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## Documentary Valuation: Analysis of the Legal, Technological and Informational Dimensions of the Electronic Document

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### *Summary*

*This text is the first part of a work divided into three stages concerning documentary evaluation. Its objective is to analyse the repercussions of the legal, technological and informational dimensions of documentary valuation on the electronic document. To this end, it is taken as a basis, first, to identify the necessary conceptual guidelines in the use and development in the preparation of the electronic document. Second, to establish the conceptual dimensions of the valuation of the electronic document by integrating archival theory. Analyzing the above, it is expected to increase the global vision given the intervention of the new needs and characteristics exposed by the electronic document in relation to its creation, management and conservation.*

**Keywords:** *Document valuation, dimensions, electronic document, electronic management, macro valuation.*

### Introduction

Documentary valuation is a theoretical-practical response to the excessive production of documents. The authors Cermeño and Rivas (2010: 15) indicate that it is valued in order to conserve, because it is not feasible to treasure each and every one of the documents produced in an organization. The authors establish criteria and principles necessary for documentary evaluation; In this order of ideas, the principles provide the assessment with a conceptual framework and the criteria recreate the manifestation of the type of information considered valuable.

Carol Couture, on the other hand, proposes five basic principles when evaluating documents; First, to be aware that the valued archives are evidence of the activities carried out, second, respect for the objectivity and contemporaneity of the judgment presented, third, respect for the ties that unite the evaluation to other archival interventions, fourth, respect for the balance between the management and the patrimonial purposes of evaluation, and fifth, compliance with the balance between the context of creation of the archives and the documents subject to management.

Now, as for the criteria most accepted by the professional community, they are, first, conservation, which allows the identification of the information contained in documents considered to be of permanent conservation, taking into account their origin and evolution in the organization, which contain significant data on important events. The second corresponds to the elimination of documents which do not have any secondary value, i.e., drafts, copies, reference or summary documents. (Cermeño and Rivas, 2010: 48)

To carry out the valuation, Schellenberg proposed primary and secondary values. Primary values are established when archival documents are "found in the offices and are frequently used by the administration" (del Castillo Guevara & Ravelo Díaz, 2017, p. 277). Secondary

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values are related to the evidence that the documents hold of the organization and functioning of the governmental body that produced them (evidential value), along with the information they contain about people, corporations, things, problems, conditions, among other matters (informational values). (Del Castillo Guevara and Ravelo Díaz, 2017: 277)

Stated in this way, it should be noted that the secondary value is the critique of this theory, since it is determined by archivists but focused on research and its various currents. At this point, it is necessary to frame the Macrovaluation. The theory of macrovaluation introduces the social value of documents, Fernández and Cedeño (2017: 2) explain:

[...] There are those who argue that the best way is to identify documentation that shows the interaction between Canadian society, government institutions and citizens.

The purpose of the valuation within the framework of the macro-valuation is "to clearly identify the level of interaction of the official programs, the governmental structure, and the isolated or voluntarily associated citizens it serves, and the documents of that plan are chosen to preserve them in perpetuity" (Fernández Abarca & Cedeño Molina, 2017: 2).

Defined as "a planned, strategic, holistic, systematic and comparative approach to the investigation and identification of society's needs with respect to documents" (Fenoglio, 2013: 4). It is worth mentioning that in a pragmatic way, in order to carry out the valuation of documents through the theory of macrovaluation, especially for electronic ones, an exhaustive analysis of the production context must be carried out and to carry it out, three aspects must be analyzed:

First, the functions, sub-functions, programmes and activities of the entity, secondly, the structure, the administrative organization chart; thirdly, the result of the interaction between the execution of the functions or programmes of the institution developed from the administrative structure and the connections with society, i.e. the citizens who participate in both the functions and the structure and who are affected. (Fenoglio, 2013: 5)

The steps to develop the macro-valuation are synthesized in the Top Down, top-down methodology, which consists of establishing the functions, from the most to the least important of the producing entity, its processes and the documents that are linked to them, and then entering to read and evaluate the documents: "it descends from the analysis of the functions, the activities and responsibilities of each of the actors (macro-valuation), to the formulation of valuation and selection rules for the specific documents that these functions produce (microvaluation)" (Serra, 2005: 13).

The theory of macrovaluation emphasizes the context of document production rather than the content. In addition, it is a social approach that focuses on three social phenomena:

[...] structures (institutions that create the documents), functions and activities (socio-historical trends) and citizens (users, clients). The assessment of these three phenomena and especially their relationships, interconnections and influences will determine, in terms of social impact, which documents have value and will be preserved and which do not and will be destroyed (Hernández Olivera, 2009: 148).

Having stated the above, it is necessary to question: How do the legal, technological and informational dimensions influence the valuation of electronic documents today? In order to respond to the above research, the general objective is to analyze the repercussions of documentary valuation from the legal, technological and informational dimensions of documentary valuation. To this end, it is based on the following specific objectives: first, to identify the conceptual guidelines necessary for the use and development of the electronic

document. Second, to establish the conceptual dimensions of the valuation of the electronic document by integrating archival theory.

Although the topic is not exhausted here, it is necessary to highlight that it is intended to generate a synergy between the analysis of various dimensions that interact in turn with good practices related to the following text of the research.

