradigms, complicates interagency collaboration and increases the risk of inconsistent implementation. The authors advocate for a holistic, proactive, and strategically aligned approach to digital archiving, while acknowledging the conceptual and operational challenges involved.

Frings-Hessami and Oliver (2022) explored the influence of language choice on recordkeeping strategies in Switzerland. Their study demonstrated that the use of English terminology—or its translation into French—significantly affected the success of archival practices. Clear, locally adapted language, free from technical jargon and aligned with the prevailing information culture, was found to be more effective in promoting stakeholder engagement and facilitating digital transformation.

Foscarini et al. (2021) employed grounded theory and discourse analysis to examine the translation of key archival concepts from the English version of the General Data Protection Regulation (GDPR) into Italian, Slovenian, Finnish, and Icelandic. Through questionnaires and interviews, the study identified several mistranslations—particularly of the term *record*, which was variously rendered as “register,” “document,” “record,” or “database entry.” The translation processes often failed to consider socio-cultural and disciplinary contexts and did not involve archival professionals, leading to conceptual inaccuracies.

Klett (2017) analyzed the use of recordkeeping terminology in Swedish records appraisal between 2007 and 2016. Drawing on a range of authoritative sources—including term databases, legislation, and policy documents—she found that the terms *record* and *information* dominated the discourse. However, “record” was not widely understood outside professional circles, while “information” was interpreted in a more subjective and personal manner. Although *public record* emerged as a key legal concept, its influence diminished at operational levels, where broader and less precise vocabulary prevailed.

Borglund and Engvall (2014) conducted a word frequency and text analysis of Swedish governmental project documentation to investigate the use of recordkeeping terminology in archival and open data discourses. Their findings revealed that terminology varied according to stakeholder goals: *document* referred to project materials, *record* emphasized access and preservation, *information* was user-oriented and politically framed, and *data* was associated with innovation and service development. The substitution of “record” with other terms was often a strategic effort to justify the costs of digital archiving and to enhance public acceptance.

It is noteworthy that while researchers such as Klett (2017) and Borglund and Engvall (2014) employed the concept of *public record*, the Swedish government typically uses the term *official document* in English translations of its legislation

(Kallberg 2013, p. 11; Klareld 2017, p. 18), further contributing to terminological inconsistency.

Research material and methods

This study explores the interaction between recordkeeping concepts and deontic expressions of obligation, with a particular emphasis on their detectability within legislative texts. Additionally, it investigates the divergences in the use and interpretation of recordkeeping terminology between legislative language and professional discourse. The methodological approach integrates quantitative techniques—such as word frequency analysis—with qualitative discourse analysis to interpret the findings.

To address this complex and multi-level phenomenon, the study poses the following research questions:

1. What recordkeeping concepts and modality verbs are frequently used in selected RIM laws?
2. How are recordkeeping concepts used as objects of deontic modality expressing an obligation, and is this connection easy to identify?
3. Are there significant differences in the use and meaning of recordkeeping concepts between legislative and professional terminologies?

The search for research material was conducted in November 2024 and January 2025. Primary data includes English translations of the Finnish general RIM laws, available from the Finlex Database owned by the Ministry of Justice (<https://www.finlex.fi/fi/laki/kaannokset/>):

- The Finnish Constitution (731/1999)
- The Act on the Openness of Government Activities (621/1999)
- The Administrative Procedure Act (434/2003)
- Data protection Act (1050/2018)
- Information Management in Public Administration (906/2019) and
- Act on Electronic Services and Communication in the Public Sector (13/2003).

The Archives Act (831/1994) and the Act on the Provision of Digital Services (306/2019) would have been central to Finland's general RIM legislation, but they were excluded from the materials because they were only available in Finnish, and official English translations were not provided by the authorities. An independent translation by the present author would not have adequately represented the legislator's authoritative interpretation and might have introduced further conceptual ambiguity, particularly in the comparison of legislative and recordkeeping terminologies. Secondary data comprise the EU's General Data Protection Regulation (GDPR, 2016/679), available on the EUR-Lex online service by the European Union (<https://eur-lex.europa.eu/>), and legislative and recordkeeping terminologies (Table 1),

Table 1 Definitions of the recordkeeping concepts in terminologies; reference names are abbreviated in brackets

