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DIGITAL INNOVATION AND INFORMATION TECHNOLOGY IN THE CONTEXT OF CYBERSECURITY AND GENERAL DATA PROTECTION

Abstract

Purpose: *Data breaches can devastate cultural heritage, hence necessitating a multi-level approach that extends beyond technology to include IT security culture and administrative processes across the data lifecycle. Public administrations should focus on employee training, sensitive data management, and partnering with secure tech suppliers. Central to the digitization of cultural heritage are the 2022–2023 guidelines (MiC, 2022). The extensive recovery operations illuminate the need for protection and enhancement, not only in cataloging what exists but also as a basis for future endeavors.*

Methods/Approach: *In conclusion, the intersection of digital innovation, cybersecurity, and data protection in the realm of cultural heritage requires a nuanced, legally informed, and technologically sophisticated approach. This ensures not only the preservation of our historical legacy but also its responsible and secure engagement in the digital age.*

Results: *Digitization allows historical memory to be preserved through the transfer of archival material in compliance with the provisions of the Cultural heritage and landscape code. This is in order to obtain a result that on the one hand allows the protection of the cultural documentary heritage and on the other guarantees public usability for future generations.*

Conclusions: *A digitization project's primary goals are the conservation of originals, asset utilization and valorization, heritage study, and integrating prior digitization efforts. The process, essential for preserving historical memory, must be scalable and adaptable.*

Keywords: *IT security - culture and administrative processes - protect cultural value*

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INNOVAZIONE DIGITALE E TECNOLOGIA DELL'INFORMAZIONE NEL CONTESTO DELLA SICUREZZA INFORMATICA E DELLA PROTEZIONE GENERALE DEI DATI

Astratto

Scopo: *Le violazioni dei dati possono devastare il patrimonio culturale, rendendo quindi necessario un approccio multilivello che si estende oltre la tecnologia per includere la cultura della sicurezza IT e i processi amministrativi attraverso il ciclo di vita dei dati. Le pubbliche amministrazioni dovrebbero concentrarsi sulla formazione dei dipendenti, sulla gestione dei dati sensibili e sulla collaborazione con fornitori tecnologici sicuri. Centrali per la digitalizzazione del patrimonio culturale sono le linee guida 2022-2023 (MiC, 2022). Le estese operazioni di recupero mettono in luce la necessità di protezione e valorizzazione, non solo catalogando ciò che esiste ma anche come base per gli sforzi futuri.*

Metodi/Approccio: *In conclusione, l'intersezione tra innovazione digitale, sicurezza informatica e protezione dei dati nel regno dei beni culturali patrimonio culturale richiede un approccio articolato, giuridicamente informato e tecnologicamente sofisticato. Ciò garantisce non solo la preservazione del nostro patrimonio storico, ma anche il suo impegno responsabile e sicuro nell'era digitale.*

Risultati: *La digitalizzazione consente di preservare la memoria storica attraverso il trasferimento di materiale d'archivio nel rispetto delle disposizioni del Codice dei beni culturali e del paesaggio. Ciò al fine di ottenere un risultato che da un lato consenta la tutela del patrimonio culturale documentario e dall'altro garantisca la fruibilità pubblica per le generazioni future.*

Conclusioni: *Obiettivi primari di un progetto di digitalizzazione sono la conservazione degli originali, l'utilizzo e la valorizzazione dei beni, studio del patrimonio e integrazione degli sforzi di digitalizzazione precedenti. Il processo, essenziale per preservare la memoria storica, deve essere scalabile e adattabile.*

Parole chiave: *sicurezza informatica - cultura e processi amministrativi - tutelare il valore culturale*

