



inDICES

Measuring the Impact  
of Digital Culture

# Policy Analysis of Value Chains for CHIs in the Digital Single Market

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*A summary of the Deliverable D3.1 | WP3: Change Management and Policy  
Recommendations*

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# Context

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## the changing role of CHIs and the COVID-19 pandemic

A shift has been observed in how people perceive the role of culture, and in particular the role of the cultural heritage (CH) sector. CHIs increasingly define their role and mission broadly, understanding that — having great social trust — they can have an impact in many areas of society. There is also a growing interest among institutions in measuring and understanding their social impact. In parallel, there has been a shift in the relationship between cultural activity and the generation of economic and social value added. This shift is captured by Pier Luigi Sacco, who describes the move from the Culture 1.0 model, which is based on a patronage system, through Culture 2.0, with the mass production of cultural products controlled by entrance barriers to accessing technologies and resources, to Culture 3.0, which blurs the boundaries between producers and users (Sacco 2011). This shift should be accompanied by a new policy perspective and structural fund programming that take into account the Culture 3.0 framework.

The global pandemic has proven that we need to think in terms of the impact the Cultural and Creative Sectors (CCS) have on societies, and try to more clearly define the role of digital cultural heritage. This process should take into account that the path towards rapid digital transformation chosen by many CHIs in response to the pandemic will enhance the variety of interactions with heritage content online (strengthening Culture 3.0). Considering the impact of culture on different macroeconomic areas, we need to remember the ongoing challenges in the sector and thus underline the importance of media literacy, digital competence, and access and use in this context.

We decided to look at the CH sector in the context of the structural inter-dependencies and the impact it has on other sectors of the economy and society. Taking into consideration changing perceptions of the role and responsibilities of cultural heritage institutions, as well as the impact of the COVID-19 pandemic, the report starts by providing context for the social, economic and cultural value of digital cultural heritage. It then takes a closer look at the European policies concerning digital heritage resources and the DSM, and proposes a framework for analysing digital cultural heritage value chains (created on the basis of a case study analysis of the reuse of digital cultural heritage).

# Conclusions from our case study analysis

At the core of the report is a case study analysis, which was aimed at better understanding how digital cultural heritage value chains are created and sustained. We analysed 82 cases of digital cultural heritage reuse and identified different types of actors in the reuse of digital cultural resources. These include CHIs, other public institutions such as universities and local authorities, NGOs, informal groups, private firms, communities, and individuals. Below are the key findings from our research.

**Almost 30% of reuse cases have been developed and delivered by CHI actors. 21% of cases were produced and disseminated by other public institutions (mostly universities and local authorities).**

