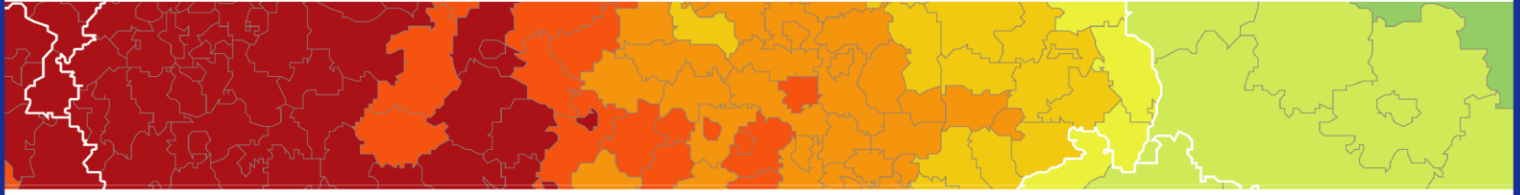


Inspire policy making by territorial evidence



Material Cultural Heritage as a Strategic Territorial Development Resource: Mapping Impacts Through a Set of Common European Socio-economic Indicators

Targeted Analysis

Scientific Annex

27/09/2019

This targeted analysis activity is conducted within the framework of the ESPON 2020 Cooperation Programme, partly financed by the European Regional Development Fund.

The ESPON EGTC is the Single Beneficiary of the ESPON 2020 Cooperation Programme. The Single Operation within the programme is implemented by the ESPON EGTC and co-financed by the European Regional Development Fund, the EU Member States and the Partner States, Iceland, Liechtenstein, Norway and Switzerland.

This delivery does not necessarily reflect the opinion of the members of the ESPON 2020 Monitoring Committee.

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Acknowledgements

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ISBN 978-99959-55-98-4

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Annex I – Overview of NUTS levels per country/region

This annex provides an overview per country/region of the different NUTS levels and regions.

NUTS Level	Geographical denomination	Description	Number of regions in the NUTS category
Austria			
NUTS 0	Country (land)	National level (Austria)	
NUTS 1	Groups of states (Gruppen von Bundesländern)	Established regions invested by Eurostat, grouping the provinces together	3
NUTS 2	States (Bundesländer)	Established Austrian states (provinces)	9
NUTS 3	Groups of Districts (Gruppen von Politischen Bezirken)	Established regions invested by Eurostat, grouping the districts together	35
Belgium (Brussels)			
NUTS 0	Country (land)	National level (Belgium)	
NUTS 1	Regions (gewesten)	Three Belgian regions (Flanders, Wallonia, Brussels)	3 (1 in BXL)
NUTS 2	Provinces (provincies)	Established administrative regions on the regional level	11 (1 in BXL)
NUTS 3	Arrondissements (Arrondissementen)	Established administrative regions on the local level	44 (1 in BXL)
Belgium (Flanders)			
NUTS 0	Country (land)	National level (Belgium)	
NUTS 1	Regions (gewesten)	Three Belgian regions (Flanders, Wallonia, Brussels)	3 (1 in FL)
NUTS 2	Provinces (provincies)	Established administrative regions on the regional level	11 (5 in FL)
NUTS 3	Arrondissements (Arrondissementen)	Established administrative regions on the local level	44 (22 in FL)
Italy			
NUTS 0	Country	National level (Italy)	
NUTS 1	Macro-regions	Five Italian macro-regions (North-West, North-East, Centre, South, Islands)	5
NUTS 2	Regions and autonomous provinces	Established administrative regions and administrative autonomous provinces (Provincia autonoma di Trento e provincia autonoma di Bolzano/Bozen).	21 (19 regions and 2 autonomous provinces)
NUTS 3	Provinces	Established administrative provinces on the local level	110
The Netherlands			
NUTS 0	Country (land)	National level (The Netherlands)	
NUTS 1	Parts of the country (landsdelen)	Statistical regions invented by Eurostat and NSI, grouping several provinces together	4
NUTS 2	Provinces (provincies)	Established administrative regions on the regional level	12
NUTS 3	COROP Regions (COROP regio's)	Statistical regions invented by Eurostat and NSI, grouping several municipalities together	40
Norway			
NUTS 0	Country (national level)	National level (Norway)	
NUTS 1	N/A	Does not exist	N/A
NUTS 2	Regions (Landsdeler)	Established but purely geographical regions, no administrative purpose	7
NUTS 3	Counties (Fylker)	Established administrative bodies with their elective representations	19
Portugal			
NUTS 0	Country	National level (Portugal)	

NUTS 1	National	Continental Portugal, Azores and Madeira	3
NUTS 2	Regions	Regional Commissions, Coordination Autonomous regions	7
NUTS 3	Subregions	Administrative, Statistical and Autonomous regions	25
Romania			
NUTS 0	Country (national level)	National level (Romania)	
NUTS 1	Macro regions (Macroregiuni)		4
NUTS 2	Regions (Regiuni)		8
NUTS 3	Counties + Bucharest (Județe + București)		42
Slovakia			
NUTS 0	Country	National Level (Slovakia)	
NUTS 1	N/A	Does not exist	N/A
NUTS 2	Oblast	Non-administrative division	4
NUTS 3	Regions	Established administrative regions on the regional level	8
Slovenia			
NUTS 0	Country (national level)	National level (Slovenia)	
NUTS 1	N/A	Does not exist	N/A
NUTS 2	Cohesion region	Macro region	2
NUTS 3	Statistical/development region	Administrative entities created in 2000 for legal and statistical purposes	12
Sweden			
NUTS 0	Country (land)	National level (Sweden)	
NUTS 1	Lands (landsdelar)	Three lands (East, South and North Sweden)	3
NUTS 2	National areas (riksområden)	Established by the EU for statistical purposes grouping several counties together	8
NUTS 3	County (län)	Established administrative regions	21

Source: elaboration of the service provider (2018) based on the 2016 NUTS classification, see <https://ec.europa.eu/eurostat/web/nuts/nuts-maps-.pdf>

Annex II – Operational definition of material cultural heritage

This annex provides an elaboration of the operational definition of material cultural heritage and presents complementary details to the Main Report.

Introduction

Defining material cultural heritage (MCH) can be a challenging task, as the definition of heritage is present-centred and changes over time (Ashworth and al., 2007). As such, it can be open to revision and re-interpretation depending on the change of context and the public's experiences and expectations. In general terms, heritage is what is considered worthy to be preserved and transmitted to future generations due to its *heritage value*, such as archaeological, historical, architectural, or aesthetic value (Vanhoutte, 2019). The recognition of such value can result from a process (or judgement) which attributes meaning to an object, practice or place (Smith 2006; Ashworth, Graham, and Tunbridge 2007), but also from other considerations (e.g. age can be considered as a proxy for the heritage value of a building or object).