## Conceptual Articulations

For the pertinent purposes, a matrix is presented in which the conceptual categories inherent to documentary valuation are alternately juxtaposed.

**Table 1:** Conceptual Matrix of Documentary Valuation.

| Concept   | Representation  |
|---|---|
| Documentary Valuation                                 | "Intellectual work by which the primary and secondary values of documents are determined in order to establish their permanence in the different phases of the life cycle" (Colombian Institute of Technical Standards, 2010: 5)  |
| Macro valuation                                       | Nowadays, certain characteristics must be taken into account in order to enhance its treatment. First, the functions, sub-functions, and activities of the organization; second, the structure and organizational chart of the archive; and third, the result of the interaction between functions and society. Macrovaluation understood in this way not only frames the functions of the entity, but also contemplates the direct relationships of the electronic document, thus intertwining the three streams of study (entity, document, society) Pulido (2021: 127-128)   |
| Microvaluation  | This process allows the archivist to save time according to criteria such as age, extension, uniqueness, duration, completeness, fragility, handling, among others. It should be noted that in order to achieve an assertive Microvaluation, specific aspects such as the functions, sub-functions, programs and activities of the entity are examined. Polished (2021: 128-7-129)  |
| Electronic Valuation                                  | Pulido (2021: 122-125) in his academic text indicates that, in the valuation, the main and secondary copies must be differentiated since in the first versions of the documents there is not all the instrumental reason, now it is necessary to take into account that the versions of the same document can have value if they legitimize the other. It is therefore understood that the valuation of electronic documents must be carried out before their creation, and the technological metadata to be captured from each document will be key in its life cycle. A not insignificant fact to bear in mind is that the original electronic document contains information related to its authentication. |
| Information and Communication Technologies            | Article 6. Technological neutrality. The State shall guarantee the free adoption of technologies that promote the efficient provision of services, content and applications that use ICTs and guarantee free and fair competition, in addition to ensuring that their adoption is in harmony with sustainable environmental development. (Congress of the Republic of Colombia, 2009: 1)  |
| Document Management Program (PGD)                     | A set of administrative and technical activities aimed at planning, handling and organising the documentation produced and received by entities, from its origin to its final destination, in order to facilitate its use and conservation (AGN, 2023: 1)   |
| Electronic Archival Document Management System (EMSD) | Computer tool for the management of electronic archival documents. Notably, it can also be used in traditional archival document management. (AGN, 2020: 75)  |
| Archival Document                                     | Record of the information generated, received, stored, and communicated by electronic means, which remains in these media during its life cycle. It is produced by a person or entity by reason of its activities and must be treated in accordance with archival principles and processes. (AGN, 2020: 71)   |
| Electronic Archival Document                          | An analogue or digital archival document consisting of a message produced on the basis of electronic impulses and which can be stored in a device for this purpose, transmitted through a channel or network and reconstructed in natural language or original form by means of electronic equipment. (ICA, 2023).  |

**Source:** Authors' Own Creation.

## Methodology

From the evaluative point of view, the research has a qualitative approach, with an inductive logic, established in the systematic search for concepts considered essential in the evaluation of both analog and digital documents. The qualitative approach is understood by Vargas Beal (2011: 17) as the approach from which the methods, techniques, strategies and instruments are aligned with observational logic in a subjective way that questions some aspect of reality, its unit of analysis is based on the quality or characteristic, this methodology produces as results categories, relationships, structures and systematizations offered between the parts of the analyzed reality.

Given that the inductive method allows to evidence the precisions and conflicts related to the theoretical and practical aspects studied, it is highlighted that within the text it is presented in an interpretative way, thus the hermeneutic method is presented as an ally given its importance in relation to the interpretation of the national legal system, the theories and positions that currently question the electronic document.

Since the research is exploratory and descriptive, it seeks to deepen the conceptual structure of the archival field, with documentary research being based on forge, synthesize and even amend relational concepts. In terms of research techniques, documentary content analysis and categorical analysis are carried out, based on information collection and analysis matrices, consolidating the dimensions under study.

## Manifestation of Dimensions

This section expands on the axiomatic elements that interact between archiving, electronic records, and the legal, technological, and informational dimensions.

**Legal Dimension.** The national legal apparatus usually presents the structural norms interconnected with each other, thus establishing articulated legal bodies or systems. (Capella, 2008: 35). In accordance with the above, it should be noted that the legal component periodically generates updates in accordance with the national reality. The legal dimension gives the electronic document its physical, functional, structural and interoperability characteristics; with which it assigns it a qualitative character.

The contents present in the different media (graphics, texts, links, illustrations, audio, video, among others), manifest the diversity, richness and structural change that the electronic document itself has been increasingly establishing in the public administration. The General Archive of the Nation (AGN) grants the following general provisions on electronic documents:

- Law 594 of 2000 states that state entities may incorporate technologies in the administration and conservation of documents and their files, using any technical, electronic, computer, optical or telematic means, and that such documents shall be valid and effective provided that the requirements of procedural laws are met.
- Law 527 of 1999 establishes the legal framework that information systems must follow in relation to the legal effects required by law.