DIGITALNE INOVACIJE IN INFORMACIJSKA TEHNOLOGIJA V KONTEKSTU KIBERNETSKE VARNOSTI IN SPLOŠNEGA VARSTVA PODATKOV

Izvleček

Namen: *vdori v podatkovne baze lahko opustošijo kulturno dediščino, zato je potreben pristop na več ravneh, ki ne samo da vključuje tehnologijo ampak tudi varnost IT tehnologij in upravnih procesov v celotnem življenjskem ciklu podatkov. Javne uprave bi se morale osredotočiti na usposabljanje zaposlenih, upravljanje občutljivih podatkov in partnerstvo z dobavitelji varne tehnologije. Osrednji del digitalizacije kulturne dediščine tvorijo smernice 2022–2023 (MiC, 2022). Obsežne operacije obnavljanja le-teh poudarjajo potrebo po zaščiti in izboljšavi, ne le pri katalogiziranju obstoječih podatkovnih baz, ter služijo tudi kot podlaga za prihodnja prizadevanja.*

Metode/pristop: *ugotavljamo da presečišče digitalnih inovacij, kibernetске varnosti in varstva podatkov na področju kulturne dediščine zahteva uravnotežen, pravno utemeljen in tehnološko dovršen pristop. To zagotavlja ne le ohranjanje naše zgodovinske dediščine, temveč tudi odgovorno in varno implementacijo v digitalni dobi.*

Rezultati: *Digitalizacija omogoča ohranjanje zgodovinskega spomina s prenosom arhivskega gradiva v skladu z določili zakonodaje o kulturni dediščini in krajini. S tem želimo doseči rezultat, ki na eni strani omogoča varovanje kulturne dokumentarne dediščine, na drugi pa zagotavlja javno uporabnost za prihodnje generacije.*

Sklepi: *Primarni cilji projekta digitalizacije so ohranjanje izvirnikov, uporaba in valorizacija sredstev, preučevanje dediščine in vključevanje predhodnih prizadevanj za digitalizacijo. Proces, ki je bistven za ohranjanje zgodovinskega spomina, mora biti merljiv in prilagodljiv.*

Ključne besede: *IT varnost - kultura in upravni procesi - varovanje kulturne dediščine*

1. INTRODUCTION

Our nation's vast and invaluable documentary heritage is safeguarded in both public archives and private collections of cultural significance, reflecting the lives of individuals and their communities. Public administration archives (State, territorial authorities, public bodies) are deemed cultural artifacts by legislation, specifically under Decree 22.1.2004 no. 42, which encompasses the Cultural heritage and landscape code.

Over time, archives have come to be recognized as cultural assets, particularly those documents that, beyond their legal or administrative validity, possess historical significance warranting indefinite preservation. The evolution of the concept of cultural goods, moving from a materialistic perspective (as per the fundamental law of 1939 on the protection of artistic and historical items) to an immaterial conception valuing the expressive aspects of civilization, marks a doctrinal shift.

This normative framework, crafted to protect cultural value, culminates in the imposition of legal protections. These do not strip ownership rights but rather redirect the asset's trajectory towards socio-economic development within its locale. The essence of cultural heritage, as a testament to civilization, shifts from ownership to purpose, thereby rendering cultural goods public in terms of utility rather than possession.

Pursuant to Art. 10, para. 1 of Decree no. 42/2004 and subsequent amendments, various items of historical, artistic, archaeological, and ethnological interest are presumed cultural assets. This includes those belonging to the State, regions, other local public bodies, public institutions, and non-profit legal entities.

Moreover, Art. 822, para. 2 of the Civil Code integrates this discipline, including within the public domain buildings of historical, archaeological, and artistic interest, museum collections, archives, and other assets subjected by law to public domain regulations (Buzzanca, 2019).

The extensive recovery operations illuminate the need for protection and enhancement, not only in cataloging what exists but also as a basis for future endeavors. Recognizing such heritage as both a cultural and communal asset necessitates its integration into inclusive cultural growth strategies, embracing the societal role of ownership as outlined in both the Italian Constitution and the Civil Code.

2. A VIRTUOS EXAMPLE: FICARELLI FUND

The Ficarelli's archive, after having been declared of cultural interest by the Archival Superintendence, was purchased on 13 October 2003, by Ministry of Cultural Heritage and Activities and was intended for the State Archives of Bari competent for the territory. The same is subject to the protection regime referred to in part II of Decree no. 42/2004.

