

Soup du jour – existing and emerging trends in archives and records management standardization

Soup du jour

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Abstract

Purpose – This paper aims to examine the concept of standardization beyond its traditional use in generating and implementing standards and good practice guidelines (S&GPG) by looking at existing and emerging trends.

Design/methodology/approach – This paper utilizes two primary approaches to categorizing S&GPG for better comprehension: categorization based on provenance as well as based on subject matter.

Findings – A significant concern related to categorizing S&GPG based on provenance or subject is the constant proliferation of standards being developed and introduced every year. This rapid growth in standards requires frequent re-categorization to keep up with the dynamic nature of this field. To tackle this problem, this paper explores emerging concepts such as ontological representation and frameworks that offer archives and records management (ARM) professionals.

Practical implications – Standardization refers to establishing uniform rules through mutual agreement to ensure consistency. The study of standardization goes beyond the development of individual S&GPG, encompassing their practical application in work settings. Categorizing standards alone may not fully capture their actual use. However, abstraction mechanisms like ontological representations, models and frameworks can demonstrate how these standards have been leveraged. This paper provides illustrative examples rather than an exhaustive list to showcase how these mechanisms have been applied in research projects or as practical tools.

Originality/value – This paper explores the emerging topic of standardization from the perspective of ontological representations and models or frameworks. In addition, it also contributes to the discussion of the 2022 version of ARMA International's Information Governance Implementation Model and the 2020 version of the World Bank Group's Records Management Roadmap, providing unique insights into these topics.

Keywords Maturity models, International standards, ARMA International information governance implementation model, Ontological representation, World Bank Group records management roadmap

Paper type General review

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Introduction

The concept of standardization and the establishment of guidelines can be challenging to define universally. According to [Timmermans and Epstein \(2010\)](#), standardization aims to establish consistent rules that create uniformity across different periods and jurisdictions through mutual agreements. This uniformity can be expressed through establishing formal standards pertaining to design, terminology, performance and procedures. Design standards define the characteristics and attributes of tools and products. Terminology standards ensure consistent meanings across different regions and periods. Performance standards establish specifications for desired outcomes. Procedural standards outline how processes should be carried out ([Timmermans and Berg, 2010](#)). In addition to formal standards, there are also informal standards that exist within specific contexts. They tend to be common agreements that may not be all-encompassing but rely on specific and/or contextual knowledge ([Arnold and Hasse, 2015](#)). Informal standards often develop through repetition, habit and imitation to achieve desired outcomes ([Loconto and Busch, 2010](#)). While they may not necessarily result in the highest level of performance or optimal processes, these informal standards still serve as a sufficient guideline for good practices.

Standardization emerged as a significant practice in the late 19th century, particularly in scientific research and manufacturing ([Williams, 2014](#)). In scientific experiments, standardization involves ensuring consistent experimental conditions. In manufacturing, it focused on standardized parts that could be used for a variety of complex operations. To facilitate the process of standardization, national and international organizations dedicated to establishing standards have played a key role. One notable example is the International Organization for Standardization, commonly known as ISO, which was established after Second World War by a United Nations committee to promote postwar trade. Initially, ISO only provided recommendations, but it began publishing formal standards that were subsequently adopted as national standards starting in 1970 ([Timmermans and Epstein, 2010](#)). To encompass the broad spectrum of standards, this article uses the term *standards and good practice guidelines* (S&GPG), which includes both formal and informal standards. Differentiating between these two types can be challenging since many informal standards have the potential to become formalized over time ([Loconto and Busch, 2010](#)). Professional communities commonly establish S&GPGs to regulate activities and ensure consistent measurements across different contexts. Furthermore, S&GPG are crucial in directing the efforts of senior management toward achieving organizational success. This encompasses maximizing benefits, managing risks and optimizing resources, namely, human capital, information and financial ([ISACA, 2018](#)).