## Actors / Creators

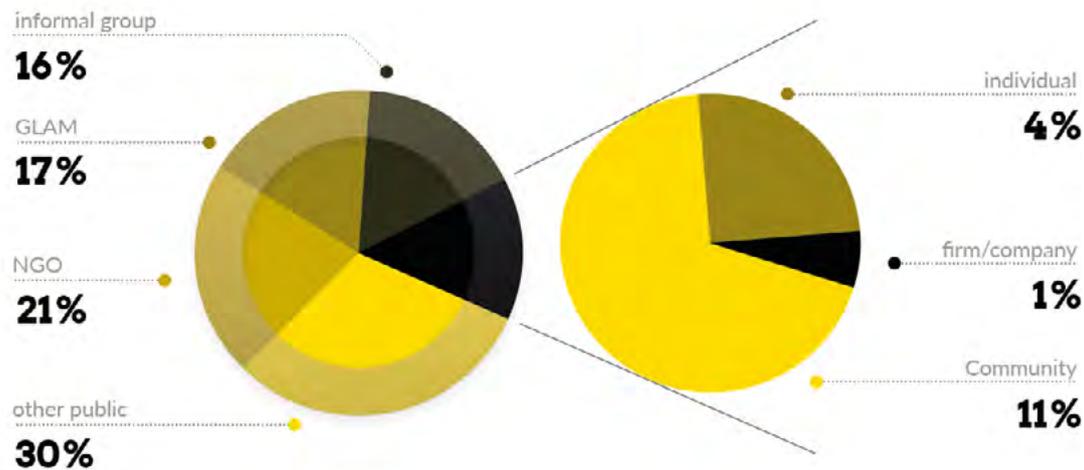


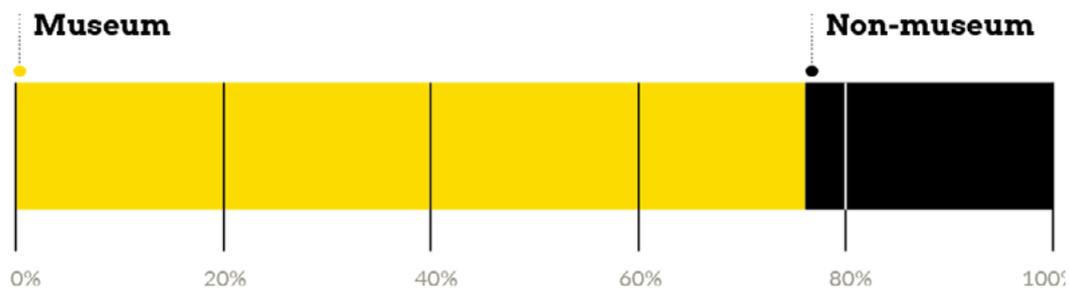
Diagram 1. Actors by Category

n=82

Private endeavours that end with a concrete product, service, and/or initiative with which end users can interact constitute only 16% of the reuse cases in our sample. What is interesting is that within this 16% share, individuals seem to do much “better” – 1 in 10 cases was created by an individual without the aid of substantial capital – than informal groups and/or communities. Only one case in our database (n=82) can be attributed to an informal group.

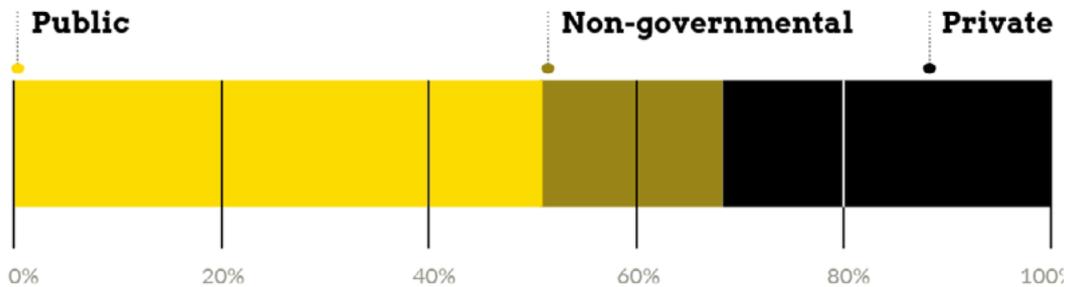
The high percentage of cases where resources are reused by CHI actors – most probably the same ones that own the resource – force us to revisit the typical policy narrative tied to the reuse of publicly available resources. Traditionally, external actors have been expected to reuse these, with our research showing that CHI activity is dominant. What is also important is that 80% of CHI reuse can be attributed to museums.

## Museum vs non-museum (GLAM)



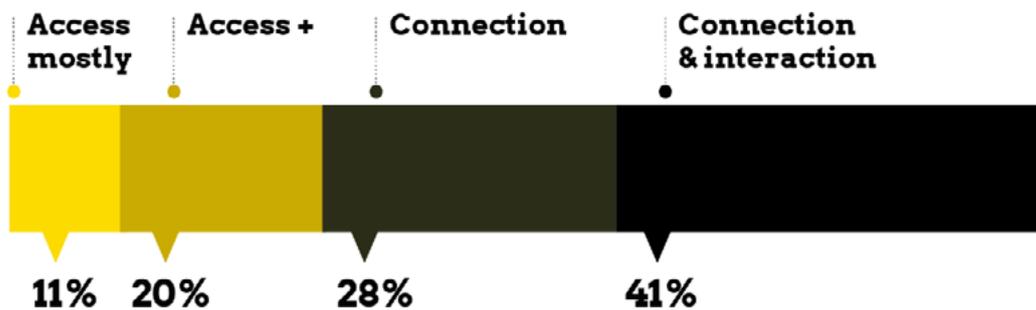
The other way of looking at the actorship in the realm of reuse is to use traditional sectoral divisions. Mapping the use cases according to these categories shows that over 50% of the cases in our sample have been created by some sort of public institutions, 17% by non-governmental actors and 26% by private actors. Although it may seem trivial, our data confirms that most value created by reuse applications is still the outcome of some form of public investment. Much less action is noted when few public policy instruments and/or incentives are in place.