Concept	Definitions
Data	<p>The equivalent in Finnish: data. (DET)</p> <p><i>“The smallest meaningful units of information”</i> (MAT)</p> <p><i>“Symbols or characters that represent raw facts or figures and form the basis of information”</i> (MAT)</p> <p><i>“Facts, ideas, or discrete pieces of information, especially when in the form originally collected and unanalyzed.”</i> (MAT)</p> <p><i>“A general term for information; particularly used for information stored in a database.”</i> (MAT)</p> <p><i>Information represented in a formalized manner, suitable for transmission, interpretation, or processing manually or automatically</i> (NAT; MAT)</p> <p><i>“Loosely used for INFORMATION, especially in large quantities”</i> (NAT)</p> <p><i>“Data is information, presentation of facts and document characteristics.”</i> (IATE)</p> <p><i>“Set of values of qualitative or quantitative variables; restated, pieces of data are individual pieces of information.”</i> (DET)</p> <p><i>“Data is measured, collected and reported, and analyzed, whereupon it can be visualized using graphs or images.”</i> (DET)</p> <p><i>“Data as a general concept refers to the fact that some existing information or knowledge is represented or coded in some form suitable for better usage or processing.”</i> (DET)</p>
Information	<p>The equivalent in Finnish: tieto (DET)</p> <p><i>“Information is recorded, collected and assembled data.”</i> (MAT)</p> <p><i>“Information is details which explain something, or data of which human being has given some meaning.”</i> (IATE)</p> <p>Recorded data (NAT)</p>
Document	<p>The equivalent in Finnish: asiakirja (DET)</p> <p><i>“A single archival, record or manuscript item.”</i> (MAT)</p> <p><i>“Recorded information or object which can be treated as a unit.”</i> (MAT)</p> <p><i>“Recorded information regardless of medium or characteristics.”</i> (MAT)</p>
Official document	<i>The equivalent in Finnish: virallinen asiakirja</i> (DET)
Record	<p>The equivalent in Finnish: äänilevy (DET)</p> <p><i>“Information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business.”</i> (MAT)</p>
Public record	<p><i>“A record available to the public.”</i> (MAT)</p> <p><i>“2. A record made by a public officer or a government agency in the course of the performance of a duty.”</i> (MAT)</p> <p><i>“1) RECORDS/ARCHIVES legally defined as public; also used to designate RECORDS/ARCHIVES open to public inspection</i> (NAT)</p> <p><i>“2) RECORDS/ARCHIVES created or received and accumulated by government agencies in the conduct of public business, which may or may not be open to public inspection.”</i> (NAT)</p> <p><i>“Public record relates to the documentation of the parliamentary sessions and to the access to information in a document or record in the public domain.”</i> (IATE)</p>
Official record	<i>“1. A record created by, received by, sanctioned by, or proceeding from an individual acting within their designated capacity.”</i> (MAT)

Table 1 (continued)

Concept	Definitions
	“2. A complete, final, and authorized copy of a record, especially the copy bearing an original signature or seal.” (MAT)
	“An authority record: “An entry in an authority file that contains information about the preferred form of a name or subject heading.” (MAT)

which were utilized in the analysis and interpretation to compare potential differences in the meanings of the recordkeeping concepts used in the primary data. The terminologies are:

- Digital Interactive Terminology for Europe (IATE)
- Nordisk Arkivterminologi (NAT) by Eriksen et al. (2003)
- The Digital Europa Thesaurus (DET) and
- The Multilingual Archival Terminology (MAT).

The terminologies represent both professional recordkeeping glossaries and glossaries in the European Union.

The analysis included the following steps. Initially, word lists from the primary data were created in Atlas.ti to identify recordkeeping concepts, modality verbs, and their frequencies. Excel functionalities were then used to generate figures and tables. This was followed by a text search using keywords that included two frequently used auxiliary modality verbs and three recordkeeping concepts: *shall* OR *should* AND *data* OR *document* OR *information*, resulting in 946 paragraphs. Subsequently, the primary data were encoded, and quotes expressing obligations were identified. Finding clearly manifested connections between deontic expressions and recordkeeping objects posed challenges, leading to the creation of various combinations of codes (e.g., “*shall + provide + information*”), with most containing one to seven quotations. The challenges and examples related to quotations are presented in the results. Finally, the concepts used in the legislation were compared with legislative and professional terminologies to analyze potential differences in meaning. When carefully planned, combining quantitative and qualitative methods is an effective approach to answering research questions, and describing a complex phenomenon quantitatively, objectively, systematically, and verbally, thereby providing an understanding of different meanings (Bryman 2008, pp 624–625; Tuomi and Sarajärvi 2009, pp 105–108).