Standardization has long been a concern for archives and records management (ARM) professionals, who have frequently employed a number of S&GPG to fulfill their institutional responsibilities ([Hofman, 2005](#)). The standardization objective is to help practitioners meet the challenges posed by digital advancements, enhance work practices and foster collaboration among different institutions ([Hofman, 2015](#); [Katu, 2016a](#)). This goal can be achieved by promoting effective communication through shared terminology and practices ([Timmermans and Epstein, 2010](#)). Furthermore, these S&GPG have enhanced education and continuous learning ([Franks, 2015](#); [Seelakate, 2018](#); [Seymour, 2017](#)).

This article aims to explore the broader notion of standardization beyond the narrow confines of the development of individual S&GPG. Standardization is widely recognized as establishing collectively agreed-upon rules that govern professional communities, working toward consistency across different periods and locations. Rather than focusing on which individual S&GPG have been developed and published, this article examines two significant trends in categorizing S&GPG: provenance and subject matter, and explores two emerging

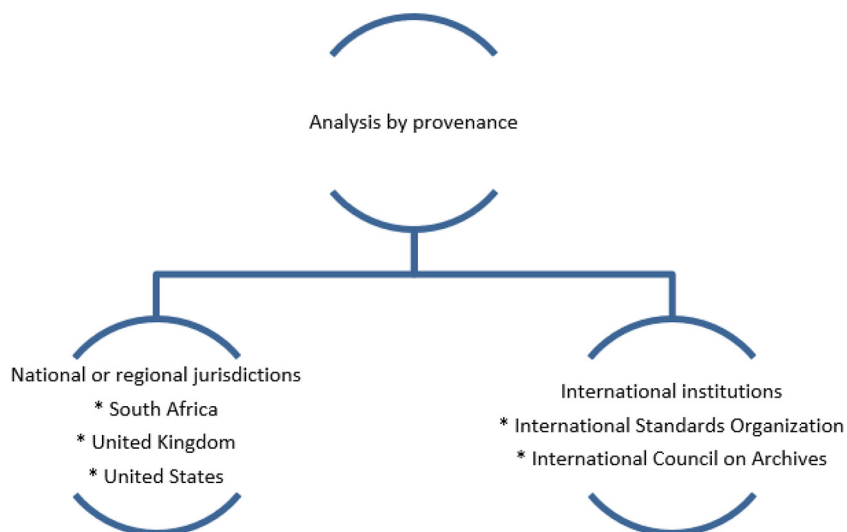
trends in standardization: ontological representation and frameworks, providing illustrations for each trend.

Standards and good practice guidelines categorization

ARM professionals have developed S&GPG for several decades. This includes establishing a global standard for archival description in the late 1980s and through the 1990s (Stibbe, 1998). Another significant achievement is establishing a leading worldwide standard for records management through coordinated efforts starting in the mid- to late-1990s (Healy, 2010). There has been substantial growth in the number of S&GPG developed over the past three decades. During this time, their quantity has increased from just a few to several dozen across a variety of subject domains (Franks, 2015; Hofman, 2015; Katuu, 2016a; Seelakate, 2018). To effectively monitor these advancements, a variety of methods have been implemented. One tactic involves arranging them based on their subject matter, while another entails categorizing them according to their provenance (Katuu, 2020). Although chronological categorization is feasible, it is not discussed in this context.

Initial attempts to address jurisdiction-specific requirements in tackling unique challenges may have led to the development of the many S&GPG by different professional organizations, research groups or government entities. Notably, European-developed standards like MoReq differ from those created by the U.S. federal government, such as the DOD standard 5015.2 (Fresko, 2008; Pelz-Sharpe, 2023; Sprehe, 2000). Furthermore, there are also S&GPG established by bodies like the ISO and professional organizations such as the International Council on Archives, all contributing to a diverse landscape identified by their provenance (Clavaud and Wildi, 2021; Sundqvist *et al.*, 2019; Varlamova, 2019). Figure 1 illustrates efforts at identifying S&GPG by provenance.