## Public vs Private



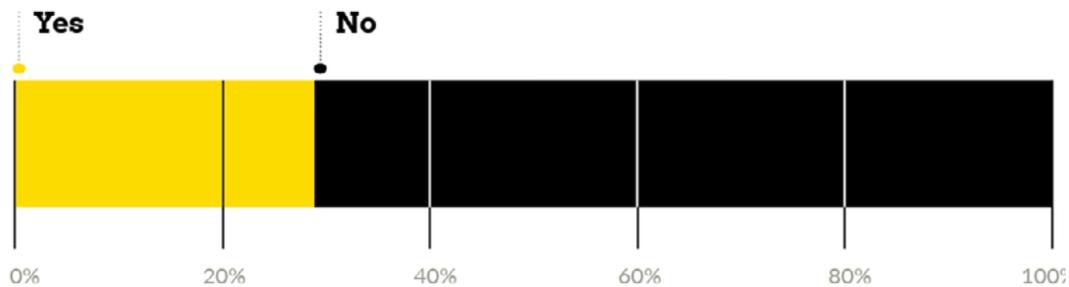
Many reuse initiatives analyzed by us strive to make meaningful connections with end users. Only 11% of cases in our database are strictly focused on access with either no or very little effort to engage end users. Others make use of the more than 30 connection and interaction tools we identified.

## Connection

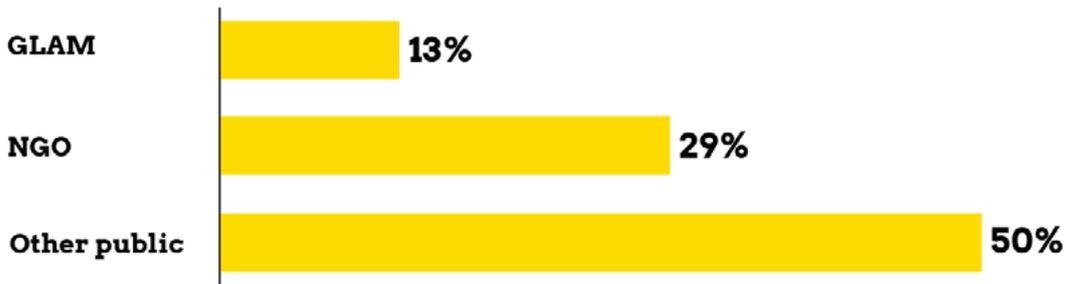


Cross-sector collaboration in the process of developing reuse projects is not very common. In general, less than one-third of the cases we analyzed have been developed with at least a minimal level of intersectoral discussions and/or negotiations. CHIs do not seem to be very open to cross-sectoral collaboration in the reuse of digital cultural resources. The same can be said about the NGO actors. While the probability of collaboration (at least in our sample) grows substantially for other public institutions (such as universities or public authorities). Cross-sectoral collaboration should – of course – not be seen as valuable per se. However, our database revealed that when this type of collaboration took place, the creators were more likely to be making use of connection, interaction and engagement tools.