Results

This section first presents the use and different meanings of concepts of recordkeeping. This is followed by the findings on the frequencies of English modality verbs and recordkeeping concepts in RIM laws. This is followed by the findings on the

use of these concepts in legislative texts and their differing meanings compared to professional and legislative terminologies are introduced. Finally, findings on how modality verbs and recordkeeping concepts are used together and the ease with which this interaction can be identified in legislative texts.

Use and different meanings of concepts of recordkeeping

The following section presents key findings on the use of recordkeeping concepts in terminologies (Table 1) and legislation highlighting the differences in their meanings. As a general observation, the Administrative Procedure Act (434/2003), the Constitution of Finland (731/1999), and the Data Protection Act (1050/2018) do not provide explicit definitions of these concepts. Consequently, the meanings of these concepts must be interpreted within their respective contexts.

The conceptualizations are disparate: “smallest unit of relevant fact,” “elated to a specific task or service,” “treated as a single entity by computer,” and “a meaningful collection” each provide a different starting point for identifying “the real-life information object” in a legal text. In terminologies, *data* are understood to range from the smallest units of relevant raw fact to information in its many broad meanings. Data have not been explicitly defined in the selected laws, but other meanings have been attributed to it in their usage. In the GDPR (2016/679, Article 4), data relate to *personal data*, which may include, for example, genetic data or data concerning health. The Act on Information Management in Public Administration (906/2019) links data to dataset [in Finnish: tietoaaineisto] and in the meaning of an official document: “*dataset means an information entity composed of documents and other corresponding information related to a specific task or service of the authorities*”. According to DET dataset [in Finnish: tietojoukko] is defined as “*collection of separate sets of information (data) that is treated as a single unit by a computer.*” The Act on Electronic Services and Communication (13/2003) intertwines data with electronic data transmission. There are also other prefixes or suffixes in the legislation and in DET related to data, such as breach, dynamic, integrity, meta, structure, portability, security, and statistical, all of which connect data with different meanings. According to terminologies, *information* (in Finnish: tieto) is a meaningful collection of recorded data. Although the concept is not defined by law, it has been widely used in selected laws to mean various things such as data, any information, an electronic message, information in the document, document, or record. The analysis confirms that terminologies and legislation assign different meanings to data and information, with or without prefixes or suffixes, making these concepts highly context dependent.

Terminologies and legislation provide partly different and inconsistent definitions for the concepts of *document* and *record*, *public record*, and *official document*, making the interaction between these concepts complex and difficult to interpret. In terminologies, a document is defined as recorded information, which can be a record or an archival record and can take various forms or presentations. A record refers to information and evidence resulting from the business or legal activities of a person or organization. Finnish legislation does not use the English word record

in its definitions; instead, it is used to mean a document, a register, a database entry, or when something, such as a document or video, is recorded. In Finnish legislative terminology (Lainsäädäntösanasto 2023), it is used in one example, when someone records a dissenting opinion. Additionally, in EU terminology, record relates to audiovisual equipment such as CDs or DVDs (DET). According to terminologies, a public record pertains to situations where a record is created or received by a government agency and is legally defined as public or available for public review. This definition may also involve documenting parliamentary sessions. An official record may refer to an authorized copy of a record or an entry in an authority file. Interestingly, the chosen terminologies do not provide a definition for an official document. However, the Finnish equivalent, *virallinen asiakirja*, is provided (DET), which means the same as document or record. In this context, it is official but not necessarily connected to an authority organization.