From the mid-2000s to the 2010s, there was a substantial increase in the number of S&GPGs. To cope with these rapid changes, some ARM professionals implemented a categorization system based on subject matter (Katuu, 2016a). This shift allowed for



Source: Katuu (2016a), p. 873

Figure 1.
S&GPG
categorization by
provenance

structuring and organizing relevant sources according to specific subjects or themes, thereby improving efficiency and facilitating more straightforward access to information. [Figures 2 and 3](#) illustrate efforts at identifying S&GPG by subject or themes.

One major concern regarding the categorization of S&GPG based on provenance or subject is the continuous proliferation of standards being developed and released each year. This rapid pace necessitates frequent re-categorization to accommodate the rapidly growing volume. For instance, the ISO Technical Committee 46 Subcommittee 11, which oversees records management standards, has already published 19 standards with an additional five in development ([International Standards Organization, 2023a](#)). Similarly, ISO Technical Committee 171 Subcommittee 1, responsible for standards on quality, preservation and integrity of information, has published 21 to date ([International Standards Organization, 2023b](#)). Moreover, ISO Technical Committee 171 Subcommittee 2, which focuses on document file formats, electronic document management systems and authenticity, has

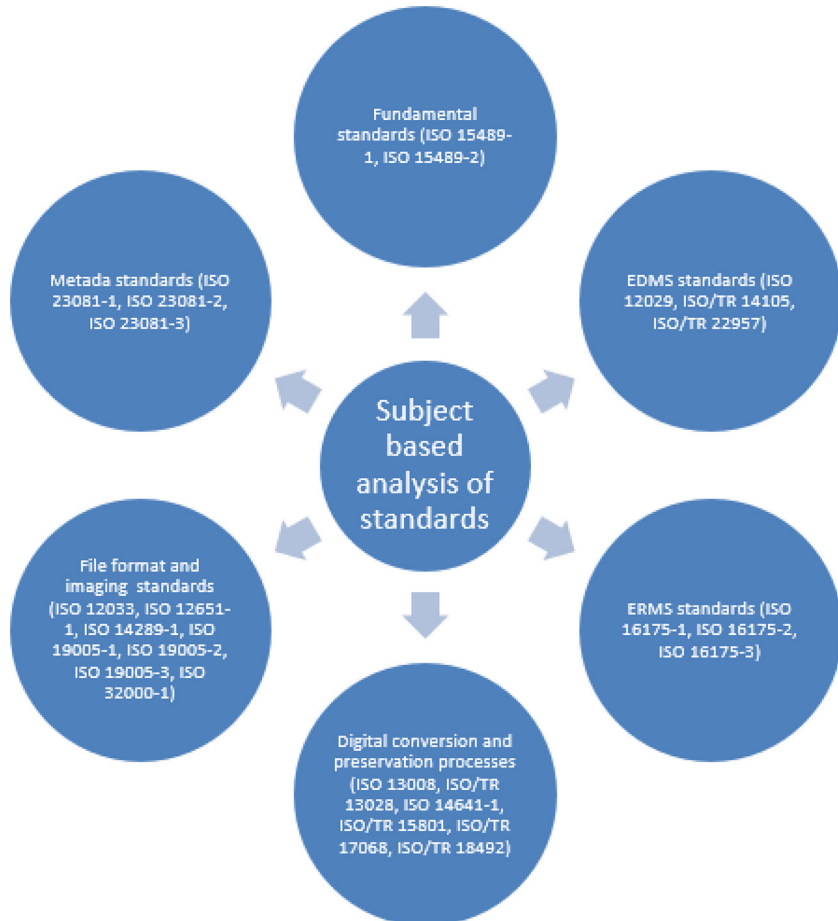


Figure 2.
S&GPG
categorization by
subject matter

Source: Katuu (2016a), p. 872



Figure 3. ARMA's Information Governance Implementation Index (IGIM) domain and components

Source: ARMA International (2022a)

published 36 standards, with nine still underway ([International Standards Organization, 2023c](#)).