- External Circular No. 5 of 2012 issued by the AGN, outlines the "Recommendations to carry out digitization processes and official electronic communications within the framework of the Zero Paper initiative", thus making clear the archival purposes and certified digitization.
- NTC 5985: Implementation Guidelines for Document Digitization.
- GTC-ISO-TR 15801: Electronically Stored Information. Recommendations for integrity and reliability. (AGN, 2014: 1-3)

**Technological Dimension.** It represents the technological options offered in the market, it is understood as the structure, the product and the interface. According to Pulido (2017, 133-134), these standards are:

- Model Requirements for the Management of Electronic Documents and Records (MoReq), understood as a model of "functional" requirements used throughout the European Union.
- United Nations Educational, Scientific and Cultural Organization (UNESCO), from which the Charter for the Preservation of Digital Heritage derives.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) Vancouver Declaration on Memory of the World in the Digital Age: Digitization and Preservation.
- ISO 16175, a standard developed in line with document management which deploys principles and functional requirements for documents in software applications with various functionalities.
- International Research on Permanent Authentic Records in Electronic Systems (InterPARES), an international research project focused on the long-term preservation of archival electronic records in relation to their systems.

Functional requirements define the characteristics of the system, understand the nature of the operation, its interaction, the development of electronic documents and their status. Today, the State is focused on the Zero Paper and Digital Government directive, which is why ICTs benefit and are articulated with a wide range of resources. technological, technical, financial and human resources necessary for the development of a long-term Digital Preservation Plan condensed into the Integrated Document Conservation System, ideally maintaining the archival characteristics of the information and its archival component.

**Informational Dimension.** Dulzaides Iglesias, and Molina Gómez (2004: 1-5), allude to the fact that the analysis of information is a basic and complementary element of the process of providing information, it focuses on the information contained in the documents, on their meaning, on the sources and on their authority. It is a form of research aimed at capturing, evaluating, selecting and synthesizing the underlying messages within the content of documents, generating an analysis of their meanings, in relation to a determined or identified problem, thus favoring decision-making, the development of pertinent actions and strategies understood as an ideal instrument in information management. Decree 1080 of 2015 establishes that the authenticity, integrity, inalterability, reliability, availability and conservation of electronic documents will be guaranteed if their evidentiary value is maintained over time.

The following table summarizes the characteristics of the electronic documents set forth in Decree 1080 and whose compliance is mandatory:

**Table. 2:** Features of the Electronic Archival Document.

| Feature                   | Representation  |
|---------------------------|---|
| Stable content            | The content must not change over time, in case of changes, they must be authorized according to what is delimited by the Policy and the PGD in accordance with what is decided by the Law.  |
| Fixed Documentary Form    | It is the quality of the electronic archival document which is responsible for ensuring that its content is complete and unaltered over time, preserving the original form of its creation.   |
| Archival link             | Electronic archival documents present a link between them, given the characteristic trait of management within the organization, which is why the link must be maintained in relation to the life cycle, taking into account the metadata, structure, context, content, and its documentary grouping. |
| Functional Equivalent     | In the physical medium, it refers to written information, as for the electronic archival document, this requirement will be satisfied if such information is accessible over time, since it is understood as a data message.  |
| Management and processing | It is the cyclical articulation of the PGD, taking into account that electronic archival documents must comply with the following components: Capture, Traceability, Classification, Description, Access, Labeling, Conservation, Preservation, Transfers and Final Disposal.                         |

**Source:** Authors' Own Creation.

At this point, it is necessary to note that two concepts are intertwined here, namely, documentary analysis and information analysis. The authors Dulzaides and Molina (2004: 1-5) refer to a symbiotic process between documentary analysis and information analysis, the former requires knowledge of the rules established for its realization, the use of thesauri and categories, while the latter requires qualification, creativity, intelligence and knowledge related to the subject of the document, oriented to use, relationship and management of concepts, as well as a certain ability to locate the context and establish the links between the processed information and the knowledge available for the solution of some situation.

**Plot of the Archival Dimension.** Defined by Mundet (2011: 16) as the science of archives made up of a set of knowledge and methods for the treatment of documents and archives. The International Council on Archives describes it as "the theoretical and practical study of the principles, procedures and problems concerning the functions of archives". Archival science now has two fields of action; theory and practice. Archival theory includes its own history, its object or scope of action and methodology, in order to achieve its ends. Archival practice, on the other hand, is composed of the techniques and procedures used for the active preservation of documents and for the dissemination of information. (Mundet, 2011: 17)

Archival science, being composed of theoretical knowledge and practical procedures, is in turn divided into two areas, namely, the first, the specific area, composed of fundamental knowledge of its evolution, which generates good practices, these being the foundation of the standards. The second, the applied or auxiliary area, made up of knowledge from other sciences which allows it to be instrumentalized in the development of science. (Mundet, 2011: 17)

Archival science is based on the following Auxiliary Sciences:

- Palaeography: studies the origins and evolution of writing, given its development it deals with knowledge and its interpretation, as well as analyzes all scriptural systems.
  - Diplomatic: analyzes the parts and structure of the document, also studies the internal and external aspects, being able to establish their different typologies, as well as being able to determine the authenticity given the origin of the documents.
  - Chronology: establishes the processing of data over time related to historical events.
  - History: studies the development of individuals and organizations in relation to their activities in a temporal sequence, being recorded in documents, as a result of the passage of time.
  - Siglography: responsible for the study of stamps located on documents, boxes, sheets, among others. Typical of archival science when the stamp is part of the documents it validates, closes or marks.
  - Heraldry: studies the coats of arms of a family, dynasty, institution, or locality.
  - Law: it composes the legal environment from which documents and archives condense and develop their activity.
- Information and Communication Technology: in today's management, electronic documents are created, managed and preserved, taking into account that they enable individual and organizational activities.
- Linguistics: the science of language, which configures the content of documents, is used to represent the content, both in description, classification, ontologies, indexing, etc.
  - Administration: establishes the application of administrative techniques in archives, understood as the logistical units of organizations. (Mundet, 2011: 17-18) (Rojas, n.d.: 1) (Historical Archive of the Nobility, 2023: 1)

## Analysis of Results and Constituent Concepts

Regarding the valuation of the electronic document, Bonal Zazo, recovered by Garzón and Nieto (2018: 48-50), establishes it as an ephemeral object given its volatility, for which he bases an analysis based on four unavoidable questions:

### Board. 3: Orientation of the Documentary Valuation.

| Question                               | Orientation  |
|--|--|
| Why do we value?                       | Because too many documents are produced. The file dictates which to keep and which can be deleted.   |
| What do we value for?                  | Set deadlines and transfers. Define access deadlines. Decide on conservation. Decide on Deletion   |
| What is the valuation subject to?      | The theory of the three ages: activity, semi-activity, and inactivity. The Australian theory (Record Continuum): As time goes by, the electronic document takes on other dimensions. Colombian activity is governed from the age of three. The valuation is a transversal element, from the origin it has already been assigned valuation metadata and therefore its life span.  |
| What is the purpose of the assessment? | We value documentary series. The series are understood as a testimony and this profile gives them their documentary, continuous, repetitive and serial character. The nuances required in the valuation of series are: <ul style="list-style-type: none"> <li>•The technological environment</li> <li>•Whether it is based on a robust technological system or not</li> <li>•Evaluate the contents of the registry</li> <li>•Analyze the level of data processing</li> <li>• Analyze contemporaneity, temporality and obsolescence</li> <li>• Preserve the record and samples of the most extensive documents</li> </ul> |

**Source:** Garzón and Nieto (2018: 48-50).

The valuation understood in this way makes sense to the extent that it presents its results given the interactions in the execution of the functions and the society in which the state administrative activity is immersed.

Functions and Principles of Document Valuation Document valuation performs various functions, such as the control of document production, the life cycle of documents and the definition of digital preservation policies. It is also based on the following principles:

- The documents must prove over time its patrimonial, administrative, legal, financial and legal work in relation to the work carried out by the entity in the company
- Have in mind the time of preparation of the documents since they attest to the process, leaving a record of the how and why, since they influence decision-making
- Be aware of the relationships between valuation and previous and subsequent archival processes
- A balance between primary and secondary values is projected
- Establish a synergy between the context of creation, the fundamentals of use and their relationship over time (Couture, 2003: 30-40)

Evaluation criteria have been proposed that consider the preservation of documents that explain the origin and evolution of an organization, documents related to laws and regulations, significant data of people or events, and those necessary to protect individual or institutional rights. On the other hand, criteria are established for the elimination of documents that do not have secondary value.

**Legal Dimension.** This dimension underpins the Legal Principles of the digital environment and ICTs

- Technological neutrality: reference to current technology, taking into account its progress and permanent development
- Good faith: electronic interaction benefits from technological supports based on the trust of the parties
- Freedom of contract: in relation to ICTs, it emanates from the principle of inalterability
- Non-modification of the regime of the law of obligations and private contracts: it establishes that electronic commercial transactions do not substantially change the current law, it is only a question of the change of supports and means
- Functional equivalence of electronic acts: similar to the principle of functional equivalence in legal acts, concluded through electronic means (Rincón, 2017, p. 87-117)

Meanwhile, Law 527 states on the Legal Requirements of electronic documents that:

- Written: the information must be accessible for later consultation, it must integrate the principles of digital preservation (principle of integrity, principle of equivalence, principle of economy, principle of topicality, principle of cooperation and principle of standardization)
- Signature: you will be satisfied if an effective method has been used to identify the initiator taking into account the approval of the content
- Integrity: satisfied as long as the information contained remains complete and unalterable
- Admissibility and probative value: "shall be admissible as evidence and their probative force is that granted in the provisions of Chapter VIII of Title XIII, Section Three, Book Two of the Code of Civil Procedure"
- Criterion for evidentiary evaluation: subject to the reliability of the origin/creation, archiving or communication, as long as the integrity of the information is preserved
- Storage: satisfied as long as it complies with the conditions set out by law



Now, Law 527 reveals the Principles of Functional Equivalents, which are established from the analysis of purposes and functions, which determine how such purposes and functions could be fulfilled in relation to electronic techniques; In this way, it accepted the criterion of "functional equivalent", which takes into account the following requirements: first, Reliability, second, Inalterability, and third, Traceability. This Law grants electronic documents the same levels of security as a physical document, as long as they comply with the technical and legal requirements demanded in the same Law. (The Congress of Colombia, 1998)

**Technological Dimension.** The technological field encompasses the Objectives of the Connectivity Agenda set out below:

- Objective 1. Quality of life: the State must allow citizen participation through financial support, information, education and the creation of basic infrastructure
- Objective 2. Competitiveness: is the development of strategies focused on increasing productivity and efficiency through ICT
- Objective 3. Modernization of the State: focuses on the inter-institutional standardization of state administration through citizen control (Rincón & Mendieta, 2021, p.315-316)

At the same time, Digital Government is established, the OECD (2017: 18) mentions that it makes use of digital technologies by integrating government modernization strategies, in order to create public value, for which it is based on the following lines for implementation:

- Statistical quality of the methodology and impact assessment.