Finnish legislation defines *document* [in Finnish *asiakirja*], and *an official document* [*viranomaisen asiakirja*] in the Act on the Openness of Government Activities (621/1999, Section 5.1) as follows:

“(1)---a document is defined as a written or visual presentation, and also as a message relating to a given topic or subject-matter and consisting of signs which, by virtue of the use to which they are put, are meant to be taken as a whole, but are decipherable only by means of a computer, an audio or video recorder or some other technical device.” (Act on the Openness of Government Activities 621/1999, Section 5.1)

“(2) An official document is defined as a document in the possession of an authority and prepared by an authority or a person in the service of an authority, or a document delivered to an authority for the consideration of a matter or otherwise in connection with a matter within the competence or duties of the authority. In addition, a document is deemed to be prepared by an authority if it has been commissioned by the authority; and a document is deemed to have been delivered to an authority if it has been given to a person commissioned by the authority or otherwise acting on its behalf for the performance of the commission.” (Act on the Openness of Government Activities (621/1999, Section 5.2)

The first definition combines the ideas and meanings of *document* and *record* (Table 1). In Finland, *an official document* [*viranomaisen asiakirja*] is a key instrument in RIM laws and recordkeeping practices, serving as a criterion for determining whether the requirements of a law are applicable. The second criterion is whether the document is related to an authority organization, as defined in the legislation. The focus is on a strong connection between the official document and the authority organization, which is the starting point for considering whether recordkeeping obligations should be applied. Questions regarding the publicity of the official document follow this consideration, with Finnish legislation regulating in detail the situations when and how this occurs. Therefore, although there are similarities between the concepts of public record and official document, their emphasis differs. One might speculate that public record is too closely associated with records publicity, leading translators to prefer the term official document. However, referring to DET, one

might also question whether a document can be official [in Finnish *virallinen*] without being related to an authority. For example, when buying a house or car, a document is created between different parties, such as a car dealer, a client, and a bank, without involving an authority; yet, the document can still be perceived as official. Currently, terminologies or international standards (e.g., ISO 24143:2022; SFS-ISO 15489-1:2017:en) do not provide support to resolve this issue.

Findings on the frequencies of modality verbs and recordkeeping concepts

The following section presents the findings on the frequencies of English modality verbs (Fig. 1) and recordkeeping concepts in Finnish records and information management (RIM) laws (Fig. 2). It also includes their distribution across individual statutes, as shown in Tables 2 and 3.

As illustrated in Fig. 1, the most frequently mentioned imperative auxiliary modality verbs are *shall* ($n=974$) and *should* ($n=422$), with *must* and *need* trailing significantly behind. Interestingly, the permissive modality verb *may* ($n=450$) appears even more frequently than *should*. Although the words *has* and *have* shown numerous occurrences, the expressions *has to be* and *have to be*, which can serve as alternatives to *shall* (Rydzewska-Siemiątkowska 2023), resulted in only three hits each. This suggests that, at least within the Finnish RIM legislative genre, these expressions are not used interchangeably with *shall*.

The top three concepts (Fig. 2) are *data* ($n=1620$), *information* ($n=612$), and *document(s)* ($n=391$), with the concepts of *archive(s)* and *record(s)* being significantly less frequent. A more precise text search for *official document* yielded only 34 hits ($n=34$ out of 391). The following sections present the findings on a law-by-law basis.