In Europe, there is a common understanding of this concept. In the European Union, according to article 3.3 of the Lisbon Treaty and article 167 of the Treaty on the Functioning of the European Union (TFEU), Member States are primarily responsible for the protection and promotion of cultural heritage, while the European institutions shall aid and complementary actions. As such, each country or region outlines its own set of criteria and processes to *designate*, conserve, maintain, communicate and transmit MCH by cultural heritage laws, which are an integral part of the national (or local) legislative framework (Klamer et. al., 2013).¹ This process has been traditionally managed by public authorities at local, national or international level (for instance with the UNESCO World Heritage List²). It should be noted, however, that some scholars are questioning the established value typologies and evaluation methods usually employed by experts to identify *what* heritage is (rather than *why* heritage is valuable) and call for a reframing of the value-based heritage discourse (Fredheim and Khalaf, 2016, Klamer and Mignosa, 2019). Following the Council of Europe Framework Convention on the Value of Cultural Heritage for Society (Faro, 2005) which sets out the responsibilities and involvement of individuals and communities towards cultural heritage, it is increasingly acknowledged that also non-experts should be involved in the process considering the strong relation between heritage and the surrounding place, local communities and social practices (Hawke, S. 2010; European Commission, 2018). This inclusive approach opposes instrumental uses of cultural heritage by national narratives proposing a top-down definition and interpretation of what should

¹ It should be noted that “defining” heritage has a different meaning than “designating” heritage, the latter referring to how the definition of heritage is applied.

² <https://whc.unesco.org/en/list/>

be valued and conserved, since at the grassroots level, meaning and value can be different (Smith 2006) as well as more plural (Ashworth, Graham, and Tunbridge 2007).

Since each European country has different systems of designation of MCH which reflects national or regional traditions, the study had to adopt an *operational* definition of MCH in the context of this study. This operational definition has been used as a basis to operationalise the collection of data for the mapping of the baseline population of MCH and to allow for the comparability of the results of the impact assessment.

The approach taken by the study to elaborate such an operational definition was to primarily analyse the main legislative acts related to MCH in the Stakeholder countries/regions.³ According to the Terms of Reference (ToR), the analysis did not include intangible cultural heritage, natural heritage (e.g. natural landscape without human interactions) and digital heritage. The results of the analysis are briefly presented in the paragraph below. More detailed information is included in the country fiches in Annex III.

Towards an operational definition of material cultural heritage

The analysis showed that each country/region has different ways of selecting *what* has heritage value and thus demarcating the population of MCH.

In relation to the typologies of MCH, all the Stakeholder countries/regions make a distinction between immovable (e.g. buildings) and movable (e.g. objects) MCH.⁴ These two macro-categories can be further distinguished in sub-categories. It is interesting to note the references to landscapes in many legislative acts. In recent years, there has been a shift towards an all-inclusive definition and a more holistic perspective of MCH as part of “living” cultural landscapes (Robertson 2003, Spek 2017), which includes features of the environment which have been shaped over time by the interaction between people and place. This reflects the conceptual shift from an object-oriented approach to the protection of the spatial and functional system as a whole.⁵

³ The main sources used to identify relevant heritage laws include the HEREIN System (<http://www.herein-system.eu/>) and the UNESCO Database of National Cultural Heritage Laws (<http://www.unesco.org/culture/natlaws/>) and the Compendium of cultural policies and trends (<https://www.culturalpolicies.net/web/index.php>)

⁴ It is interesting to note that these two categories are often regulated by separate legislative acts and sometimes managed by different public authorities (as in the case of Brussels Capital and Flanders where movable heritage is associated with immaterial heritage).

⁵ Examples can be found in the report “Linking Natura 2000 and cultural heritage”, European Commission (2017).

While understanding that each country/region has its own classification, it is possible to identify the following general typologies:

Table 1: Typology of MCH

Category	Sub-category	Description/ Characteristics	Examples⁶
Immovable	Archaeological sites	This category includes those elements of the past which are researched predominantly by archaeological methods, and especially excavation (aboveground, underground or underwater)	<ul style="list-style-type: none"> • Archaeological vestiges: settlements, necropolises, graves, funeral buildings and burial grounds, raised stones, etc.; • Objects associated with the archaeological sites
	Constructions/ Buildings	This sub-category is very large and includes heterogeneous objects considered having heritage value according to the different national legislation such as churches, castles, historic houses.	<ul style="list-style-type: none"> • Religious heritage (churches, monasteries, etc.); • State buildings (castles, fortresses, etc.); • Historic houses; • Technical constructions (routes and bridges, lighthouses, etc.); • Industrial heritage; • Organs
	Landscapes	The concept of landscape has been given increasing importance and recognition in national legislation. Several legislative acts also refer to groups of immovable properties which show homogeneity and/or integration into the landscape	<ul style="list-style-type: none"> • Cultural landscape; • Homogeneous groups of buildings (such as Cityscapes/village)
	Parks and gardens	Parks and gardens are sometimes included in a separate category ⁷	<ul style="list-style-type: none"> • Parks; • Gardens
Movable	Artefacts and collections	Several legislative acts include exhaustive lists of objects. The common ground is that they are all remains and traces of human creativity. Usually, artefacts and collections are managed by cultural institutions (such as museums, libraries and archives)	Sculptures, paintings, musical instruments, tools, household items, pieces of furniture, ceramics; textiles, leather goods; objects of metal, wood, bone, stone, glass; jewellery; ensembles of ethnographic objects, etc.

Source: elaboration of the service provider (2019) based on analysis of national heritage legislations

The analysis also confirms that the criteria and processes to designate MCH are not homogeneous in the countries/regions, as shown by several examples summarised below. The heritage value might be recognised following a scientific evaluation process managed by experts (e.g. in Slovakia), or age might be used as a proxy. Very often, both methods can apply (e.g. Austria, Norway). It should be noted that the age used as proxy can vary: for immovable MCH and especially buildings, the most accepted rule seems to be a hundred years old (e.g.

⁶ This list is not exhaustive and aims at giving examples for each sub-category.

⁷ An example is the Monument Protection Act in Austria.