Government monitoring and evaluation. It focuses on measuring the achievement of indicators related to online products, automated focused on the measurement of the creation of public value directly and indirectly.

Data Availability. Guarantee the statistical quality of the methodology, as well as guarantee the availability of the data to carry out required and necessary calculations.

Robustness of composite indicators. Each year, the data collected allows adjustments to be made in order to become a comprehensive and coherent analytical tool.

Data Availability. The Colombian government must keep up to date in the development of measurement instruments, both in relation to the content and to the institutions that emerge as sources at the territorial level.

- Organizational Environment, Monitoring and Evaluation of Digital Government

Culture and measurement of public institutions. Public institutions are the source of information for the evaluation of digital government strategy, expanding efforts to foster a data-driven public sector.

Explore alternative methods of data collection. The burden on public institutions is to provide data for evaluation where open government data and interoperability platforms are related, investing in automated data capture.

Measuring issues to strengthen digital government. Methodology based on an e-government approach, it allows the evolution from the Online Government Strategy to the Digital Government Strategy.

- ICT project management and digital government impact assessment.

Towards a new governance of ICT projects. Governments seek to address the successes and failures of ICT projects, as well as innovate in relational efforts to strengthen accountability for successful and failed projects, it should be noted that these measures substantially favor compliance. (OECD, 2017: 118-131)

**Informational Dimension.** The informational context sets out the Guiding Principles for the development of a PGD, which are:

- Administrative principles: these are the administrative considerations of document management in relation to the transparency of administration, simplification and efficiency
- Economic principles: economic considerations, such as cost reduction, etc.
- Archival principles: these are the fundamental considerations of the program; In relation to the principles set forth in Law 594 of 2000, they are also related to the theory of document management, which are: the concept of total archiving, the life cycle of the document, respect for provenance and the natural order. (Zapata, 2005: 110)

In juxtaposition are the Characteristics of the electronic document generated from the NTC/ISO 15489 standard.

- Authenticity: To ensure the authenticity of documents, entities must implement and document the policies and procedures necessary to control the creation, receipt, transmission, maintenance, and disposition of documents, to which it must be ensured that the creators are fully identified and authorized, in addition to ensuring that the documents are protected against any unauthorized anomaly.
- Integrity: Referring to the complete and unaltered nature of the electronic document. It is necessary that electronic documents are protected from any unauthorized modification. Now, if any modification is made, it must be recorded for follow-up.
- Reliability: The content represents exactly what was meant in it. It is a complete, precise and accurate representation of what he is witnessing, and he can be called upon to prove it.
- Availability: It is findable, retrievable, presentable, interpretable and readable. The context of the documents should be clear and contain the information necessary for the understanding of the operations that created and managed them as a result of the activities. (MinTIC, 2012: 7)

**Archival Context.** The electronic archival document has the virtue of being able to operate in different types of systems, the AGN (2017) establishes that its management must configure certain minimum requirements, which will be enshrined by a specialized system, this system is the SGDEA and must allow at least:

- Archival integrity of the holdings by preserving the archival link of the documents
- Harmonize document management in both the physical and electronic environments.
- Attend to the archival principles of provenance, original order, integrity of the collections, and archival description
- Consider the management of archival instruments
- Consider transfer processes and the implementation of DLT
- Ensure long-term preservation of archival electronic documents
- Use of interoperability standards for the exchange of information between information systems

The SGDEA should also take into account the following complementary elements in order to achieve full progress:

- Information systems
- The Functional Equivalent
- The Data Message
- Authenticity
- Integrity
- The legal value
- Probative value
- The Digital Signature
- Inalterability
- Digital Preservation
- ICT management. (AGN, 2017)
- The international and national context currently outlines Blockchain technology which is transforming various industries, especially those that constitute digital, electronic, virtual and even mixed content, all from three (3) layers, namely:
  - The first, in charge of managing the processing of digital content
  - The second, specialized in tagging, capable of managing metadata in a decentralized way
  - The third is storage that could be a service such as InterPlanetary File System (IPFS) combined with InterPlanetary Database (IPDB) (Preukschat, 2018, p.118 – 123)

These elements currently generate the following relationships.]