## Cross-sector collaboration

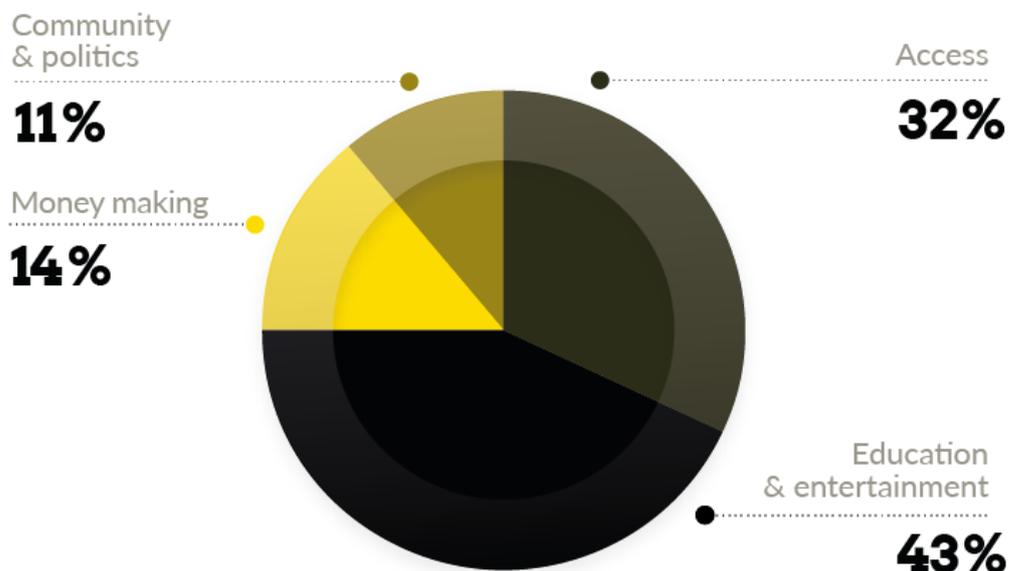


## Cross-sectoral collaboration observed

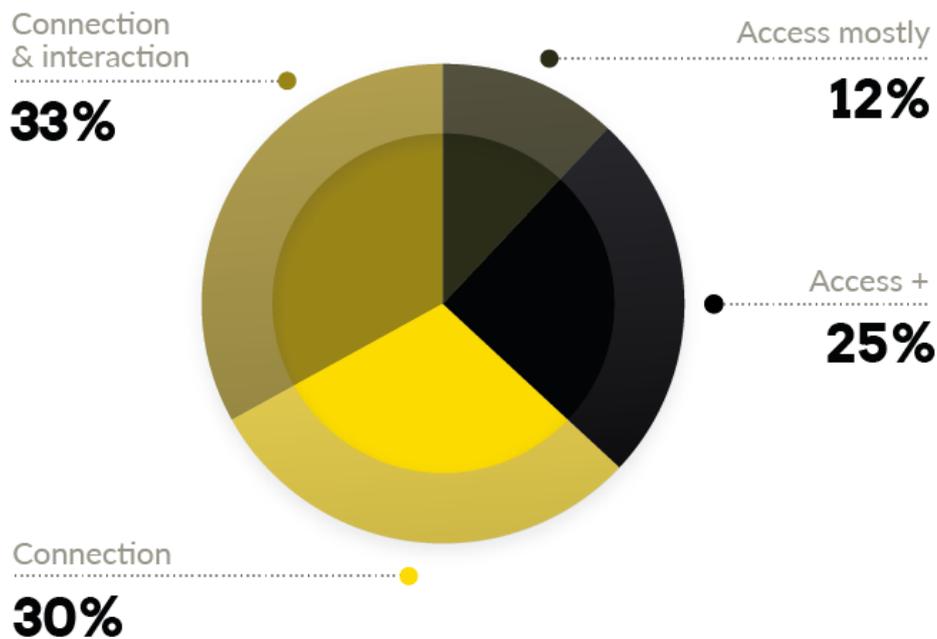


We analyzed the main purpose of the reuse projects. Most focus primarily on providing access to digitised heritage (33%). And while these efforts are undeniably necessary (not to mention very challenging), we believe they should be supplemented with many more activities that link availability with the actual use and application by end users. Therefore, we welcome the finding that the second most present primary purpose in our sample is entertainment (22%); followed shortly by education (20%). Moreover, it is positive to note that CHI actors (who are mostly responsible for reuse projects) are equally active in all three fields, trying to bridge the gap between access and more targeted social impact. CHI actors have initiated 33% of all primarily access projects, 47% of all education projects, and 44% of entertainment projects.