Additionally, other ISO Technical Committees are dedicated to subjects such as blockchain, information governance and quality management, which overlap with ARM professionals' interests. These committees have at least three dozen published or currently under development standards. In addition to ISO, professional associations, government entities at national and regional levels and other standard-setting organizations continue to develop and release standards and guidelines. For instance, the U.S. Department of Defense initially published its functional requirements, known in short as DOD 51051.2, in 1997 ([Swartz, 2008](#)); subsequent revisions were made in 2002 and 2007, with the most recent publication issued in 2023, marking a significant time gap since the last update ([Pelz-Sharpe, 2023](#); [Seymour, 2017](#)). These examples illustrate the challenges of keeping track of multiple S&GPG using provenance or subject-based approaches.

Standardization and ontological representation, models and frameworks

Standardization serves two primary purposes: abstracting key elements while deliberately disregarding others, and establishing authority or strong influence to govern social action ([Timmermans, 2015](#), p. 80). Abstraction occurs in at least two ways. One involves formal ontological representation of concepts, data and entities substantiating a subject domain. The other is achieved by developing frameworks that assist ARM professionals in fulfilling their roles by either seamlessly incorporating disparate S&GPG and/or explaining how they operate ([Hofman, 2005](#)). The use of ontological representations facilitates examining functions executed throughout the entire lifespan of records, from their creation to long-term preservation ([Michetti and Haufek, 2020](#)). By adopting this approach, ARM professionals can comprehend the tasks and processes necessary for fulfilling their roles ([Gänsler and Michetti, 2018](#); [Katu, 2022](#)). This

approach goes beyond mere theoretical inquiry by addressing practical considerations and identifying potential deficiencies (Gänsler, 2017).

A recent research initiative conducted within the InterPARES Trust project aimed to establish an ontological representation of functions and activities in archival systems (Michetti and Haufek, 2020). This study incorporated ISO-created S&GPG, as well as frameworks from ARMA International and the Society of American Archivists. The research project developed a comprehensive framework enriched by numerous visual representations showcasing lower-level hierarchies, sub-functions, records management and archives activities. The authors noted that these ontological depictions offered a theoretical portrayal that may reflect the inconsistencies, uncertainties, mistakes and overlaps – in essence, the difficulties – inherent within the international standards themselves (Michetti and Haufek, 2020). To tackle this challenge, Michetti and Haufek (2020, pp. 147–148) developed a mind map as a visual representation of the critical functions associated with information governance in an organization. The InterPARES researchers surveyed a sample of ARM professionals as part of the study. The objective was to assess the effectiveness of using mind maps in accurately depicting work environments. Their findings indicated that employing an ontological representation such as a mind map can offer practical benefits. This process included enabling ARM professionals to assess if all aspects of their roles are comprehensively captured. They could also determine the extent to which selected tools and policies are integrated into carrying out their responsibilities (Michetti and Haufek, 2020).

Models and frameworks

The complexity of the abstraction found in S&GPGs can present challenges in comprehending and effectively implementing them (Hofman, 2005). Consequently, ARM professionals have developed or used established frameworks and models that embed principles and methodologies from these S&GPG into evaluation systems for continuous improvement (Ishlahuddin *et al.*, 2020; Lappin *et al.*, 2021). One commonly employed example is the maturity model, which has been applied across different fields such as digital economy, open government, project management and social media (Chovanová *et al.*, 2019; Durga and Singla, 2019; Maseh and Katuu, 2017; Tribunella and Tribunella, 2019). The underlying concept behind maturity models is that organizations progress from having no capability to achieving optimal capability through a gradual development or maturity process (Murray and Ward, 2007). This progression in maturity can be viewed as a defined evolutionary path based on the life cycle perspective or from the perspective of performance enhancements that are potential or desired outcomes (Wendler, 2012).