**Board. 4: Social Orientation.**

|                    |                               |  |
|--------------------|-------------------------------|--|
|                    | Social Impacts                | *Strategic: policies, plans, processes, procedures, and standardization<br>*Holistic: policies, ideology, historical research trends, government programs, etc. *Systematic: document management processes (planning, production, management, organization, transfers, disposition and preservation)*Corporate: exchange, safeguarding and processing of information |
| Social Interaction | Electronic Archival Document  | 1. Functions/Sub-functions/Programs/Activities<br>2. Structure/Organizational Chart<br>3. Result of the interaction between the performance of functions and society   |
|                    | Social Phenomena of Valuation | 1. Structure (Institutions)<br>2. Functions /Activities/ (Socio-Historical Trends)<br>3. Citizens (Users/Customers)  |

**Source:** Authors' Own Creation.

**Conclusions**

The new aspects generated by the electronic archival document sustain the social changes of modern times. Social impact can be established from four aspects, namely: the first, Strategic, from which policies, plans, processes, procedures and standardization are derived. Second, the Holistic, from which policies, historical research trends, government programs, among others, come. Third, the Systematic, framed in the GD, and Fourth, the Corporate, from which the exchange, safeguarding and processing of information to generate strategic value is located.

Thus, the research exposes several aspects of the documentary valuation that are at play in the interpretation of the new social character exposed on the archival electrical document. However, it also generates the following investigations:

What are the legal implications of document valuation in the context of data protection?

In some regulatory frameworks, there are strict laws and regulations governing the collection, storage, and handling of personal data. Documentary valuation must comply with these laws to ensure data privacy and security. Some key implications include:

- **Data Subject Consent:** This must be done by obtaining the consent of the data subject before collecting and processing their information.
- **Data Subject Rights:** Citizens have rights, such as access to and deletion of their data. This implies that the documentary valuation must allow the fulfilment of these rights.
- **Data security:** Document valuation should implement robust security measures to protect personal data from unauthorized access.
- **Notification of data breaches:** In the event of a security breach, authorities and those affected may need to be notified or need to be notified.

A second question is: How do emerging technologies, such as artificial intelligence, affect document valuation?

Emerging technologies, such as artificial intelligence (AI), have a significant impact on document valuation in several ways:

- **Automation:** AI can automate much of the valuation process by automatically identifying relevant documents, categorizing them, and removing outdated or irrelevant documents.
- **Advanced search:** AI systems can improve document search and retrieval through natural language understanding and contextual analysis.
- **Classification and tagging:** AI can classify documents based on their content, making them easier to organize and retrieve.
- **Sensitive data detection:** AI can help identify sensitive or personal data in documents, which is essential for complying with privacy regulations.
- **Long-term value prediction:** AI can also predict the future value of documents, which helps in decision-making about their retention.

When we can finish with the reflection of the second question, it is desirable to think that we can move forward in the reflection of a third question that is posed: How can data mining tools and techniques be used in the documentary assessment?

Data mining tools and techniques are essential in document valuation to extract valuable information and knowledge from large sets of documents. Some ways to use data mining include:

- **Text analysis:** Text mining allows you to analyze the content of documents to identify patterns, trends, and hidden relationships.
- **Clustering and classification:** With this, we can use clustering algorithms to group similar documents and classification algorithms to label documents into specific categories.
- **Information extraction:** Data mining can help extract structured information from unstructured documents, such as dates, names, or financial data.
- **Anomaly detection:** The same data mining can identify (deviations) of documents or data, which can be useful for detecting fraud or data quality issues.

- Predictive modeling: This type of modeling uses techniques to predict the future value of documents and decide whether to retain or delete them. These are some of the ways in which the legal, technological and informational dimensions affect and are applied in documentary valuation. It is important to address these areas holistically to ensure effective document management and comply with applicable regulations and regulations.

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## ANNEX 1

|                    |  | Dimension Analysis  |   |
|--------------------|--|---|---|
| DIMENSION ANALYSIS | Principles of the entity in the company* | *The documents must prove over time their patrimonial, administrative, legal, financial and legal work in terms of the work carried out by the entity in the company* Have in specific the time of preparation of the documents since they attest to the process leaving a record of the Documentary how and why given that they influence decision-making* Be aware of the existing relationships between the valuation and the previous and subsequent archival processes* A balance between primary and secondary values is projected*Establish a synergy between the context of creation, the fundamentals of use and their relationship over time (Couture, 2003: 30-40) |   |
|                    | Valuation                                | Why do we value?  | Because too many documents are produced. The file dictates what to keep and which can be deleted  |
|                    | Unknown                                  | What do we value for?   | Set deadlines and transfers. Define access deadlines. Decide on conservation. Decide on Deletion  |
|                    |  | What is the valuation subject to?   | *The theory of the three ages: activity, semi-activity and inactivity*The Australian theory   |
|                    |  | Social Interaction  | Social Impacts  |
|                    |  |   | *Strategic: policies, plans, processes, procedures, and standardization *Holistic: policies, ideology, historical research trends, government programs, etc. *Systematic: document management processes (planning, production, management, organization, transfers, disposition and preservation)*Corporate: exchange, safeguarding and processing of information |
|                    |  | Electronic Archival Document  | 1. Functions/Sub-functions/Programs/ Activities 2. Structure/Organizational Chart3. Result of the interaction between the performance of functions  |