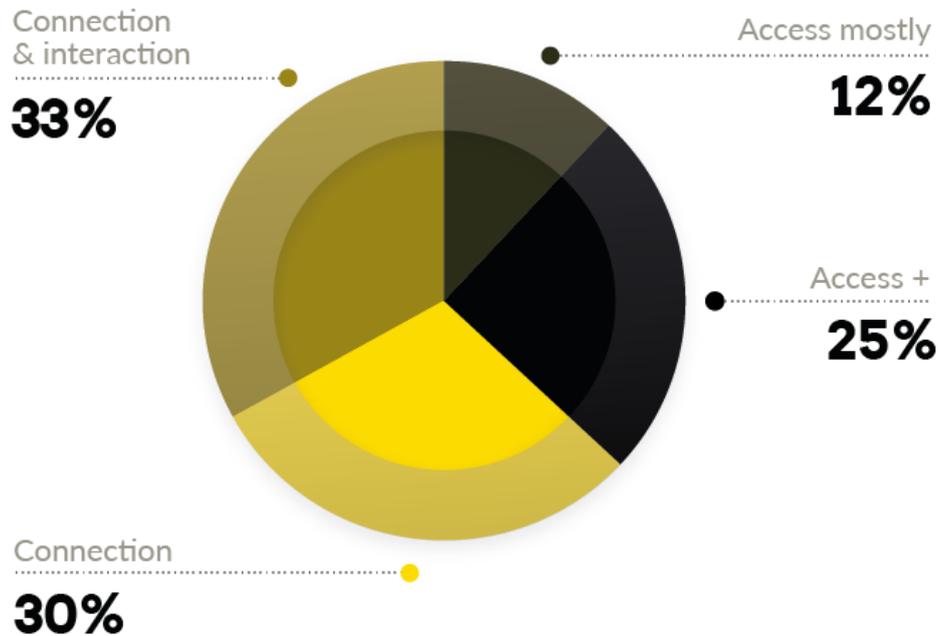
## Main purpose by groups



## Cross-sectoral collaboration observed



## No cross-sectoral collaboration



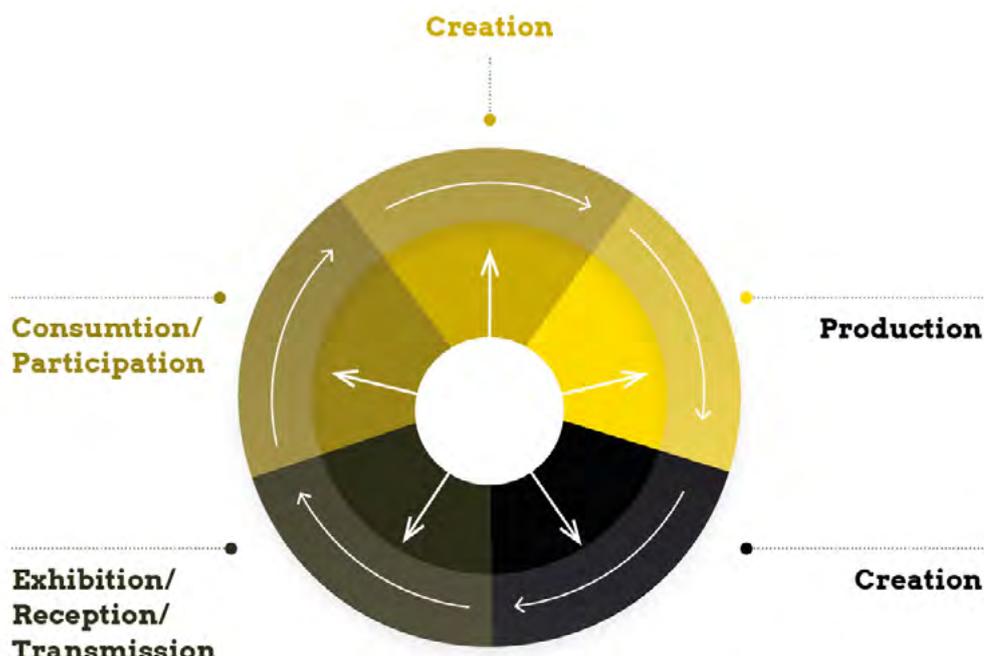
On the other hand, if one wants to see more impact in areas such as the economy, community building, and more direct political and/or social change, one should inspire or incentivise other actors to take part in reuse ventures in a more decisive way. Our data shows that these initiatives may happen only outside the world of, say, institutional culture. It also shows that the current production of such initiatives (which can be categorised as “Community & politics”) in which influence is targeted directly towards economic, community or political impacts through the use of digital cultural resources is very limited. It could therefore also be concluded that there is a suboptimal promotion of the idea that digital cultural resources can be reapplied to directly influence community building, targeted knowledge sharing, political decision-making and/or to rescue specific heritage in danger of disappearing.

**We discovered that more than a third of the cases grouped in our database have some kind of market linkage; i.e. more than a third have generated income from the target groups. Closer analysis of these cases allowed us to elaborate on the list of eight mechanisms that are applied to raise market income: (1) pre-sales; (2) a freemium-premium model; (3) advertisement; (4) commodity sales of by-products; (5) membership; (6) paid access; (7) donations; (8) paid “tailored” service.**



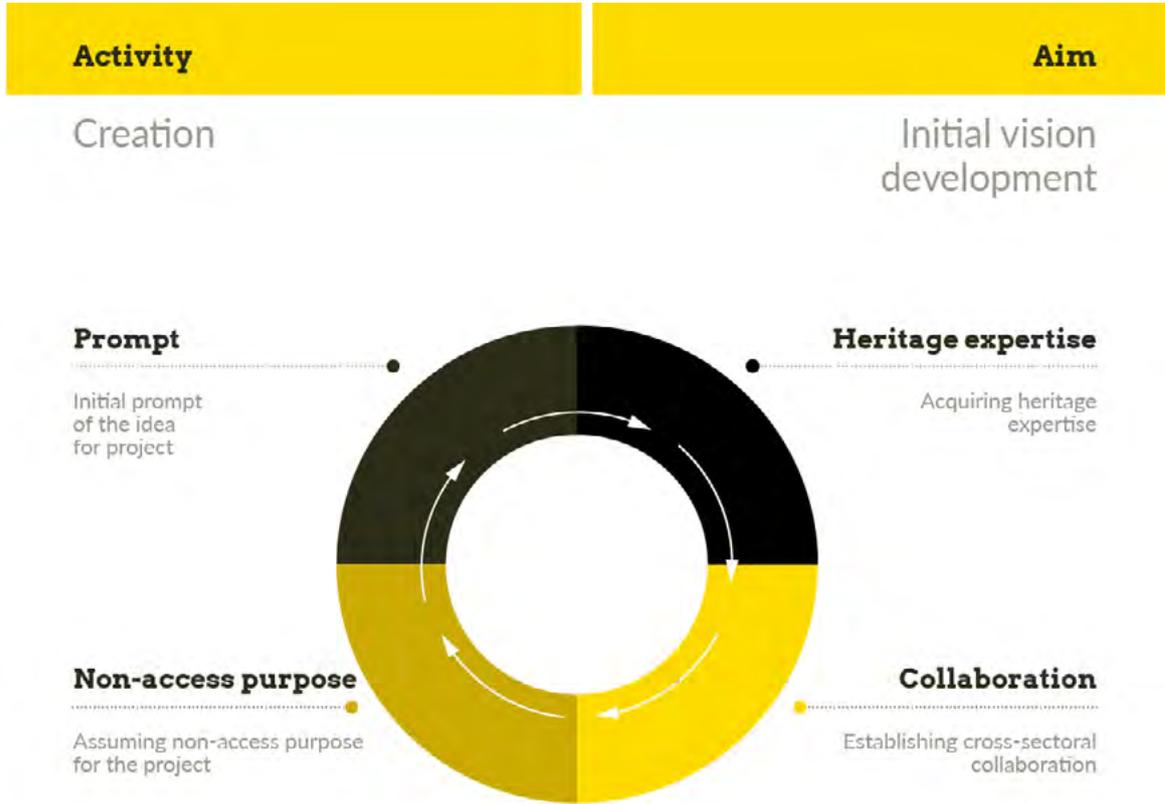
# Digital cultural heritage value creation framework