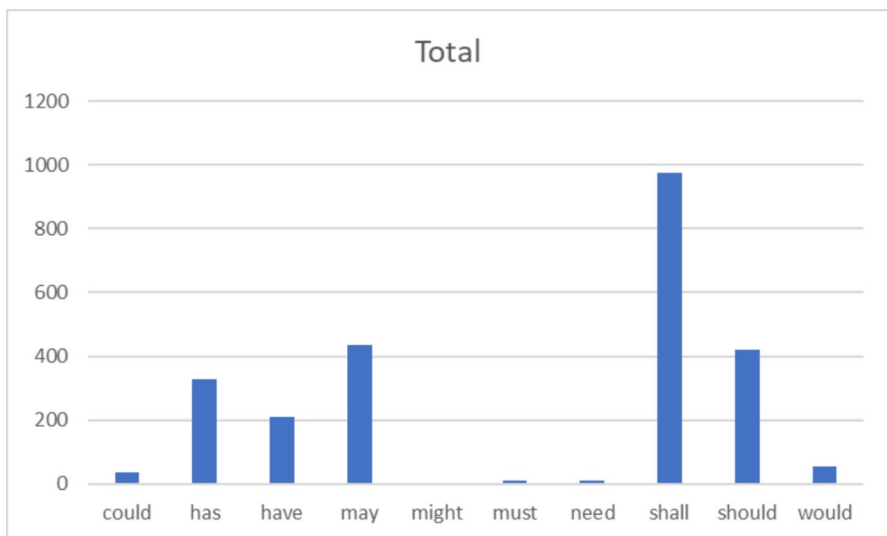


Fig. 1 The frequencies of auxiliary modality verbs in selected RIM laws

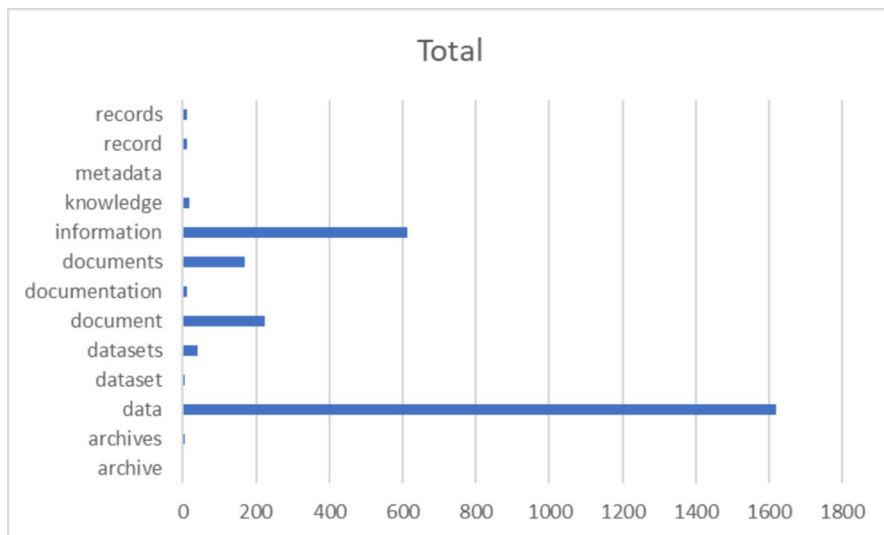


Fig. 2 Frequencies of recordkeeping concepts in RIM laws

Table 2 shows that the use of the auxiliary verb *shall* in Finnish legislation is minor compared to the GDPR. Surprisingly, while *should* only appears in the GDPR, it is not used in Finnish national legislation. The GDPR tends to be more imperative in its expressions compared to national legislation. However, it also frequently employs permissive expressions (*may*), likely due to the Act addressing various scenarios related to the processing of personal data, which may or may not materialize. Additionally, the Act allows for the regulation of certain situations concerning the processing of personal data within national legislation.

The analysis (Table 3) reveals notable variation in the use of key information-related concepts across legislative texts. While the term *data* appears most frequently in the GDPR, national legislation tends to emphasize *information* and *documents*, particularly in laws governing public administration and transparency. In contrast, the term *record* is rarely used in national statutes and appears only marginally in the GDPR, indicating a divergence in conceptual emphasis between European-level regulation and domestic legal frameworks.

Findings on the use of auxiliary modality verbs and recordkeeping concepts together

The complexity of legislative texts, the inconsistent use of recordkeeping concepts, and the interrelation between modality expressions and recordkeeping concepts posed significant challenges in identifying and coding them. Auxiliary modality verbs such as *shall* and *should* were often associated with high-level overarching ideas without a direct connection to recordkeeping concepts. Additionally, the

Table 2 Frequencies of auxiliary modality verbs by statute: a comparative analysis of selected Finnish RIM legislation and the GDPR

Modality verbs including auxiliary and main verbs	Act on Information Management in Public Administration (906/2019)	Act on the Openness of Government Activities (621/1999)	Administrative Procedure Act (434/2003)	Data protection act (1050/2018)	Act on Electronic Services and Communication (13/2003)	Constitution of Finland (731/1999)	GDPR (2016/679)	Total
Shall	67	74	153	20	22	159	479	974
Should	0	0	0	0	0	0	422	422
May	17	42	58	24	11	81	217	450

Table 3 Frequencies of recordkeeping concepts by statute: a comparative analysis of selected Finnish RIM legislation and the GDPR