The concept of a maturity model based on the lifecycle perspective outlines an organization's development as it progresses through growth stages, with the ultimate goal being to achieve full capability (Wendler, 2012). An example of this can be observed in the ECMk model for enterprise content management (ECM), developed by a South African organization that evaluated its partnership with an ECM service provider (Katu, 2018). The ECMk model emphasized the importance of advancing through each stage to facilitate continuous improvement and knowledge acquisition over time (Katu, 2018). In contrast, other maturity models focus on performance and can evaluate optimal effectiveness and value within different maturity stages. For instance, the AAC-MM is a maturity model designed specifically to assess records management performance in an open government context in Catalonia, Spain (Gómez, 2019). This approach allows for determining which level of completeness or excellence is most suitable based on specific circumstances (Wendler, 2012).

Over the past two decades, ARM professionals have employed a variety of maturity models in many capacities. In the early 2000s, an e-Records readiness tool was used as a precursor to the Records Management Capacity Assessment System (RMCAS), which remained in use until the early 2010s (Demb, 2008; Maseh, 2019; McLeod *et al.*, 2007). From the beginning of the 2010s onwards, ARM professionals made use of established maturity models such as the Enterprise Content Management Maturity Model (ECM3) while also creating customized frameworks tailored to specific institutions or jurisdictions (Ashley and Mistic, 2019; Foley, 2019; Garrido and Arias, 2019; Gómez, 2019; Rajh, 2019). The most recent developments are illustrated below using two examples: the 2022 ARMA International Information Governance Implementation Model (IGIM) and the 2020 World Bank Group Records Management Roadmap (RMR).

ARMA International information governance implementation model (IGIM)

The IGIM developed by ARMA International facilitates communication and collaboration among a set of stakeholders involved in information governance. Initially introduced as a beta-version in 2019, the IGIM has since been updated to its second edition, published in 2022 (ARMA International, 2022a). This latest edition of the IGIM presents eight critical areas for effectively implementing an information governance program. These domains include establishing a steering committee, defining authorities and supports, creating a procedural framework, developing capabilities, managing the information lifecycle effectively, designing appropriate architecture and ensuring robust infrastructure (ARMA International, 2023). Figure 3 illustrates the components that constitute the IGIM domains.

ARMA International has used this framework to administer annual surveys to its organizational members and evaluate their level of maturity. The most recent survey, conducted in 2022, collected 158 responses which were used to compare maturity across all eight domains (ARMA International, 2023). The survey also allowed for comparisons between large and small- to mid-sized organizations based on previous years' data (ARMA International, 2023).

World Bank Group records management roadmap (RMR)

The RMR toolkit, developed by the World Bank Group in 2020, is a valuable resource for organizations seeking to establish effective records management programs (World Bank Group Archives, 2021a). The primary objective of the RMR is to emphasize the significance of records management in promoting accountability, transparency and efficiency – fundamental components of sound governance practices (World Bank Group Archives, 2021a). Functioning as a strategic planning instrument, the RMR outlines seven key goals, referred to as destinations, and is accompanied by supporting objectives that are referred to as milestones (World Bank Group Archives, 2021b). Figure 4 illustrates the key goals.

Every destination consists of three to five milestones that must be achieved to evaluate the degree of advancement, as outlined in Figure 5.

While the traditional approach typically involves starting with the initial objective of establishing a conceptual and policy framework, this tool provides users with more flexibility. Users can choose the domain that best aligns with their current priorities and requirements, allowing them to progress from one goal to another within the framework (World Bank Group Archives, 2021b).

World Bank Group developed several distinctions between the IGIM developed by ARMA and RMR. There are several differences between the World Bank Group's RMR and ARMA International's IGIM which include the target audience, supporting S&GPG, authoring entity and how frequently the undergo updates.