Austria, Brussels Capital, Sweden),⁸ while for movable heritage the threshold is often lower (e.g. fifty years), but again this is not a general rule.⁹

In relation to material cultural heritage protection, listing/registering into national and/or local registers (regardless of the ownership regime – public or private) is also not a generalised practice, especially for movable MCH. In the case of Austria for instance, there are no national registers (due to the automatic legislative listing).

Table 2: Examples of designation of MCH

Country	Designation of MCH	Presence of national Registers/List
Austria	<p><i>Monument Protection Act – MPA</i> According to <i>Section 1 §1(4)</i>, the public interest in preservation [...] gains effect by virtue of:</p> <ul style="list-style-type: none"> • legal presumption (§ 2); • by regulation of the Federal Monuments Authority (§ 2a); • by decree of the Federal Monuments Authority (§ 3); • by regulation of the Austrian State Archive (§ 25a). <p>According to <i>§2(4) Section 2</i>, “the presumption does not apply to utility articles which were produced in large quantities, either industrially or by hand, and are less than 100 years old, unless these are protected as constitutive parts of, or appurtenances to, an object under monument protection.”</p>	<p>No</p> <p>Statistics on the population of immovable MCH are kept by Statistik Austria</p>
Slovakia	<p><i>Act n.49/2002 on the protection of monuments and historic sites</i> According to <i>Part 3 §15</i>, the declaration of cultural monuments is made as follows: (1) The Monuments Board shall declare a movable object or immovable property a cultural heritage monument based on cultural heritage value [...] According to <i>Part 3 §16</i>: (2) Each historic reserve shall be declared by the Government on a proposal from the Ministry [...] According to <i>Part 3 §17</i>: (2) A historic zone shall be declared by the Ministry on a proposal from the Monuments Board [...] According to <i>Part 3 §18</i>: (2) A protective zone shall be declared by the Monuments Board on a proposal from the Municipality [...]</p>	<p>Yes</p> <p>The Central List shall be kept by the Monuments Board and is divided into</p> <ol style="list-style-type: none"> a) register of movable cultural monuments; b) register of immovable cultural monuments; c) register of historic reserve; d) register of historic zones.
Norway	<p><i>Cultural Heritage Act (last amended 2015)</i></p> <ul style="list-style-type: none"> • legal presumption: (§ 4): some monuments and sites earlier than AD 1537 are automatically protected by law [...] • (§ 12): a. pre-medieval and medieval objects (up to AD 1537); b. coins dated earlier than AD 1650; c. Sami objects of the kinds described under a. that are more than 100 years old. • Individual Protection (§ 15) 	<p>Yes</p>

Source: elaboration of the service provider (2019) based on analysis of national heritage legislation (2018)

⁸ In some studies (ECORYS, 2012; Ortus Economic Research Ltd, 2019) pre-1919 buildings are considered as heritage properties.

⁹ As example, in Brussels Capital “books over a hundred years, isolated or in a collection; geographical maps, printed more than 200 years old” are protected (Decree 11 July 2002, Chapter 1 Art. 1(1)).

This first analysis was complemented by additional desk research and extensive reflections with the Stakeholder Committee. Notably, the underlying background reference is the research paper carried out by Terje Nypan (in Van Balen and Vandesande, 2015). Based on these considerations, the study adopted the following operational definition:

Box 1: Operational definition of MCH in the context of this study

Objects both immovable (e.g. archaeological sites, cultural landscapes, etc.) and movable (e.g. paintings, books, etc.) recognised as having heritage value in each country according to three types of recognition:

1. Listed (included in national and/or regional inventories, the latter understood as sources made available by public authorities at national and regional level where MCH is recorded) as having heritage value and legally protected (this also comprises the sites listed in the UNESCO World Heritage List);
2. Listed (included in national and/or regional inventories) as having heritage value but not legally protected;
3. Historical building stock¹⁰.

This operational definition also includes places which are publicly accessible where movable MCH objects are stored/exhibited, namely archives, libraries and museums.

Source: Elaboration of the service provider and the Stakeholder Committee (2018)

It should be noted that some objects might fall under several categories of the operational definition, which may lead to double counting. For example, Place Royale in Brussels is counted as a single World Heritage site under (1) but represents many buildings under (3). While such double counting could be limited through in-depth data collection (for instance in national and regional property registers), this was not possible in the context of the current study due to scope and resource constraints.

As already underlined, this is an *operational* definition to be used within the context of this study and not a *theory-driven* definition of MCH. Firstly, this operational definition does not always reflect national traditions and legislations in each country/region: for instance, not all pre-1919 historic buildings are labelled *per se* as heritage by the competent authorities in some countries/regions (e.g. the Netherlands, Flanders). The operational definition applies an extended approach and includes age (e.g. pre-1919) as a proxy to recognise heritage value. The rationale behind the chosen approach is that the study aims to get closer to what people and communities commonly consider having heritage value which is sometimes larger than what is labelled (usually by experts in a top-down approach) and provides a more inclusive

¹⁰ In the context of this study, pre-1919 dwellings will be used as a proxy for the historical buildings stock. This choice is based on the available statistical data provided at European level by EUROSTAT – 2011 Census database. This information is not without limitations (for instance the Census refers to 2011 data and includes only dwellings), but it is comparable across countries and up to NUTS Level 3.

appreciation of the richness (and diversity) of the European cultural heritage. In this sense, the study takes into consideration recent developments in heritage discourse following the Faro Convention. Historic building stock is part of the *genius loci* in the territory where they are located and, as such, contributes to the quality of life of citizens and to make Europe a more attractive place for its inhabitants (and tourists).¹⁵

It is also worth mentioning that the extended operational definition of MCH adopted by this study could be relevant for future research in the field of environmental economics, in particular in relation to the pre-1919 building stock. Studies that dealt with the impact of immovable heritage on environmental sustainability, mostly focussed on building stock research (Kohler et al., 2009; Meijer et al., 2009; Deilmann et al., 2009; Thomsen and van der Flier, 2009) and life cycle cost analysis (LCCA), suggested that renovation and refurbishment of the existing building stock could have important environmental benefits. Especially in Europe, which has a long building history, preserving, maintaining and reusing existing structures could contribute to reducing urban sprawl, prolonging of the physical service life of buildings and building parts, supporting waste-avoidance and preserving embodied energy (Cultural Heritage Counts for Europe report, 2015) in line with the principles of the European policy on resource efficiency and circular economy. Most existing buildings, and, in particular, immovable MCH, do not compare favourably with the energy efficiency of new built structures. However, historic buildings can be fitted with energy-saving insulation in order to help them meet the efficiency standards to move towards a more sustainable environment. Prolonging the lifecycle might function as a factor contributing to lower CO₂ emissions and energy use and it might also reduce the overall energy use needed for production and transport of new construction materials. Although there is today an increasing awareness of the CO₂ reduction potential of the existing stock among stakeholders (EuroACE 2004, EURIM 2007, IEA 2009), reliable information about the composition of the existing building stock, renovation activities, the dynamics of its transformation and how it relates to the different actors in property professions is very limited.