Through photography, the Ficarelli's archive brings to memory the passage of illustrious figures in art, industry and commerce and pays great attention to events and representatives of politics, including Mussolini, Matteotti, De Gasperi, Gronchi, Segni, Einaudi and his friend Aldo Moro, whom he portrayed several times on public and private occasions.

The photos document the great events involving the city and rural areas: the war period, the floods, the naval disasters but also the realization of major works such as the Fiera del Levante, the inauguration of the railway lines, the urban transformations.

The photographic fund is constituted approximately 150.000 negatives on plate and film, divided into two parts.

The first, oldest, is made up of 46 series which include 1.984 plate and film negatives, with images dating from the end of the 1800s to 1960 and organized by the photographer Ficarelli already by major themes. This part has been entirely inventoried, digitized and placed in special containers suitable for conservation, and is fully usable and consultable by scholars who request it.

The second, containing mainly film negatives, testifies to the activity of the photographer from Bari from the 1940s to the 1970s, and that of his studio from 1970 to approximately 1990.

The Ficarelli's archive, given its importance for the historical reconstruction of the city of Bari and the surrounding area, enjoys a high interest from users, who have been waiting for years to be able to use it in its entirety. Requests for consultation and reproduction of the negatives are in fact the order of the day, arriving from all over Italy.

The main objective is to deliver and make the community better aware of a photographic collection with a strong historical-documentary value.

Courtesy of the State Archives of Bari: Ficarelli's Archive



Figure 1: Bari, Old Port Fishermen 1930

The development of an information system, interoperable with that of the digital resource aggregator bodies, will make it possible to expand the possibilities for sharing the preserved cultural heritage, with a view to technological innovation in terms of use and in line with the actions aimed at the transition digital in the PA.

Among the expected results, the digitization of all the negatives will make it possible to guarantee the preservation of the images over time, preventing the risk of deterioration and loss of information by improving their long-term conservation.

The use of digital technologies will make it possible to streamline the activities linked to the use of the fund with a view to bringing the PA closer to the citizen and free access to culture.

3. CULTURAL BOND AS A TOOL FOR VALORISING PRIVATE PROPERTY RIGHTS

Among the main distinctions relating to cultural assets, the one relating to the subjective profile in relation to the regime of belonging is fundamental: if the asset belongs to public bodies or private non-profit legal entities, these assets must be classified as public; if the subjects are private owners, the Cultural heritage

and landscape code (Cultural heritage and landscape code, 2004). requires that the interest be declared by an administrative provision².

For things belonging to private individuals, other than non-profit entities, the subjection to the regulations envisaged for cultural heritage cannot ignore a specific declaration from the administration, pursuant to art. 10 paragraph 3 of the Decree (Cultural heritage and landscape code, 2004). This declaration is aimed at ascertaining the actual existence of a cultural interest of particular importance, or of an exceptional nature in the case of book collections or collections.

In the latter case, the asset remains privately owned but, as a consequence of the particular regime to which it is subjected, in conjunction with the need to protect the public interest underlying the declaration of cultural interest, it is subject to particular conservation rules, protection and valorization: private ownership must coexist with public prerogatives which affect the rights of enjoyment and disposal of the asset.

This peculiar regime translates into a series of limitations both in making modifications in contrast with the established cultural interest and in diverting the thing from its proper destination or in altering or transferring it (Sandulli, 1989).

However, all this cannot be considered a “limit” to the private owner’s rights, but rather is the way in which the law resolves particular conflicts, caused by the convergence and possible incompatibility of the private owner’s interest with the public interest in that cultural asset.

In fact, the provision that declares the cultural interest of an asset, in fact, in binding it lays the foundations and introduces, through its content and its motivation, a series of specific requirements (i.e. limitations) regarding the use of the object asset of the provision.