	Destination 1: Our organization recognizes the value of managing records effectively.
	Destination 2: Our organization’s records management program is managed strategically.
	Destination 3: Our organization commits sufficient resources to support records management.
	Destination 4: Our organization recognizes the link between records and information technology.
	Destination 5: Our organization manages records effectively and accountably.
	Destination 6: Our organization provides appropriate access to records.
	Destination 7: Our organization stores records appropriately and disposes of them regularly.

Figure 4.
World Bank Group
RMR – goals or
destinations

Source: World Bank Group Archives (2021b)

Discussion

This article explored the broader concept of standardization. Instead of focusing solely on which specific S&GPG have been created and published by ARM professionals, this discussion has examined two essential trends in categorizing them: their provenance and subject matter. Provenance categorization involves looking at where these S&GPG originate, such as different jurisdictions or institutions that generate them; subject matter categorization focuses on the themes addressed by these S&GPG. One primary concern when using either provenance or subject matter as a basis for categorizing S&GPG is the continuously increasing number of standards developed and published yearly. Keeping up with these changes would require frequent re-categorizations to accommodate new additions and ensure accuracy due to its growing volume.

This article also examined two emerging trends in standardization: ontological representation and frameworks. Each trend offers practicality, but they are not necessarily equivalent. Ontological representations provide an abstract overview of concepts and processes, assisting in identifying conceptual gaps in S&GPG development. Models and frameworks cater more to practitioner needs for assessment and implementation, primarily through their maturity model approach. This article highlighted two examples of models or frameworks: ARMA International’s IGIM and World Bank Group’s RMR, summarized in [Table 1](#).

Although both frameworks use the same maturity model underlying framework, they are authored by different entities with distinct target audiences. The IGIM explicitly incorporates S&GPG, whereas RMR does not. There is a valid argument regarding whether frameworks and models should explicitly rely on S&GPG. There is a valid argument to be made about whether frameworks and models should explicitly rely on S&GPG since these resources are expected to provide value over time. For instance, the development of RMCAS in the early 2000s incorporated three specific S&GPG: ISO 15489:2001, MoReq and the

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DESTINATION 1: OUR ORGANIZATION RECOGNIZES THE VALUE OF MANAGING RECORDS EFFECTIVELY.

 -  **Milestone 1** Our organization is aware of the value of records management for organizational success.
 - Milestone 2** Senior managers actively support records management.
 - Milestone 3** Our organization links records management with legal, regulatory, and policy requirements.
 - Milestone 4** Our organization works with allied agencies to support a coordinated approach to records management.
- 


DESTINATION 2: OUR ORGANIZATION'S RECORDS MANAGEMENT PROGRAM IS MANAGED STRATEGICALLY.

 -  **Milestone 1** Our organization has a strategic plan for records management.
 - Milestone 2** Our organization follows formal records management policies and procedures.
 - Milestone 3** Our organization confirms records management responsibilities of all staff.
 - Milestone 4** Our organization monitors and audits records management programs and services.
- 


DESTINATION 3: OUR ORGANIZATION COMMITS SUFFICIENT RESOURCES TO SUPPORT RECORDS MANAGEMENT.

 -  **Milestone 1** Our organization commits adequate financial resources for records management.
 - Milestone 2** Our organization provides a secure physical infrastructure and acquires appropriate equipment/technology for records.
 - Milestone 3** Our organization engages qualified professionals to perform records management duties.
- 


DESTINATION 4: OUR ORGANIZATION RECOGNIZES THE LINK BETWEEN RECORDS AND INFORMATION TECHNOLOGY.

 -  **Milestone 1** Our organization manages all records and evidence effectively, regardless of form or medium.
 - Milestone 2** Our organization selects information technologies strategically to support records management.
 - Milestone 3** Our organization collaborates with information technology providers to protect records and evidence.
- 

DESTINATION 5: OUR ORGANIZATION MANAGES RECORDS EFFECTIVELY AND ACCOUNTABLY.