Annex III – Country fiches on the regulatory framework of MCH

This annex provides a fiche per stakeholder country/region setting out the legal framework regulating MCH.

Austria		
Stakeholder for this study	Federal Monuments Authority Austria	
National authority responsible for cultural heritage	<p>The responsibility for cultural (and natural) heritage is split between the federal state and the 9 provinces as follows:</p> <ul style="list-style-type: none"> • The Federal Monuments Authority Austria (<i>BDA - Bundesdenkmalamt</i>)¹¹ under the Federal Minister for Arts and Culture, Constitution and Media is responsible for monument protection, heritage, provenance and art restitution; • the Provinces are responsible for building regulation, protection of nature but also of sites (<i>Ortsbilder</i>) and land-use-planning 	
Protective Law for MCH	Main legislative act	Federal Act on the Protection of Monuments Due to Their Historic, Artistic or Other Cultural Significance (Monument Protection Act – MPA) ¹²
	Last amendment	2013 (Federal Gazette I Nr. 92/2013)
Selection criteria	<p>Historic, artistic and cultural meaning in public interest (based on scientific standards).</p> <p>According to § 1(4) <i>Section 1</i>, the public interest in preservation within the meaning of para. 1 (monument protection) gains effect by virtue of:</p> <ul style="list-style-type: none"> • legal presumption (§ 2) • by regulation of the Federal Monuments Authority (§ 2a) • by decree of the Federal Monuments Authority (§ 3) • by regulation of the Austrian State Archive (§ 25a). <p>In the case of ensembles and collections, public interest in their preservation as a unit can only gain effect by decree of the Federal Monuments Authority.</p>	
National registers / database (if available)	<p>Immovable Heritage Bundesdenkmalamt - Statistik¹³</p> <p>Movable Heritage In Austria all movable material heritage which belongs to the public and to churches is automatically protected by law, meaning that almost all collections of museums are protected by law. However, there is no national list.</p>	

¹² Original version: Federal Gazette Nr. 533/1923. Non-official English translation is available at: https://bda.gv.at/fileadmin/Medien/bda.gv.at/SERVICE_RECHT_DOWNLOAD/Monument_Protection_Art.pdf

¹³ <https://bda.gv.at/de/denkmalverzeichnis/#statistik-2017>

Belgium - Brussels Capital		
Stakeholder for this study	Directorate for Monuments and Sites	
Main responsible bodies for cultural heritage	<p>Responsibilities for heritage are shared between the Brussels-Capital Region and the French and Flemish-speaking Community of Belgium as follows:</p> <ul style="list-style-type: none"> • the Brussels-Capital Region and its institutions (parliament, government, administration) have full and exclusive competence for the definition of the policy relating to built heritage within its territory. The main actors are as follows: <ul style="list-style-type: none"> ○ the Minister-President, who is responsible for heritage policy (the so-called "Monuments and Sites" competence) ○ the Monuments and Sites Directorate (<i>Direction des monuments et sites</i>)¹⁴, one of the administrative units within the Brussels Planning and Heritage administration of the Brussels Regional Public Service. Other actors involved are: <ul style="list-style-type: none"> ○ The Royal Commission for Monuments and Sites, a consultative body of independent experts, issues approvals for building permits concerning protected monuments and sites. It also advises the government on heritage related issues. ○ The Brussels Planning and Heritage¹⁵ administration (formerly Brussels Urban Development) comprises several other administrative units playing a more indirect role in the heritage area (Urban Development Directorate, Urban Renewal Directorate) • the French-speaking and Flemish Communities of Belgium covers the protection of movable cultural heritage 	
Protective Law for MCH	Main legislative act	<ul style="list-style-type: none"> • Brussels Planning Code (COBAT)¹⁶ • Decree 11 July 2002 on movable cultural property and the intangible heritage of the Wallonia-Brussels Federation¹⁷ • Flemish Parliament Act Concerning the Protection of Movable Cultural Heritage of Exceptional Significance of 24 January 2003 (<i>Topstukendecreet</i> or "Masterpiece Decree") • <i>Loi relative à la protection du patrimoine culturel subaquatique (4 avril 2014)</i>¹⁸
	Last amendment	The COBAT was modified and amended several times up to 2014. It is complemented by various implementing decrees. It is currently in the process of being revised.

¹⁴ <http://be.brussels/about-the-region/brussels-planning-and-heritage/direction-des-monuments-et-sites>

¹⁵ <http://be.brussels/about-the-region/brussels-planning-and-heritage>

¹⁶ 9 AVRIL 2004. Code bruxellois de l'aménagement du territoire (CoBAT). Available (in French and Dutch) at: http://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=fr&la=F&cn=2004040935&table_name=loi

¹⁷ Décret du 11 juillet 2002 relatif aux biens culturels mobiliers et au patrimoine immatériel de la Fédération Wallonie-Bruxelles. Available in French at <http://www.patrimoineculturel.cfwb.be/index.php?id=7247>

¹⁸ Loi du 4 avril 2014 relative à la protection du patrimoine culturel subaquatique. Available (French/Dutch): http://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=nl&la=N&cn=2014040407&table_name=wet

		The amended version should be adopted during the current parliamentary term (2014-2019). Decree 11 July 2002: modified by A.Gt 3-06-2006
Selection criteria	<p>For built heritage:</p> <ul style="list-style-type: none"> - Architectural Value of the Building - Documentary Value of the Building - Value of dialogue with its surroundings¹⁹ <p>For movable heritage:</p> <ul style="list-style-type: none"> - Historical value 	
National registers / database (if available)	<p>Immovable Heritage</p> <ul style="list-style-type: none"> • Inventory of the architectural heritage²⁰ • The inventory of the archaeological subsoil²¹ • The organ inventory²² • The inventory of wallpapers <p>Movable Heritage</p> <ul style="list-style-type: none"> • Inventory of movable cultural heritage²³ 	

