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Cultural Heritage as Fuel for Innovation: Enabling the Power of Creation

How is innovation stimulated? Where does CH fit in the innovation process? What is the role of CH creators and managers in the innovation process of a society? How can an innovative environment be nurtured?

This Think Paper explores the role of CH in innovation and focuses on the changing digital landscape where CH exists. The main argument is that the digital availability of CH content can serve as trigger to fuel innovation in all sectors of society.

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This Think Paper is one of a collection of Think Papers issued by RICHES in order to stimulate further debate on the issues arising from the research.

Research undertaken by the RICHES project covers a range of subject areas including digital libraries, virtual performance, crafts, fashion, technologies and spaces.

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Innovation has been identified to fuel the economy and to improve wellbeing. It has been defined as “the process of turning a new idea into something deemed useful” (Castañer, 2016). Its result is an invention, which can take the form of a new idea, a new product or service, or a new process (or practice) including organisational innovation and marketing innovation (Rogers, 1995; Stoneman, 2011). Innovations can be functional, such as developing a system to write music or finding the right mix of pigment and oil to paint, but can also impact intellectual and sensory performance, such as writing a musical composition or painting an altarpiece.



Figure 1. Page from L'Orfeo (1609), by Claudio Monteverdi, an innovative work exploring the use of the orchestra for dramatic power. Among the first operas.

Figure 2. Detail from the Ghent Altarpiece (1432) by Jan van Eyck, associated with the innovative use of oil paint on wood panel and depiction of light: reflections and refractions.

The latter is referred to as soft innovation. Examples need not only be related to culture. Soft innovations can also be found in the new way light shines in luxury autos, which does not alter the functionality, or the new look of a website, which may very well influence functionality. Organisations can introduce innovation to improve their position in the market, which can lead to an increase in revenue (Schumpeter, 1947), but can also result in a deepening or widening of the customer base. Soft innovation has been identified to be closely linked to the creative industries, which refer to the goods and services related to cultural, artistic and entertainment activities. These include book publishing and libraries, visual arts and museums, performing arts and recordings, cinema and broadcasting, crafts, fashion, design and architecture (Caves, 2002; DCMS, 2015). The close link between soft innovation and cultural heritage points to three important aspects:

- **Innovation is fuelled by the exchange of creative ideas**, which may generate from the proximity of creative individuals but also from the availability of information to stimulate creativity¹.
- **Cultural heritage is a gold mine of (past) creative ideas**, which can be built upon to develop new applications, in turn generating new knowledge and leading to further innovation².
- **Technology can introduce novelty** into ‘old’ ideas, products or services, and processes, in turn leading to innovation³.

It can therefore be argued that an important role of cultural heritage organisations is to disseminate their collections widely, supported by digital technology, in order to stimulate the exchange of new and old creative ideas to serve as trigger for new innovation. This innovation can take place in the cultural sector, in the greater creative industries, as well as in the rest of the economy. It is the flow of creative ideas that leads to further innovative thinking and heritage institutions have a magnificent collection of latent innovations to make available to the world.



Figure 3. Glasgow Museum of Transport (2011) by Zaha Hadid, an innovator in the use of fluid forms in architecture.

Figure 4. Kinetic Petals Dress 1 (2016) by Nervous System, an innovative example of 3D printing applied to fashion.

1. See Acs and Audretsch 2005, Feldman 1999.

2. Borowiecki and Navarrete 2016.

3. Schumpeter 1942, Schumpeter 1947.

Digital technology and CH

CH organisations can use DT to support innovation in society by disseminating collections, otherwise limited by physical accessibility. A greater digital cultural repository would only stimulate creative minds to further innovate. CH organisations can also adopt DT to innovate from within, by enhancing products and services and through the reorganisation of processes and staff.

The adoption of DT in CH organisations has led to innovation in content creation and in content presentation (Castañer and Campos, 2002). Examples can be found in the use of online platforms to disseminate content, such as Europeana or even Wikipedia. This has further led to innovation in audience reach (Bakhshi and Throsby, 2012). An example can be found in the live broadcasts of blockbuster exhibitions of the British Museum, available online as well as in cinemas, allowing people to access a tour of the museum and exhibition from remote areas of the world and through mobile technology. Making cultural heritage available through new venues, and new technologies, including the cinema and the Internet, potentially lead to multiple benefits, including widening audience reach and increasing new audiences. All these innovations have resulted, most importantly, in a lower access cost and a more efficient outcome for society. That is, it is physically impossible to show more than 10% of collections at any one time while access to the entire digital repository is possible 24/7 limited only by an Internet connection⁴.

Excellence in the use of DT can be identified in several organisations that have managed to ensure a prominent place in the market. Attention distribution is greatly skewed to a few institutions and to a few objects. Examples include the British Museum blockbuster exhibition, above mentioned, or the Metropolitan Opera's live broadcasting, not to mention Google's various projects. For the majority of organisations, a more subtle, perhaps, but greater challenge lies in finding optimal solutions to position heritage content online so that it reaches a wide audience while serving as catalyst for innovative thinking.

Organisational innovation has remained a challenge for the majority of CH organisations. Not only do they need to employ staff who can work with DT, but in addition they need to change work-flow patterns to incorporate digital collections in their activities. The speed of organisational innovation can be reflected in the rate of digitisation, estimated at 17.3% of European collections, and on the rate of online publication, estimated at 7.4% (Borowiecki and Navarrete, 2016). Further research is needed to analyse the organisational innovation of CH institutions as part of the adoption of DT.

4. Navarrete and Borowiecki, 2015.

How can European cultural organisations be a stronger partner in the innovation process? RICHES research has identified the key elements that result in greater innovation of the cultural sector:

- **Adoption of a digital work practice** that will enable organisational innovation as well as the creative reuse of collections.
- **Slack**, or available resources beyond the essential, allowing for creative new applications of technology.
- **Skilled staff** to ensure the digital know-how of the institution supports the wide dissemination of collections.
- **Long-term strategic planning** to guide decision making, resource allocation and further technological applications.

The construction and development of a common infrastructure shared by all cultural heritage domains, the pooling of resources and the enrichment of the content made available to all would further support the exchange of know-how.

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and finding new ways of engaging with heritage in a digital world”*

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