Concept	Act on Information Management in Public Administration (906/2019)	Act on the Openness of Government Activities (621/1999)	Administrative Procedure Act (434/2003)	Data protection Act (1050/2018)	Act on Electronic Services and Communication (13/2003)	Constitution of Finland (731/1999)	GDPR (2016/679)	Total
Data	59	25	2	263	16	1	1254	1620
Document	18	130	52	0	21	0	2	223
Documents	25	96	13	2	13	6	13	168
Information	220	141	27	24	9	21	170	612
Record	2	1	3	0	1	0	5	12
Records	0	1	0	0	1	0	10	12

sentences were frequently so long and complex that it was difficult to identify clear modality clauses where the modality verbs and the recordkeeping objects were inextricably linked. There were also instances where the obligation was clear but followed by a detailed list of several dozen points, ultimately hindering the interpretability of the requirement. Below are some examples of codes and quotes that clearly demonstrate the interaction between deontic expressions and recordkeeping concepts concerning obligations:

“shall + provide + information”

“---1. Where personal data relating to a data subject are collected from the data subject, the controller shall, at the time when personal data are obtained, provide the data subject with all of the following information:---” (Act 2016/679 Art. 13)

“shall + register + documents + information”

“The authority shall, without delay, register the documents and other information generated in service production so that their generation in service production can be verified afterwards” (Act 906/2019, Section 27)

“shall + run + the period of secrecy + of an official document”

“The period of secrecy of an official document shall run from the date indicated in the document or, if the document bears no date, from the day of its completion.---” (Act 621/1999, Section 31)

“shall + transfer + the document”

“If an authority has been erroneously submitted a document requesting consideration of a matter beyond its competence, the authority shall transfer the document without delay to the authority it considers to be competent.---” (Act 434/2003, Section 21)

“should + include + personal data concerning health”

“Personal data concerning health should include all data pertaining to the health status of a data subject which reveal information relating to the past, current or future physical or mental health status of the data subject.---” (Act 2016/679, Chapter I, 35)

“should + not + apply + to + anonymous + information”

“The principles of data protection should therefore not apply to anonymous information, namely information which does not relate to an identified or identifiable natural person or to personal data rendered anonymous in such a manner that the data subject is not or no longer identifiable. ---” (Act 2016/679, Chapter I, 26)

Although some examples of obligatory modality expressions relating to recordkeeping concepts were identified through a text search using two frequently used

modality verbs and three recordkeeping concepts, it became evident that legislation names objects not only according to recordkeeping or information-related concepts but also according to final outputs such as complaint, certification, decision, protocol, notification, register, report, and statement, with or without prefixes or suffixes. This emerged as a key obstacle in finding a clear interaction between modality verbs and recordkeeping concepts.

Discussion

This study examined how deontic modality and recordkeeping concepts are used together to express obligations in selected Finnish records and information management (RIM) laws, translated into English by the competent authorities. It also explored whether the connection between these elements is clearly identifiable in legislative texts, and how the meanings assigned to recordkeeping concepts vary across laws and terminologies. The analysis, based on both quantitative and qualitative methods, revealed several key findings that align with and extend previous research.

The most frequently used auxiliary modality verbs in the legislative texts were *shall* and *should*, consistent with earlier findings (Nurmi and Kivilehto 2019) and with the recommendations of legislative translation guidelines (Guide to Translating Finnish Statutes into English and Treaties into Finnish 2019; EU Style Guide 2024). Similarly, the most commonly occurring recordkeeping-related terms were *data*, *information*, and *document*. However, these terms were used inconsistently, echoing concerns raised in prior studies (Borglund and Engvall 2014; Klett 2017). Notably, the concept of *record* appeared infrequently and, when present, often referred to a register, database entry, or act of recording—rather than a *public record* in the archival sense (Foscarini et al. 2021; Klett 2017). This finding underscores the risk of misinterpretation, particularly in digital environments where the distinction between data, information, and records is critical for legal compliance and accountability.

The analysis further revealed that the connection between deontic expressions and recordkeeping concepts is neither explicit nor easy to identify. Several factors contribute to this lack of clarity. Legislative texts often feature complex sentence structures and lengthy formulations, which obscure the recordkeeping concept as the object of the obligation. Moreover, the definitions of key concepts—where available—are often ambiguous, fragmented across multiple laws, and lack hierarchical structure. These issues complicate the consistent interpretation and implementation of legal obligations in information systems.