Belgium – Flanders	
Stakeholder for this study	Flanders Heritage Agency
Main responsible bodies for cultural heritage	<p>In Flanders heritage is divided, for administrative and political purposes, into the fields of 'Immovable' and 'Cultural Heritage'²⁴:</p> <ul style="list-style-type: none"> • The Flemish government is the central actor in the implementation of the regional immovable heritage (built heritage, landscapes and archaeological sites) policy as follows: <ul style="list-style-type: none"> ○ Flanders Heritage Agency (<i>Agentschap Onroerend Erfgoed Beleidsdomein Omgeving</i>)²⁵ ○ Flemish Commission for Immovable Heritage: external advisory board for issues concerning the implementation of the heritage legislation by the Flanders Heritage Agency. • The Department of Culture (policy domain <i>Cultuur, Jeugd, Sport en Media</i>)²⁶ of the Flemish Government is responsible for movable (paintings, documents, archives ...) and intangible cultural heritage. <p>At local level, the Cultural Heritage Decree approved in the Flemish Parliament on 24 February 2017 introduced some administrative changes which impact the relationship between the different government levels. As of 1 January 2018, the provinces lost their cultural competence for movable and intangible heritage and are no longer involved in the cultural heritage policy. With the cities, municipalities and the Flemish</p>

¹⁹ For more information: http://www.irismonument.be/pdf/nl/75-algemene_methodologie.pdf

²⁰ <http://www.irismonument.be/>

²¹ <http://patrimoine.brussels/decouvrir/publications/collections-d-archeologie/atlas-du-sous-sol-archeologique-de-la-region-de-bruxelles/atlas-archeologique-de-la-region-de-bruxelles>

²² <http://patrimoine.brussels/decouvrir/inventaires-du-patrimoine-bruxellois/inventaire-des-orgues>

²³ <http://balat.kikirpa.be/intro.php?lang=fr-FR>; <http://www.patrimoineculturel.cfwb.be/index.php?id=7248>

²⁴ Source: <https://www.culturalpolicies.net/web/belgium.php?aid=422>

²⁵ <https://www.onroerenderfgoed.be/en/who-are-we>

²⁶ <https://cjsm.be/cultuur/>

	Community Commission (VGC), a new agreement is made on how they become involved in the implementation of the decree ²⁷	
Protective Law for MCH	Main legislative act	<ul style="list-style-type: none"> • Flemish Heritage Decree of July 12 2013²⁸ and its Implementation Decree²⁹ dealing with immovable heritage; • Cultural Heritage Decree of February 24 2017³⁰ (based on a previous Decree of 6 July 2012). The Cultural Heritage Decree deals only with movable and intangible heritage (oral history, traditions, ...); • Flemish Parliament Act Concerning the Protection of Movable Cultural Heritage of Exceptional Significance of January 24, 2003 (Topstukkendecreet or "Masterpiece Decree")³¹ • Federal law <i>Loi relative à la protection du patrimoine culturel subaquatique</i> (4 avril 2014)³²
	Last amendment	Flemish Heritage Decree: 2018 ³³ Cultural Heritage Decree: 2017
Selection criteria	Heritage values (historical value, architectural value, esthetical value, ...) and selection criteria (rarity - recognisability - representativeness - value of the whole - value of the context)	
National registers / database (if available)	Immovable cultural heritage Digital heritage Inventory - <i>De Inventaris van het Onroerend Erfgoed</i> ³⁴ Movable cultural heritage <i>Topstukkenlijst</i> ³⁵ <i>Collectie Vlaamse Gemeenschap</i> ³⁶	

²⁷ Source : <https://www.culturalpolicies.net/web/belgium.php?aid=52&curln=100>

²⁸ Decreet betreffende het onroerend erfgoed (citeeropschrift: "het Onroerenderfgoeddecreet van 12 juli 2013"). Available (in Flemish) at <https://codex.vlaanderen.be/Portals/Codex/documenten/1023317.html>

²⁹ Besluit van de Vlaamse Regering betreffende de uitvoering van het Onroerenderfgoeddecreet van 12 juli 2013 (citeeropschrift: "het Onroerenderfgoedbesluit van 16 mei 2014"). Available (in Flemish) at <https://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1024695¶m=inhoud&ref=search>

³⁰ Decreet houdende de ondersteuning van cultureelerfgoedwerking in Vlaanderen (citeeropschrift: "Cultureelerfgoeddecreet van 24 februari 2017") available (in Flemish) at <https://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1028103¶m=inhoud>

³¹ Decreet houdende bescherming van het roerend cultureel erfgoed van uitzonderlijk belang van 24 januari 2003. Available (in Flemish) at: http://www.kunstenerfgoed.be/sites/default/files/uploads/pdf/160119_Topstukkendecreet-2015-geconsolideerde-versie.pdf

³²

http://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=nl&la=N&cn=2014040407&table_name=wet

³³ <https://www.onroerenderfgoed.be/huidige-regelgeving>

³⁴ <https://inventaris.onroerenderfgoed.be/>

³⁵ <https://cjsm.be/topstukken/zoeken>

³⁶ <http://www.kunstenerfgoed.be/nl/wat-doen-we-beheren-van-de-collectie-de-vlaamse-gemeenschap/zoeken-de-collectie-vlaamse-gemeenschap>,

Norway	
The Antiquarian of the Kingdom - Directorate for Cultural Heritage	
<p>In Norway, the main responsible bodies in charge of cultural heritage and spatial planning are as follows:</p> <p>Directorate for Cultural Heritage (<i>Riksantikvaren</i>)³⁷ under the Ministry of Climate and Environment.</p> <p>The Directorate is responsible for the management of cultural heritage and is the Ministry of the Environment's advisory and executive body for the management of architectural and archaeological monuments and sites and cultural environments. The Directorate for Cultural Heritage also has the responsibility for cultural heritage in the Norwegian Arctic: Svalbard and Jan Mayen and acts as advisor concerning Norwegian cultural heritage in Antarctica and other polar areas.</p> <p>Other related bodies are as follows³⁸:</p> <ul style="list-style-type: none"> • County level Cultural Heritage Management exists in all 18 counties. This service advises the county administration on questions of conservation and protection of cultural heritage and environment in the planning process at county and municipality level. • Local Council Cultural Heritage Management can be found in some towns and local councils. This service advises the municipal council on questions of conservation and protection of cultural heritage and environment in the planning process. • The Archaeological Museums in Oslo, Stavanger, Bergen, Trondheim and Tromsø administer excavation and investigation of archaeological sites. • The Maritime Museums in Oslo, Stavanger, and Bergen, and the Museum of Natural History, Archaeology and Social History in Trondheim and Tromsø Museum are responsible for the underwater archaeological sites on the seabed. • The Council for Sami Cultural Heritage has its own organisation, with the same tasks as the county cultural heritage management. • Cultural Conservation of Svalbard is administered by the Governor, in accordance with the cultural heritage regulations for Svalbard. <p>In Ministry of Climate and Environment, the responsible department is Department for Cultural Heritage Management -<i>Kulturminneavdelingen</i>³⁹ -.</p> <p>This Department is responsible for developing strategies and policies within the entire field of cultural heritage; archaeology, building protection, cultural heritage as a resource in developing urban areas and villages, vessel protection, cultural environments and cultural landscapes.</p> <p>The Ministry of Culture is responsible for the movable heritage; archives, libraries, collections and museums. This responsibility is carried by the Arts Council of Norway. Arts Council Norway is the main governmental operator for the implementation of Norwegian cultural policy. Arts Council Norway functions as an advisory body to the central government and public sector on cultural affairs.</p>	
Main legislative act	<p>Cultural Heritage Act - Act of 9 June 1978 No.50 Concerning the Cultural Heritage⁴⁰</p> <p>The purpose of the Act is to protect archaeological and architectural monuments and sites, and cultural environments in all their variety and detail.</p>