| Dimension Analysis                     |                       |   |   |  |
|--|-----------------------|---|---|--|
|  |                       | (Record Continuum) As time goes by, the electronic document acquires other dimensions*Colombian activity is governed from the three ages. The valuation is a transversal element, from the origin it has already been assigned valuation metadata and therefore its life span   |   | and society  |
|  |                       | We value documentary series. The documentary series is understood as a testimony and this profile gives it its documentary, continuous, repetitive and serial character. The nuances required in the evaluation of series are:  |   |  |
| What is the purpose of the assessment? |                       | *The technological environment*Whether it is based on a robust technological system or not*Evaluate the content of the record*Analyze the level of data processing*Analyze contemporaneity, temporality and obsolescence*Keep the record and samples of the most extensive documents  | Social Phenomena of Valuation                 | 1. Structure (Institutions)2. Functions /Activities/ (Socio-Historical Trends)3. Citizens (Users/Customers)  |
| RELATIONS                              |                       | DIMENSION INTEGRATION   |   |  |
|  | Legal                 | Physical, functional, structural and interoperability characteristics of the electronic document. It has a qualitative character which exudes the diversity, richness and structural change of its support  |   | *Technological neutrality: reference to current technology taking into account its progress and permanent development*Good faith: electronic interaction benefits from technological supports based on the trust of the parties *Freedom of contract: for ICTs it emanates from the principle of inalterability *Non-modification of the regime of the law of obligations and private contracts: electronic commercial transactions do not substantially change the current law, regardless of the change of media and means *Functional equivalence of electronic acts: similar to the principle of functional equivalence in legal acts concluded by electronic means  |
|  | Technological         | Functional requirements, define system characteristics, understand the operation, interaction, development of electronic documents and their status. The qualities of the system detail, the creation and capture of documents, the management and maintenance of controls, maintenance over time, the implementation of conservation schedules, and the necessary management of the entire information chain | Legal Principles: Digital Environment and ICT |  |
| Dimensions                             |                       |   | Legal   |  |
|  | Informational         | The relationship between the analysis of information as a basic and complementary element of the process of providing information, focuses on the information contained in the documents, their meaning, the sources and their authority. It focuses on the capture, evaluation, selection and synthesis of the underlying messages within the content of the documents, through an analysis of meanings      | Law 527 of 1999 sets out legal requirements   | *Written: the information must be accessible for later consultation, it must integrate the principles of digital preservation (principle of integrity, principle of equivalence, principle of economy, principle of topicality, principle of cooperation and principle of standardization)*Signature: it will be satisfied if an effective method has been used that allows the initiator to be identified taking into account the approval of the content *Integrity: satisfied as long as the information contained remains complete and unalterable*Admissibility and probative value: "shall be admissible as evidence and their probative force is that granted in the provisions of Chapter VIII of Title XIII, Section Three, Book Two of the Code of Civil Procedure" *Criterion for evidentiary evaluation: subject to the reliability of the origin/creation, archived or communicated, as long as it preserves the integrity of the information *Storage: satisfied as long as it complies with the conditions set out by the Law |
| Assessment                             | Documentary Valuation | NTC-15489 (2010: 5) synthesizes documentary valuation as an "intellectual task  | Technological                                 | Objectives of the Connectivity *Objective 1. Quality of life: the State must allow citizen participation with the creation of basic infrastructures *Objective 2. Competitiveness:   |

| Dimension Analysis  |  |   |
|---|--|---|
|   | by which the primary and secondary values of documents are determined in order to establish their permanence in the different phases of the life cycle" (Colombian Institute of Technical Standards, 2010: 5)  | Agenda development of strategies to increase productivity and efficiency through ICT *Objective 3. Modernization of the State: focuses on the inter-institutional standardization of state administration   |
| Macro valuation   | Beyond a strict concept, the production of electronic documents today must take into account certain characteristics in order to enhance their treatment. First, the functions, sub-functions, and activities of the organization; second, the structure and organizational chart of the archive; and third, the result of the interaction between functions and society. Macrovaluation understood in this way not only frames the functions of the entity, but also contemplates the direct relationships of the electronic document, thus intertwining the three currents of study (entity, document, company) in a more practical valuation proposal. Polished (2021: 127-128)   |   |
| Microvaluation  | It is an evaluative proposal of the document, it seeks the evaluation of series, sub-series and subsequent. It starts from the principle of provenance by identifying the producers, then the components that surround it are analyzed, such as the documentary sub-series, copies, drafts and the tradition of the document itself. In this way, the primary and secondary values of electronic documents during their life cycle are based. This process allows the archivist to save time according to criteria such as age, extension, uniqueness, duration, completeness, fragility, handling, among others. It should be noted that in order to achieve an assertive Microvaluation, specific aspects such as the functions, sub-functions, programs and activities of the entity are examined. Polished (2021: 128-7-129) | Online Government (GEL) * Online services: access portals aimed at citizens and organizations* Government intranet: secure and standardized internal state platform * Interoperability platform: seeks to standardize information flows between government entities |
| Primary Values (Local Archive and Central Archive)        | *Administrative Value: related to the procedure or matter that motivates the entity*Legal Value: derived from the legal obligations of common law*Legal Value: testimony before the law*Fiscal Value: documents for the Public Treasury*Book Value: records of income and expenditure  |   |
| Secondary Value (Permanent Archive or Historical Archive) | Reference to the elaboration or reconstruction of the administration, it is a primary historical and testimonial source  |   |
| Electronic Valuation                                      | Pulido (2021: 122-125) in his academic text indicates that, in   | Informational Blockchain technology *The first manages content processing*The second, specialized in tagging, metadata management*The   |