The decree by which the restriction is affixed, therefore, in addition to recognizing the particular cultural interest inherent in the property, has a fundamental impact on the legal regime covered by the provision itself, which before that mo-

2 The cultural bond is a particular act of the public administration. (adopted by the Ministry and, at regional level, by the Superintendence) of destination or unchangeability which consequently limits the free alienability or changeability by the owner, both public and private. The procedure for identifying cultural assets consists of two parts: 1) the declaration, to which a substantial nature is attributed; 2) notification, to which a procedural nature is attributed. Indeed, the identification pursuant to art. 13 of the Code is made through a declaration of “considerable interest” which is notified to the owners or holders of the property. Once the restriction measure has been notified, the property is subject to the authorizations of the Superintendence for non-ordinary activities. (Council of State, 2002)

ment is subject to the ordinary discipline of private property provided for by the Civil Code (Royal Decree 16.3.1942, no. 262) and by the other laws in force on the subject³.

As a consequence of the cultural value of the property, the owner certainly cannot make modifications in conflict with the ascertained cultural interest, nor can he divert the thing from its proper destination or alter it or transfer it without the required legal authorizations (Marzocca, 2006).

However, the declaration of cultural interest on an asset is synonymous with advantages, since from that moment on the State can contribute, partially or even totally, to the costs of conservation, protection and valorization of the cultural asset (Grisolia, 1952).

Having regard to the legal condition of the cultural property, it is not only the right of ownership (or other real right) that is relevant, which is further enhanced by the affixing of a constraint following the declaration of cultural interest - and not as otherwise claimed by some as a limitation to the right of ownership on the good itself - but they also note the activities suitable for creating a connection between the subject and the good.

In fact, the effect of the cultural protection constraint allows the exercise of public control, aimed at preventing the assets subject to it from suffering damage to their state of conservation, through the request for prior consent from the competent authority for the carrying out of activities suitable for affecting the material condition of the property (Perlingieri, 1985).

The constraint is substantiated in a series of legal situations preordained to guarantee the cultural function performed by the asset and, once the connection between the aforementioned function and the asset has been ascertained, it expresses all the legal effects that act as a safeguard for the maintenance of the conditions on which this connection is based.

Precisely as proof of what has been observed, the traditional doctrine had classi-

3 With reference to the legal nature of the declaration of cultural interest, there has been much discussion both in doctrine and in jurisprudence among those who consider the declaration to be of a merely declaratory nature (with the consequence that the assessment should be assimilated to an act of science, given the lack of comparison of the cultural interest with the others of the interests involved, public and private) *ex plurimis* cf. Council of State, Sec. VI, 30.11.1995, n. 1362; Council of State, Sec. VI, 22.03.1993, n. 255, and those who believe, on the other hand, that the declaration produces a constitutive effect and is preceded by a discretionary assessment by the public administration regarding the cultural value of the asset, cf., Council of State, Sec. VI, 12.12.1992, n. 1055. For a broad reconstruction of the doctrinal debate

fied the regime of things of antiquity and art - cultural heritage - in the category of administrative limitations of private property, showing, on the other hand, little interest in the concurrent presence of public ownership of the goods referred to in Law 1.6.1939 no. 1089 (Alibrandi & Ferri, 1987, 223).

This thesis, considered by some to be “short-sighted”, was aimed exclusively at reinforcing the moment of limitation of the owner’s faculties, without considering the elements characterizing the legal status of the property, contained in the regime of historical and artistic protection, elements that subsequently led to an interpretation of the compression of the right to property not in negative terms.

The cultural asset, which draws on the thing as a material testimony of civilization, is superimposed on the patrimonial asset that is inherent in the same thing and whose regime of belonging does not affect the essential features of the cultural asset as an autonomous object of protection (Fish, 2008).

Unlike other goods, whose functional destination is implemented by means of a specific prescription from private property, the things that constitute cultural goods remain bound to the function connected to their nature and to their being cultural goods.

The special discipline prepared for cultural heritage defines forms and ways of coexistence between two different utilities, the cultural and the economic, thus making it possible to identify the faculties that the private owner can exercise, which are, on the other hand, precluded and which are allowed under public control (Sandulli, 1954).