³⁷ <https://www.riksantikvaren.no/>

³⁸ Source: https://www.icomos.org/risk/world_report/2000/norway_2000.htm

³⁹ <https://www.regjeringen.no/en/dep/kld/organisation/departments/department-cultural-heritage-management/id1207/>

⁴⁰ LOV 1978-06-09 nr 50 Lov om kulturminner (kulturminneloven), available in English at <https://www.regjeringen.no/en/dokumenter/cultural-heritage-act/id173106/>

Last amendment	Last amended 2015
Structures and sites or parts of these which are valuable architecturally or from the point of view of cultural history.	
Information can be retrieved from:	
<ul style="list-style-type: none"> • The website of the Ministry of Climate and Environment⁴¹ • The Askeladden database⁴² • NBL National building register (By age or Sefrak category Pre-1890) • KOSTRA Municipality state reporting. Data held by Statistics Norway • Construction industry federation • Art Council Museum register(s)⁴³ 	

Romania	
Stakeholder for this Study	National Heritage Institute
Main responsible bodies	<p>In Romania, the main responsible body is the Ministry of Culture and National Identity⁴⁴ assisted by three advisory bodies:</p> <ul style="list-style-type: none"> • the National Commission for Historical Monuments • the National Archaeological Commission • the National Commission for Museums and Collections. <p>The National Institute of Heritage (INP) is the main central body which applies the public policies in the field of cultural heritage in Romania. INP is responsible with research, inventory, protection and enhancement, for all categories of cultural heritage – immovable, movable, intangible and digital – and manages the official inventories of such heritage – the List of Historic Monuments; the National Archaeological Register; the Inventory of National Movable Heritage; the National Register of Intangible Cultural Heritage – as well as databases and digital repositories.</p>
Protective Law for MCH	<p>Main legislative act</p> <ul style="list-style-type: none"> • Ordinance 43 of 30 January 2000 for archeological monuments and sites • Law no. 182 of 25 October 2000 regarding the protection of the movable national heritage • Law no. 422 of the 18 July 2001 on the Protection of Historical Monuments • Law no. 6 of 9 January 2008 regarding technical and industrial heritage • Law no. 5 of 6 March 2000, regarding the National Spatial Plan – Section III, Protected Areas (the law established the protection by means of urban planning instruments / protected areas) • Preliminary Theses of the Cultural Heritage Code (Act), approved by Government Decision no. 905 of 2016, marking the foundation for a new approach on cultural heritage.
	<p>Last amendment</p> <ul style="list-style-type: none"> • Ordinance 43 of 30 January 2000: last republished in Official Gazette no. 951/2006; latest change by

⁴¹ <http://www.environment.no/miljotall/?topic=6&dataset=0>

⁴² <https://www.riksantikvaren.no/Veiledning/Data-og-tjenester/Askeladden>

⁴³ <http://www.kulturradet.no/english>

⁴⁴ www.cultura.ro

		<p>effect of the change of Law 187/2012 – the Penal Code, published in the Official Gazette no. 757/2012</p> <ul style="list-style-type: none"> • Law no. 182 of 25 October 2000: last republished in Official Gazette no. 259/2014; latest amendment by law 123/2017, published in Official Gazette no. 415/2017 • Law 422/2001: last republished in Official Gazette no. 938/2006; latest amendment in 1 January 2018, by effect Law 209/2017, for the amendment of Law 227/2015, the Fiscal Code • Law no. 5 of 6 March 2000, amended by Emergency Government Ordinance no. 49/2016, published in the Official Gazette no. 689/2016
Selection criteria	<p>Historical monuments shall be taken to mean immovable properties, devised in three categories – monuments, ensembles and sites – situated underground, above ground or underwater, on the territory of Romania, and which are significant for the national and universal history, culture and civilisation.</p> <p>The national cultural heritage comprises all the assets identified as such, irrespective of the ownership regime, which is a testimony and expression of the evolving values, beliefs, knowledge and traditions; includes all the elements resulting from the interaction, over time, between human and natural factors.</p>	
National registers / database (if available)	<p>The National Register of Historic Monuments (<i>Lista Monumentelor Istorice - LMI</i>) is the Romania's official list of immovable heritage which is protected by law. The list is updated upon every decision of listing or delisting which is published in the Official Gazette.⁴⁵</p> <p>National Archaeological Register / Repertoriul arheologic național, ran.cimec.ro</p> <p>Inventory of mobile national cultural heritage / Inventarul patrimoniului național mobil, clasate.cimec.ro</p> <p>GIS Map map.cimec.ro</p>	

Slovakia		
Stakeholder for this study	Monuments Board of the Slovak Republic	
Responsible bodies	In Slovakia, the main responsible body is the Monuments Board of the Slovak Republic ⁴⁶ under the Ministry of Culture, which is a specialised public administration body with key powers in the field of heritage protection of monuments and historic sites.	
Protective Law for MCH	Main legislative act	<ul style="list-style-type: none"> • Act n.49/2002 on the protection of monuments and historic sites, as amended by Act n.479/2005 and Act n.208/2009⁴⁷ • Act n.206/2009 coll. of 28 April 2009, on museums, galleries and the protection of objects of cultural significance and the amendment of Act of the Slovak National Council n.372/1990 on misdemeanours as amended⁴⁸

⁴⁵ <https://patrimoniu.ro/monumente-istorice/lista-monumentelor-istorice>

⁴⁶ <https://www.pamiatky.sk/sk>

⁴⁷ http://www.pamiatky.sk/Content/Data/File/pamiatkovy_urad/predpisy/Act_238_2014_full.pdf