| Dimension Analysis     |  |  |
|------------------------|--|--|
|                        | <p>the valuation, the main and secondary copies must be differentiated since in the first versions of the documents there is not all the instrumental reason, now it is necessary to take into account that the versions of the same document can have value if they legitimize the other. It is therefore understood that the valuation of electronic documents must be carried out before their creation, and the technological metadata to be captured from each document will be key in its life cycle. A not insignificant fact to bear in mind is that the original electronic document contains information related to its authentication. It should also be noted that in relation to the physical or traditional document, it is necessary to preserve the physical support and the electronic document can support the operability</p> | <p>(digital content in 3 layers)</p>   |
|                        | <p>Theoretical and practical study of the principles, procedures and problems concerning the functions of archives</p> <hr/> <p>Archival theory: includes its history, its object or scope of action and its methodology</p> <hr/> <p>Archival practice: composed of techniques and procedures used for the active preservation and dissemination of information</p> <hr/> <p>Specific area: composed of fundamental knowledge of its evolution, good practices and foundations of the standards</p> <hr/> <p>Applied or auxiliary area: made up of knowledge from other sciences</p>  |  |
| Concept (theory/areas) |  |  |
| Archival Principles    | <p>Principle of provenance: documents produced by one body should not be mixed with those of another</p> <hr/> <p>Principle of respect for structure: internal classification of a fund that must respond to the entity and the producing unit</p> <hr/> <p>Principle of respect for the original order: do not alter the organization given to the fund by the producing unit</p>   | <p>Electronic Archival Document Management System (EMSD)</p>   |
|                        | <p>Paleography: Origins, Evolution, Interpretation, and Analysis of Writing Systems</p> <hr/> <p>Diplomatic: analyzes the parts, the structure of the document and the internal and external aspects and can establish its origin</p> <hr/> <p>Timeline: Sets the data processing</p> <hr/> <p>History: studies the development of individuals and organizations over time</p> <hr/> <p>Sigillography: study of the seals on validated, closed or marked documents</p>   | <p>Complementary elements of SGDEA :</p> <p>*Document management*Information systems*Functional equivalent*Data message*Authenticity*Integrity*Legal value*Probative value*Digital signature*Inalterability*Digital preservation*Information technology management</p> |
| Auxiliary Sciences     |  | <p>Law 527 of 1999</p>   |
|                        |  | <p>Functional Equivalents:</p> <p>*Reliability*Inalterability*Traceability</p>   |

**Dimension Analysis**

|         |  |   |  |
|---------|--|---|--|
|         | Heraldry: Study the coats of arms of dynasty   |   |  |
|         | Law: makes up the legal environment  |   |  |
|         | Information and Communication Technology: current management of electronic documents |   |  |
|         | Linguistics: configure the content of documents                                      |   |  |
|         | Administration: application of general administrative techniques                     |   |  |
| Concept | Information and Communication Technologies   | <p>Article 6. Technological neutrality. The State shall guarantee the free adoption of technologies, taking into account the recommendations, concepts and regulations of the competent and suitable international organizations in the field, which will promote the efficient provision of services, content and applications that use Information and Communication Technologies and guarantee free and fair competition, and that their adoption is harmonious with sustainable environmental development (Congress of the Republic of Colombia, 2009: 1)</p> <p>Set of administrative and technical activities aimed at the planning, management and organization of the documentation produced and received by entities, from its origin to its final destination, in order to facilitate its use and conservation (AGN, 2023: 1)</p> | <p>PGD Guiding Principles</p> <p>*Administrative principles: the management of documents in relation to the transparency of the administration*Economic principles: economic considerations, such as cost reduction*Archival principles: relationship between Law 594 of 2000 and the theory of records management (total archive, life cycle, respect for provenance and natural order)</p>                                 |
|         | Document Management Program  | Computer tool for the management of electronic archival documents. It can also be used in traditional archival document management (AGN, 2020: 75)  |  |
|         | Electronic Archival Document Management System (EMSD)                                | Record of the information generated, received, stored, and communicated by electronic means, which remains in these media during its life cycle. It is produced by a person or entity by reason of its activities and must be treated in accordance with archival principles and processes (AGN, 2020: 71)  | <p>NTC/ISO 15489 Standard</p> <p>*Authenticity: To ensure the authenticity of documents, they must implement and document policies and procedures*Integrity: refers to the completeness and unaltered nature of the electronic document*Reliability: it is a complete, accurate, and accurate representation of what it testifies to*Availability: it is findable, retrievable, presentable, interpretable, and readable</p> |
|         | Archival Document  | For its part, the International Council on Archives (ICA, 2023: 1) defines it as: ... An analog or digital archival document consisting of a message prepared on the basis of electronic impulses and that can be stored in a device for this purpose, transmitted through a channel or network and reconstructed in natural language or original form by means of an electronic equipment which is essential to make the document intelligible again. (ICA, 2023)  |  |
|         | Electronic Archival Document   |   |  |