The Constitutional Court⁴ considered unfounded the questions of constitutional legitimacy raised regarding a hypothetical illegitimacy due to the compression of the dominical faculties relating to the right to property, as the special regime of protection to which cultural heritage is subject finds sufficient justification in the intrinsic quality of the goods subject to it, for the aptitude and destination for the satisfaction of a general interest.

In particular, the legislator has provided that the subjection to the particular protection regime (Cattaneo, 1960) must be conditional, for privately owned as-

4 Constitutional Court, sent. 28.3 2003, no. 94; Constitutional Court sent. 20.1.2004, n.26; Constitutional Court 21.1.2004, no.9.

sets, to the prior issuance of the formal declaration of cultural interest, without which any possibility of intervention by the bodies of the public administration is precluded⁵.

The reflections formulated by the Franceschini Commission are sworn by the Constitutional Court, which with sentence 9.3.1990, no. 118 (Council of State, 1990) stated that: «culture never assumes autonomous, separate and distinct importance with respect to assets of historical, artistic, archaeological and ethnographic interest, but is interpenetrated in the things that constitute its material support; It follows that culture cannot be protected separately from the good: this is the real meaning and the key to understanding art. 9 of the Constitution».

Furthermore, the Constitutional Court, with the aforementioned ruling, further specified that: «the State must take care of the cultural formation of its members, to which every value suitable for stimulating and enriching their sensitivity as persons contributes, as well as the perfection of their personality and their spiritual and material progress: this is why, in order to achieve the objectives of the promotion and development of culture, the State must provide not only for the protection of those goods that they are the value of material evidence of it and which, as such, are of instrumental importance for the achievement of the aforementioned objectives, both for their intrinsic cultural value and for the reference to the history of local civilization and custom, but it must also ensure the community the enjoyment and fruition of the cultural values expressed by the assets themselves».

Therefore, the obligations incumbent on private individuals are included in those mandatory duties of solidarity referred to in Article 2 of the Italian Constitution (Tamiozzo, 2009).

It is clear, however, that the questions that arise are all largely attributable to the dichotomy between the two administrative functions that characterize the cultural heritage sector: on the one hand, protection, aimed at safeguarding the physical

5 This condition of the property had already been analysed by the Franceschini Commission in 1964, considering that the imposition of a particularly or exceptionally important constraint of cultural interest on an asset should have been considered a *condicio sine qua non* for the asset to be considered subject to the powers of the administrative bodies, with the consequence of obliging the owner to possess or hold the property in compliance with five fundamental obligations enshrined in legislation at the time in force: to preserve them, to ensure their maintenance, not to change their physical state, not to use them in a prejudicial way, to allow public use in the ways provided for by law.

conservation of the “material support” of cultural value⁶; on the other, enhancement, aimed at the enjoyment and dissemination of the same value.

The peculiar legislation contained in the Decree 22.1.2004 no. 42 (Cultural heritage and landscape code, 2004). dictates a series of provisions aimed at implementing the established requirements on the protection and enhancement of cultural heritage.

The various criteria for subjection to the relevant rules are justified by the relationship between private property and public prerogatives.

This relationship with the public authorities has, in fact, gone through different stages, due to the preponderance of particular interests incorporated in the property. We have moved from a first phase, characterized by the coexistence of the owner's interest in the enjoyment of the property and the public interest in its conservation, which has found expression in the exercise of the function of conservative protection; to a second phase, in which these interests were joined by that of the community in the enjoyment of the asset, which introduced a new objective of the action of the public authorities, represented by the enhancement of cultural heritage for the purpose of public use of the same.

4. CYBERSECURITY AND GENERAL DATA PROTECTION

Central to the digitization of cultural heritage are the 2022-2023 guidelines published in the 22.8.2022 (MiC, 2022). These outline procedures for digital object creation, metadata, and archiving, catering to various technical methods of digitizing analogue heritage. The guidelines address project rationale, participant roles, operational methods, asset selection, and timelines. Specifications include file formats, metadata, resource identifiers, nomenclature, and preservation media.