⁴⁸ <http://www.culture.gov.sk/legdoc/68/>

		<ul style="list-style-type: none"> Implementing Decree of the Ministry of Culture of the Slovak Republic No. 253/2010 Z.z. implementing Act No. 49/2002 Z.z. on the protection of monuments and historic sites, as amended by Implementing Decree of the Ministry of Culture of the Slovak Republic No. 231/2014 Z.z.⁴⁹
	Last amendment	2014
Selection criteria	The aggregate value of important historic, social, rural, urban, architectural, scientific, technical, visual art, artistic and craft values for which the property or objects are subject to individual or territorial protection.	
National registers / database (if available)	<p>Immovable Cultural Heritage</p> <ul style="list-style-type: none"> Central Register of Monuments and Historic sites⁵⁰ comprising sub-registers of: <ul style="list-style-type: none"> Immovable cultural heritage monuments (<i>Register nehnuteľných NKP</i>)⁵¹; Protected historic reserves (<i>Register pamiatkových rezervácií</i>)⁵²; Protected historic zones (<i>Register pamiatkových zón</i>)⁵³ <p>Movable cultural heritage</p> <ul style="list-style-type: none"> Movable cultural heritage monuments (not publicly available) Register of Museums and Galleries of the Slovak Republic⁵⁴ 	

Slovenia	
Stakeholder for this study	Directorate for Cultural Heritage
Main responsible bodies	<p>In Slovenia, the main responsible bodies in charge of cultural heritage are as follows:</p> <ul style="list-style-type: none"> Ministry of Culture - Directorate for Cultural Heritage⁵⁵ The Directorate monitors the development of the complete system on the protection of cultural heritage, prepares system solutions on the protection of heritage, manages the register, and ensures the development of an information system and the documenting of the cultural heritage as well as performs administrative tasks. The Institute for the protection of Cultural Heritage of Slovenia⁵⁶ The Institute performs a variety of administrative and professional duties relating to the protection of immovable cultural heritage and of the movable and living cultural heritage associated with it.

⁴⁹ <http://www.culture.gov.sk/legdoc/119/>

⁵⁰ <http://www.pamiatky.sk/sk/page/evidencia-narodnych-kulturnych-pamiatok-na-slovensku> (for detailed information contact: peter.skulavik@pamiatky.gov.sk)

⁵¹ <http://www.pamiatky.sk/sk/page/register-nkp-tabulkove-zoznamy>

⁵² <http://www.pamiatky.sk/sk/page/register-pamiatkovych-rezervacii>

⁵³ <https://www.pamiatky.sk/sk/page/register-pamiatkovych-zon>

⁵⁴ <http://www.culture.gov.sk/posobnost-ministerstva/kulturne-dedicstvo-/muzea-a-galerie/register-muzei-a-galerii-sr-ef.html>

⁵⁵ <http://www.mk.gov.si/en/>

⁵⁶ <http://www.zvkds.si/en/kulturna-dediscina-slovenije/>

Protective Law for MCH	Main Legislative Act	Cultural Heritage Protection Act (Zvkd-1) ⁵⁷ Official Gazette of the Republic of Slovenia 16/2008 of 15 February 2008 ⁵⁸
	Last amendment	Official Gazette of the Republic of Slovenia 32/2016.
Selection criteria	Items resulting from human creativity and other human activities, and from social development and events characteristic of individual historical periods in Slovenia and the wider area whose protection is in the public interest due to their historical, cultural and civilisational value, in particular buildings and other items associated with important people and events in the political, economic and cultural history of Slovenia.	
National registers / database (if available)	Register of Slovene Cultural Heritage. ⁵⁹ Since 2009 the register consists of three units: <ul style="list-style-type: none"> • Registry of Immovable Cultural Heritage • Registry of Movable Cultural Heritage • Registry of Intangible Heritage 	

Sweden		
Stakeholder for this study	The Swedish National Heritage Board	
Main responsible bodies	In Sweden, the main responsible body is the Ministry of Culture , in particular the National Heritage Board (<i>Riksantikvarieämbetet</i>). ⁶⁰ The Board is Sweden's central administrative agency in the area of cultural heritage and cultural (or historic) environment. As the national coordinating agency, the National Heritage Board has overall responsibility for promoting the objectives of Sweden's heritage policy.	
Protective Law for MCH	Main legislative acts	Heritage Conservation Act ⁶¹ Heritage Conservation Ordinance ⁶² Regulation on State buildings ⁶³
	Last Amendments	Heritage Conservation Ordinance: 2002
Selection criteria	Historic or architectural value which is of outstanding interest because of its cultural historical value or which is a part of a cultural historical outstanding settlement area	

⁵⁷ Unofficial English translation is available at http://www.unesco.org/culture/natlaws/media/pdf/slovenia/slovenia_culturalheritageact_2008_engtno.pdf or http://www.arhiv.mk.gov.si/fileadmin/mk.gov.si/pageuploads/min_eng/legislation/CHPA.pdf

⁵⁸ <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO4144>

⁵⁹ https://www.culture.si/en/Register_of_Slovene_cultural_heritage_-_rkd.situla.org or <http://www.rkd.situla.org/>

⁶⁰ <https://www.raa.se/in-english/swedish-national-heritage-board/>

⁶¹ Kulturmiljölag (1988:950). Available in Swedish at https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/kulturmiljolaag-1988950_sfs-1988-950. Non-official English translation available at: <https://www.eui.eu/Projects/InternationalArtHeritageLaw/Documents/NationalLegislation/Sweden/heritageconservationact1988withamendmentsto2002.pdf>

⁶² Svensk författningssamling (1988:1188). Available in Swedish at https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/kulturmiljoforordning-19881188_sfs-1988-1188. Non-official English translation available at: <https://www.eui.eu/Projects/InternationalArtHeritageLaw/Documents/NationalLegislation/Sweden/heritageconservationordinance.pdf>

⁶³ Förordning (2013:558) om statliga byggnadsminnen. Available in Swedish at https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-2013558-om-statliga-byggnadsminnen_sfs-2013-558