We propose a value creation framework based on existing approaches to understanding cultural value chains and impact of cultural heritage, combined with insights from specific cases of reusing digital cultural resources that we analysed. Our framework is more complex in comparison with traditional models that assume a linear creation of added value through the metaphorical “chain” of connected actors and productive processes. Introducing this kind of complexity is of crucial importance to presenting a theory of how social, as well as economic, value and impact are constructed within the process of reusing digital cultural resources.

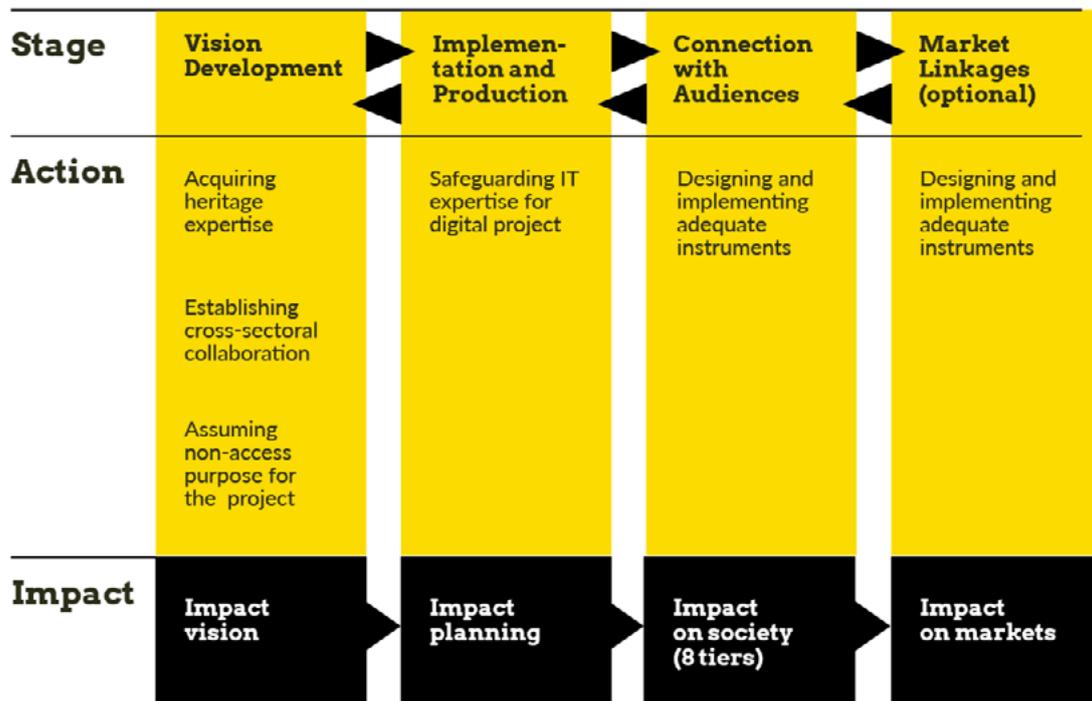


Source: The 2009 UNESCO Framework For Cultural Statistics (FCS)