6 Constitutional Court, sent. 28.3 2003, no. 94 Retrieved at: <https://www.giurcost.org>. The essentially declaratory nature of the identification of the cultural good – since it is a matter of recognizing the presence of original characteristics in things or places – does not exclude that the same act also has a constitutive effect. A lien must be understood as a set of legal situations designed to ensure the preservation of the current condition of the tied property; Once the link between the way of being of a material thing or complex and the public interest connected to cultural protection has been established, the bond expresses all those legal effects that govern the maintenance of the conditions on which this connection is based. The value to be protected is interpenetrated by the material object (sculpture, building, etc.), preserving means safeguarding the physical integrity of these entities, with specific regard to their components that express their cultural significance. Conservation protection can extend not only to the physical dimension of the cultural property, but also to the surrounding space called “environmental frame” or “buffer zones”.

A digitization (Guercio, 2019) project's primary goals are the conservation of originals, asset utilization and valorization, heritage study, and integrating prior digitization efforts. The process, essential for preserving historical memory, must be scalable and adaptable.

However, technologies like cloud computing and AI, while enhancing accessibility, also introduce cybersecurity threats. Data breaches can devastate cultural heritage, hence necessitating a multi-level approach that extends beyond technology to include IT security culture and administrative processes across the data lifecycle. Public administrations should focus on employee training, sensitive data management, and partnering with secure tech suppliers.

A significant challenge in digitization is balancing historical document authenticity with personal data protection (Buzzanca, 2023). This necessitates aligning European and national data protection laws with cultural heritage legislation.

Regarding archive access and confidentiality, the cultural heritage code specifically addresses State and public body archives. Restrictions apply to confidential documents (accessible after 50 years) and those containing sensitive or criminal data (accessible after 40 or 70 years, depending on the nature of the data). Prior to these terms, access is governed by administrative document access regulations. These provisions also apply to private archives and documents in State or public body archives.

5. CONSENSUAL FORMS OF ENHANCEMENT OF CULTURAL HERITAGE

The forms of private participation in the cultural heritage sector can take different configurations that can be traced back to various hypotheses, such as, for example, additional services, sponsorships, donations. The public, on the other hand, participates in the management and enhancement of those cultural assets of the private owner through the use of conventions for public use and various consensual instruments, including, to name a few by way of example, collaboration agreements, negotiated programming, memoranda of understanding, organizational and program agreements, to which private owners can also join. The State, through the aforementioned negotiation tools, allows the private owner of the asset to access public subsidies for the rehabilitation of the cultural property, so

that the cultural asset is enhanced through public support and ad hoc regulations for the purpose of public use by the community. The role of the private sector is becoming increasingly important, also in a broader perspective, as in the case of urban recovery and redevelopment interventions in which cultural heritage is considered a tool for social and economic development. In this context, the enhancement of cultural heritage takes on a broader meaning, because it is part of the relationship between society and territorial identities.

The activity of the administrative apparatus is now largely marked by the logic of negotiation regarding to relations both between different institutions and between the administration and private individuals.

In particular, the applicability of the agreement is different from that of the two forms of the supplementary (or procedural) agreement and the substitute agreement. The supplementary agreement is an act of a private nature, which accesses an administrative measure subject to compliance with the provisions of the agreement: the case of supplementary agreement and measure is therefore characterized as a “two-stage” case. The substitute agreement, on the other hand, replaces the measure in its entirety and constitutes a single and perfect act, capable of producing both private and public effects.

If, with regard to the administrative agreement as an act, it is necessary to take into account the rules described by Law 7.8.1990, no 241 on the procedure and in particular by Art. 11, which outlines the institution, and the profiles outlined above with reference to the requirements of the administrative agreement, with regard to the relationship between public administration and private individuals, which arises from the agreement, it is necessary to examine the applicability of the civil law principles and any pathological profiles inherent in the administrative agreement.