 -  **Milestone 1** Our organization makes records when they are needed.
 - Milestone 2** Our organization identifies and organizes records logically.
 - Milestone 3** Our organization describes records and evidence consistently.
 - Milestone 4** Our organization assigns responsibility for records.
 - Milestone 5** Our organization supports staff to manage records and evidence effectively.
- 

DESTINATION 6: OUR ORGANIZATION PROVIDES APPROPRIATE ACCESS TO RECORDS.

 -  **Milestone 1** Our organization proactively releases records to the public.
 - Milestone 2** Our organization protects private and personal information.
 - Milestone 3** Our organization protects sensitive or secret information.
- 

DESTINATION 7: OUR ORGANIZATION STORES RECORDS APPROPRIATELY AND DISPOSES OF THEM REGULARLY.

 -  **Milestone 1** Our organization stores records and evidence appropriately, regardless of form or medium.
 - Milestone 2** Our organization protects records and evidence in an emergency.
 - Milestone 3** Our organization retains records for as long as needed and disposes of records appropriately.
 - Milestone 4** Our organization destroys records securely, regardless of form or medium.
 - Milestone 5** Our organization preserves records and evidence with archival value, so they are available for public use.

Figure 5.
World Bank Group
RMR – destinations
and milestones

Source: World Bank Group Archives (2021c)

Table 1.
Comparing and
contrasting ARMA
International’s IGIM
and World Bank
Group’s RMR

	ARMA International IGIM	World Bank Group RMR
Authoring entity	Professional association	Multinational development bank
Target audience	Members of the professional association	“Governments and public-sector agencies in the planning and designing of effective records management programmes” (World Bank Group Archives, 2021a)
Underlying framework	Maturity model	Maturity model
Supporting S&GPG	ARMA International’s Generally Accepted Recordkeeping Principles (ARMA International, 2022b, 2023)	No explicit mention
Versions	At least three versions published starting with a beta version in 2019 and currently in its second version published in 2022 (ARMA International, 2022a)	One version published with an appeal in the foreword by the World Bank’s Chief Archivist asking for inputs and suggestion for improvement (World Bank Group Archives, 2021a)
Source: Table by author		

Information Management Capacity Check tool (Demb, 2008; Katuu, 2016b). However, two out of these three S&GPGs have since been superseded with newer versions published in subsequent years. The ISO 15489 standard used then was subsequently updated in 2016, while MoReq went through revision in 2010. Consequently, since it was not aligned with the revised S&GPGs, RMCAS became outdated. This example reveals the limitation of relying on time-based S&GPGs, which can hinder the effectiveness of any model or framework.

Concluding remarks

Standardization is widely recognized as facilitating overall value achievement, which promotes organizational development and institutional growth. Over the past four decades, there has been a significant increase in the number of S&GPGs developed and used by the ARM professional community. ARM professionals commonly employ a combination of S&GPGs to maximize their effectiveness. This practice extends beyond the boundaries of individual ARM disciplines and seeks to embrace a broader perspective that includes integration with related fields such as information security, information resource discovery and interoperability of information exchange (Hofman, 2005). Different S&GPG often address similar or connected issues within this expansive context using varying approaches. For example, in the realm of information resource discovery, there may be overlapping S&GPG that promote accessibility and interoperability; however, these frameworks can differ depending on whether they are applied to records management metadata or library resource metadata (Katuu, 2002; Seymour, 2017).

To meet the expectations of their respective institutions, ARM professionals have access to an extensive range of S&GPG. In aligning these guidelines, a recommended approach is to use one S&GPG as a foundation and incorporate relevant requirements from other compatible sources instead of implementing them separately (Hofman, 2006). Practical considerations have led to the emergence of ontological representation, models and frameworks within this field. Some examples include RMCAS, which offered assistance in the past but became obsolete as it relied explicitly on time-based formal standards. The focus should not be on which type of S&GPGs these representations are based upon, but rather their inherent flexibility in structure that allows for iterative changes over time. In

this regard, each available mechanism for ARM professionals can be seen as analogous to the ever-changing “soup du jour,” consistently serving its intended purpose effectively.

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