# Digital Cultural Heritage Value Creation Cycle



In the proposed framework, the impact is the result of two types of activities, conducted in the creation stage of the cultural cycle: connecting with audiences and market linkages. We want to underline the fact that impact – in other words, the added value created through value chains or cycles – is not just economic in character. While a DSM perspective focuses on economic and market impact, from the viewpoint of the CH sector, content use has cultural and social effects as well as an indirect spillover effect that is essential for the economy. In the studies we analysed, it is social and not economic impact that is prevalent and that can be identified in each of the cases that we studied. This applies to the initial stages of vision development and implementation, during which many projects do not define any market-related goals or economic impact. Also in later stages of the cycle, connection with audiences occurs in many cases, but the market linkage is an optional element of the value creation process, taking place only in some instances.



# An extended perspective on digital cultural heritage policies

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In our view, a new system-wide representation of the structural interdependencies between the online cultural sector and other sectors of the online ecosystem needs to be developed. We therefore propose that the debate on digital cultural policies be connected with an ongoing debate about the European vision and regulation of the broader online ecosystem, in other words, the internet. Only in this way can we fulfill the stated goal of our project, to understand cultural heritage value chains in the Digital Single Market.

In this debate, some of the tiers of impact proposed by Sacco (2011) are defined as key goals of this European vision: sustainability, social welfare, social cohesion or sovereignty. And just as a decade ago he argued that “cultural and creative industries need a more solid rooting within the broader economic and social context”, today we need to connect cultural policies and digital heritage frameworks within the broader regulatory context of the European internet. This means looking beyond the traditional policy loci, such as the European Commission’s 2011 ‘Recommendation on the digitisation and online accessibility of cultural material and digital preservation’ (currently under evaluation,) or copyright laws. A perspective based on an understanding of how digital cultural heritage value chains contribute to broader value creation should also be present in European debates on platform regulation and the search for European platform alternatives, on European cloud solutions, and on data governance. In this way, we can develop new policies that will strengthen positive interdependencies between the online cultural sector and other sectors of the online ecosystem.

# Recommendations

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Our initial recommendations, which are based on our research and the framework we developed, are presented below.

Please note that full recommendations constitute a separate deliverable, which will be created in 2022. Please note that we are currently working on full recommendations that will be created in 2022.

## Quality-focused approach in the CH sector

The digitisation of cultural heritage remains a substantive issue for the whole cultural heritage sector. It is essential that while increasing the volume of digitised heritage, CHIs also become more vigilant about the quality of the digitised content and its copyright status. There is a growing demand from various stakeholders (educators, researchers, CCS, IT, etc.) for rich metadata and high-quality digital items, allowing for their use and reuse within the context of both cultural heritage and other sectors.

In the Culture 3.0 paradigm, where the audience becomes engaged users and creators/producers, improvement of online access to digital cultural heritage has become a necessity. Therefore, CHIs should see their role as going beyond making content available and also stimulate its use, especially through high-quality projects that generate substantial added value. This can mean focusing on more narrative-based solutions, encouraging interactive and engaging storytelling, allowing for contextualisation and an immersive user experience and, when possible, opening the collections for use and reuse. The ambition should be to enable full use of cultural heritage data in various contexts and by different stakeholder groups.

To achieve this more qualitative approach to digitisation, access, curation and use of cultural heritage, the requirements for CHIs should be revised to support the key standards and needs of the heritage sector, but also other sectors interested in the data (rich metadata, diverse licensing, access and possibility to use high-resolution content, etc.). This approach should be at the heart of the revised approach to the digitisation of digital heritage.

Evaluation and impact assessments of the CHIs' work should become an integral part of the daily processes, with quantitative metrics and targets being expanded by qualitative measurements (especially crucial for determining social impact). Digitisation funding could come with the obligation (or at least encouragement) to provide free access.

## Museums as market reuse facilitators and promoters

Our research showed that museums are the most active (if not to say dominant) actors in executing reuse projects. However, they are often reluctant to collaborate with non-institutional actors. And when this type of collaboration happens more focus is put on promoting engagement of the end user. At the same time, when non-institutional actors are engaged in reuse projects chances of economic impact, community-building and/or other socio-political changes rise.

With all the above in mind, we propose the development and execution of regranteeing schemes that would make use of the experience and expertise of museums and other active CHIs in order to encourage and support reuse outside of the institutional context. Specifically we have in mind programs in which museums would be the operators of open calls targeted (mostly but not exclusively) at firms operating within the creative sectors. Those firms could present their proposals for implementing digital cultural assets in their production cycles – for instance (just to give some examples) involving more digital heritage in media products, books, films, video games, fashion products, etc. In other words – firms would present their proposals for including digital heritage in their products that are directed towards markets and consumers.