This new way of understanding administrative action, no longer as authoritative and imposing, but in which the subjects involved operate in different ways that suggest mediated choices, induces the transition from a centralized model of administration to a polycentric model, where there is also room for agreements between public administrations: these are instruments of negotiated settlement of the public interests involved, open to the participation of private individuals, defined by the doctrine as “infrastructural coordination procedures”, through which

the hierarchical organization of subjects and interests is tended to be overcome, without giving rise to a new legal entity distinct from the participating administrations. The Court of Auditors has also intervened on the subject, which considers that the agreements between public administrations, referred to in art. 15 of Law 7.8.1990 no. 241, constitute the instrument to regulate the collaborative performance of activities of common interest and, therefore, to compose in a unitary framework the public interests of which each administration is the bearer.

6. CONCLUSION

In conclusion, the intersection of digital innovation, cybersecurity, and data protection in the realm of cultural heritage requires a nuanced, legally informed, and technologically sophisticated approach. This ensures not only the preservation of our historical legacy but also its responsible and secure engagement in the digital age.

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SUMMARY

Digitalization allows the implementation of constitutional principles with particular reference to art. 9 of the Constitution, thus guaranteeing a better use of cultural heritage through the dynamic promotion of culture, research and modern technical methodologies. In this way, through the use of open IT systems, the community has the opportunity to have broad access to information and use cultural heritage in a rational way. The development of modern technologies becomes a main tool for cultural institutes to implement the protection and conservation of even the most delicate aspects concerning culture. This is because the digitalization of cultural heritage must be understood in a non-static but dynamic and broad sense, not merely accessory, furthermore it must be understood as an

inseparable component from internal processes, thus promoting digital transformation. In this sense, digitalization becomes an essential tool for cultural heritage management activities which, through online publication, allows new synergies to be established not only between Italian, European and international institutions but also to systematize assets, places, disciplines and projects. The reasons that drive digitalization are multiple and each of them allows complementary objectives to be achieved. Indeed, precisely for this reason, digitalization must be considered projected into the future and adequate for technological evolution precisely to avoid rapid obsolescence, guaranteeing in thus a high level of quality that is suitable for the various purposes even different from the initial ones. The drafting of a digitalization project is essential and is implemented through a priority action of defining objectives and goals. In this way it is appropriate to systematize the economic resources, human resources, and time necessary to achieve the set objective. Furthermore, the project may undergo variations depending on the situations and changes that occur during construction to avoid the risk of dispersion and failure to achieve the objective. The objectives that the digitization project implies can be summarized in points. In particular: 1. Preserve the originals, 2. use and valorization of the assets, 3. study of the heritage, 4. examination of previous digitization activities that affected the asset. To start a digitization process, it is important that the assets have already been ordered, inventoried and catalogued, as the metadata describing the digital object must guarantee the connection to the descriptive system relating to the individual areas. To digitize an asset, it will be essential to have assigned it a unique identifier (such as an example title or inventory number) and make sure to update a list or database of identifiers that are recognizable and easily linked to a descriptive system. The digitization of assets that have not been subject to metadating or that are not described is not recommended except in exceptional cases in which the primary purpose of digitization is precisely to allow the description to proceed. However, technologies like cloud computing and AI, while enhancing accessibility, also introduce cybersecurity threats. Data breaches can devastate cultural heritage, hence necessitating a multi-level approach that extends beyond technology to include IT security culture and administrative processes across the data lifecycle. Public administrations should focus on employee training, sensitive data management, and partnering with secure tech suppliers. The

intersection of digital innovation, cybersecurity, and data protection in the realm of cultural heritage requires a nuanced, legally informed, and technologically sophisticated approach. This ensures not only the preservation of our historical legacy but also its responsible and secure engagement in the digital age.

A significant challenge in digitization is balancing historical document authenticity with personal data protection. This necessitates aligning European and national data protection laws with cultural heritage legislation.

Typology: 1.01 Original scientific research