A particularly important finding concerns the concept of *official document*, as defined in the Act on the Openness of Government Activities (621/1999, Section 5.2). This concept is central to Finnish recordkeeping and closely resembles the notion of a public record. Despite its legal and practical significance—especially as a criterion for the applicability of other laws—its use in legislative texts is surprisingly limited. Furthermore, the interaction between *official document* and *public record* is problematic due to differing interpretations across legal and terminological sources. Legislation frequently refers to official documents through their

final outputs, such as decisions, certificates, consents, or reports, without explicitly linking them to broader recordkeeping frameworks. While earlier studies (e.g., Borglund and Engvall 2014; Foscarini et al. 2021; Kautto and Hotti 2024; Klareld and Gidlund 2017) have addressed some of these issues, they have not examined them through the lens of deontic modality and its role in expressing obligations.

To address these challenges, several practical recommendations can be made. First, legislative drafting and translation should be approached as interdisciplinary processes involving legal experts, linguists, and records management professionals. Such collaboration would help ensure that recordkeeping concepts are used consistently and that their meanings are clearly defined in both source and target languages.

Second, national authorities responsible for legal drafting and information governance—such as ministries of justice, national archives, and standardization bodies—should take the lead in developing shared terminologies and conceptual frameworks. These efforts should be informed by international standards (e.g., ISO 15489, MoReq) but adapted to reflect national legal and cultural contexts. This would help bridge the gap between legal language and professional recordkeeping discourse.

Third, the development of machine-readable legal texts and metadata schemas that explicitly link obligations to specific information objects could enhance the detectability of deontic expressions in digital systems. This would support the automation of compliance processes and improve the integration of legal requirements into information architecture.

These recommendations are grounded in the empirical findings of this study, which demonstrate that the current use of deontic modality and recordkeeping terminology in Finnish RIM legislation is inconsistent and often ambiguous. Without clearer conceptual alignment and terminological precision, the risk of misinterpretation and implementation failure remains high—not only in Finland but also in other multilingual and digitalizing legal systems.

A limitation of this study stems from the fact that only a subset of key Finnish RIM laws is available in English, and even those translations are not officially endorsed by the Ministry of Justice. Consequently, the analysis was necessarily limited to statutes that have been translated and made publicly accessible, but whose legal and linguistic authority remains unofficial. Foundational laws such as the Archives Act (831/1994) and the Act on the Provision of Digital Services (306/2019) remain entirely untranslated, which not only restricts the scope of this study but also poses broader challenges for international research and comparative legal analysis. This translation gap limits access to primary legal sources and constrains linguistic inquiry into deontic modality in Finnish legal contexts.

From a records and information management perspective, the lack of official translations undermines the clarity and consistency of key recordkeeping concepts across languages and jurisdictions. Since the interpretation of obligations often hinges on precise terminology—such as *record*, *document*, or *official document*—the absence of authoritative translations increases the risk of conceptual misalignment and misinterpretation. Given Finland's leadership in digital governance and information society development, the absence of official English translations for these laws represents a missed opportunity for cross-jurisdictional learning, professional collaboration, and comparative legal linguistics.

Future research could explore how obligation is expressed across different legal traditions and assessing whether deontic modal patterns identified in other jurisdictions are applicable to Finnish legal discourse. Such comparative studies would not only enrich our understanding of modality in legal language but also support the development of more inclusive and interoperable legal frameworks—particularly in the domain of records and information management.

Conclusion

This study has shown that the interaction between deontic modality and recordkeeping concepts in Finnish RIM legislation is often unclear, fragmented, and inconsistently expressed. These ambiguities pose significant challenges for interpreting legal obligations and for embedding them into digital information systems. As information professionals are increasingly required to translate legal requirements—such as retention periods, access rights, and confidentiality—into machine-readable formats, the ability to clearly identify the object of an obligation becomes critical. If the visibility of the information object is lost, there is no guarantee as to what data, information, or records are preserved, destroyed, or archived. This, in turn, jeopardizes the integrity of information management and the realization of freedom of information (FOI) rights and privacy in democratic societies.

Moreover, the limited availability of official English translations of key Finnish laws further complicates the international accessibility and comparative analysis of recordkeeping obligations. Addressing these linguistic and conceptual gaps is essential for improving legal clarity, supporting digital compliance, and fostering cross-jurisdictional collaboration.

Future research should continue to explore how obligation is expressed across legal traditions and assess the applicability of deontic modal patterns in diverse legislative contexts. Such efforts will contribute to the development of more inclusive, interoperable, and conceptually coherent legal frameworks for records and information management.

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Declarations

Conflict of interest The author declare no conflict of interest.

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