The museums (maybe together with some other industrial actors/associations) would be responsible for organizing the call, promoting it, and organizing an evaluation rules and process. Also, they could support the promotion of end-products in their strive to reach markets and clients. The companies and individuals involved in the creative sectors should be given substantial finances for supporting the involvement of the digital heritage in the production cycle; not for the funding of the whole process of production and marketing. Also, the funding schemes should allow for proposals presented by cross-sectoral consortia of actors and they should not exclude the possibilities of subcontracting in order to allow for more SMEs presence (not ready yet to become consortia members, but eager to cooperate on a smaller scale).

Similar projects could be targeted at other types of CHIs, taking into account their specificity and with the aim of encouraging reuse and value creation of the sort that we observe in the case of museums.

## Promoting collaborative reuse of digital cultural heritage

Promoting digital cultural resources (both content and data) and their reuse among other sectors is crucial. It is also important to promote and encourage cross-sectoral collaboration on the reuse of digital cultural heritage. Instead of conducting digital projects in the model where an institution hires a contractor (eg. software house), it would be beneficial to encourage a more collaborative approach where projects are developed in even closer partnerships. This would enable learning and knowledge sharing between the partners, and possibly result in more attractive solutions for end users. CHIs have the potential to become R&D labs where innovative approaches to culture and heritage are prototyped and tested. They would be not only guardians of amazing collections, but also places of knowledge creation. That is why more attention should be focused on promoting both the resources available for reuse as well as the benefits from using the related institutional knowledge. Initiatives such as collaborative labs, hackathons and incubation projects could be a way to stimulate such collaborations and promote reuse, encouraging dialog between sectors, and between experts on content and experts on tech.

One possible way to make this happen would be to encourage such collaborative approaches within existing frameworks that support and promote culture, such as for example the European Capitals of Culture.

## Digital transformation with the help of digital cultural heritage

Ongoing policy debates on the European data strategy and related issues of data governance need to include digital heritage, considered as a specific type of data. Firstly, as part of the European data strategy, a digital heritage data space is needed to fully support the development of modern data access, sharing and use practices in the cultural heritage sector, other public sectors (such as education or research), and creative and cultural sectors (both public and commercial). This will support digital transformation of the CHI sector and enable the development of a better user experience and relations with users for the CHIs.

Furthermore, and in line with the framework we propose in our report, the development of this cultural heritage data space could have much broader positive effects on the online ecosystem. We see this space as one where novel data governance models and data practices can be developed in a relatively safe environment, avoiding controversies related to the use of other types of data. The CH sector could act as an incubation lab, developing novel practices of use in other data spaces as well.

## Shared platforms and innovative tools enable CHIs to reach their audience faster

While many institutions across Europe invest their time and effort in bringing their collections online, this does not always go hand in hand with raising the awareness of CHIs' audiences about what they actually have to offer online and how it can be used. Although aggregators have been around for some time now, many institutions still publish their collections using solely (or primarily) their own websites/platforms, which often proves to be insufficient to reach their audiences effectively. This may not be an issue for bigger institutions known worldwide, yet maintaining an audience's interest is crucial for smaller, local institutions.

These institutions lack the tools necessary to reach end users and to effectively promote online content. CHIs need to improve their skills in storytelling while using their online resources, so they can be more recognizable for a public. This underlines the importance of platforms such as Europeana that give the audience an easy-to-use tool to browse collections of multiple CHIs at the same time, and therefore discover new institutions they have never heard before.

Moreover, moving digitized collections onto common platforms is crucial, especially in view of the staggering spike in digital platform use resulting from the COVID-19 pandemic. In addition to being searchable, an important reason for CHIs to join online platforms is to enable their content to be reused. This will ultimately lead to a better promotion of cultural heritage and could ensure better collaboration between different institutions, as well as between institutions and end users.

## Digital cultural heritage has educational value

Remote education during the pandemic has created opportunities for much greater use of digital resources, including cultural heritage. In a study conducted by Centrum Cyfrowe, our foundation, in September 2020 in Poland, 35% of teachers said that while teaching remotely, they had used resources from CHIs – making them one of the top five most used sources of educational content. We believe that there is a great untapped potential for building digital cultural heritage value chains in the educational sector.

This would require dedicated programs that support, in a complex manner, the reuse of CHI collections by educators, educational systems and institutions, or educational start-ups (which account for a significant part of the European start-up ecosystem). Policies need to be broad-based and offer support ranging from basic digital literacy for educators so that they can benefit from the resources and initiate grassroots activities, to incubation projects that support the development of novel educational services built with the use of digital cultural heritage resources.