National registers / database (if available) ⁶⁴	<ul style="list-style-type: none"> • The building register (BeBR) contains information about the built cultural heritage.⁶⁵ The information comes from regional museums, the Swedish Church, county administrative boards, municipalities, universities in collaboration with the National Heritage Board. • National register of heritage monuments/FMIS⁶⁶ • Protected buildings through the planning and building act (only available for 16 of 21 regions)⁶⁷ • Cultural reserves (through Environmental Code 1998:808 /7 Chapter 9 § heritage/landscape reserve)⁶⁸ • UNESCO Heritage sites in Sweden⁶⁹
The Netherlands	
Stakeholder for this study	Cultural Heritage Agency of the Netherlands
Main responsible bodies	<ul style="list-style-type: none"> • the Ministry of Education, Culture and Science <ul style="list-style-type: none"> ○ the Cultural Heritage Agency of the Netherlands (<i>Rijksdienst voor het Cultureel Erfgoed</i>)⁷⁰ carries out government policy, next to the legislation and rules the agency develops in cooperation with the government. The Agency is involved in listing, preserving, sustainably developing and providing access to movable heritage, immovable heritage (monuments and historic buildings, archaeology, historic landscapes and historic settings) and shared heritage which should be preserved on account of their cultural and historic value. ○ National Archives of the Netherlands (Nationaal Archief) ○ The Cultural Heritage Inspectorate (<i>Erfgoedinspectie</i>) which ensures compliance with the law and promotes improvements in the management and care of cultural heritage⁷¹ ○ Council for Culture ○ Provincial and local authorities responsible for provincial and local authority monuments and historic buildings. • the Ministry of Infrastructure and Environment
Protective Law for MCH	Main legislative act Heritage Act (<i>Erfgoedwet</i>) ⁷²

⁶⁴ In addition, Sweden has areas that are designated as nationally valuable cultural heritage "Riksintressen" according to the Environmental Code chapter 3 and 4. These areas support certain protection in exploitation situations. In changing land use, different interests will be weighed against each other and the cultural heritage interest will then be weighed in. In Sweden there are about 1500 such areas (Riksintressen för kulturmiljövården) for the cultural heritage. These areas include everything from villages, old towns, cultural landscapes and ancient monuments. Data of these areas (surface, no items) is kept as GIS layers.

⁶⁵ <https://www.raa.se/hitta-information/bebyggelseregistret-bebr/>

⁶⁶ <http://www.fmis.raa.se/cocoon/fornsok/search.html>

⁶⁷ <https://www.miljomal.se/Miljomalen/Alla-indikatorer/Indikator sida/Dataunderlag-for-indikator/?iid=246&pl=1&t=Land&l=SE>

⁶⁸ <https://www.raa.se/kulturarv/landskap/kulturresevat/>

⁶⁹ <http://www.unesco.se/kultur/varldsarv/varldsarv-i-sverige/>

⁷⁰ <https://culturalheritageagency.nl/en>

⁷¹ The owner of a nationally protected monument is responsible for the wellbeing of the building. The municipalities are accountable for the buildings in their territory to ensure compliance with the law

⁷² Available in English at <https://cultureelerfgoed.nl/sites/default/files/publications/heritage-act-2016.pdf>

		Heritage Act regulates matters for both movable and immovable heritage and protects the heritage together with the Environment Act (Omgevingswet) ⁷³ Movable cultural heritage and the designation of national monuments is included in the Heritage Act. The designation of spatial cultural heritage (city and village views (<i>beschermde stads- en dorpsgezichten</i>) and cultural landscapes (<i>cultuurlandschappen</i>) and dealing with the cultural heritage in the physical environment comes under the Environmental Act. ⁷⁴
	Last amendment	2016
Selection criteria	A building which is particularly valuable from a historical, cultural-historical heritage, environmental or artistic point of view. 2.1 Introduction Heritage Act: "The public interest served by the entire Dutch cultural heritage justifies its protection and thus a certain restriction on how the private or individual owner can deal with his property. It goes without saying, of course, that careful consideration needs to be given, on the one hand, to the interest served by protection and, on the other, to the interest of the owner and the free movement of goods".	
National registers / database (if available)	Rijksmonumentenregister ⁷⁵	

⁷³ Source: <https://www.culturalpolicies.net/web/netherlands.php?aid=533>

⁷⁴ <https://cultureelerfgoed.nl/dossiers/erfgoedwet/rijksmonumenten-en-de-erfgoedwet>

⁷⁵ <https://cultureelerfgoed.nl/monumentenregister> - Other information available at <https://cultureelerfgoed.nl/> and <https://erfgoedmonitor.nl/en>

Annex IV – Value Chain Approach

This annex provides an elaboration of the value chain approach and presents complementary details to what has been discussed in the Main Report.

MCH stimulates activities which in turns trigger economic transactions which have an impact on the local and national economy. In the context of this study, it was crucial to identify which economic activities are dependent on MCH, which economic impacts MCH generates, and what the linkages between MCH and the wider economy are. Exploring these connections was fundamental to develop the methodological framework in order to measure such impacts.

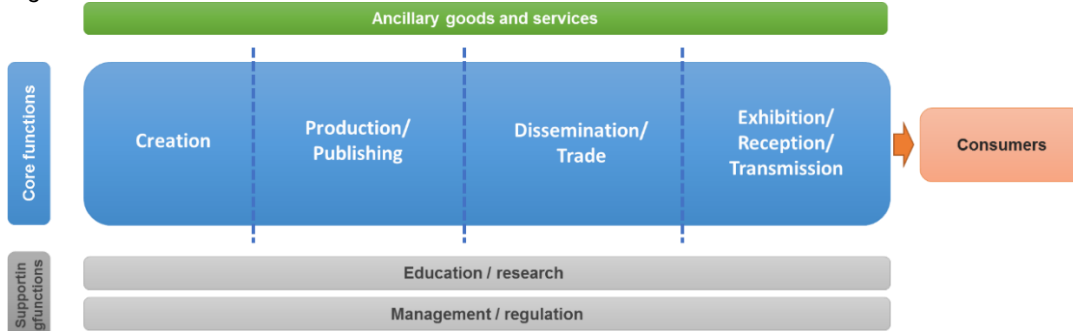
The value chain approach offers a good theoretical background to these aims and it is used as the basis for identifying the economic sectors/activities and actors linked to MCH. The value chain concept can be referred to as "a sequence of activities during which value is added to a new product or service as it makes its way from invention to final distribution" (Botkin and Matthews 1992, p. 26). The value chain approach goes further than the traditional sectoral analysis through the in-depth analysis of the interrelations between actors that must cooperate to create economic value. This concept can be applied to a wide range of domains even though the model enquires some adjustments for non-industrial sectors, such as cultural heritage, where economic value creation is not limited to the profit value creation. Heritage goods differ from other commodities as they are not reproducible nor exchangeable in the market (besides antiques market or some historic buildings traded in the real estate market).

The value chain approach has already been applied to cultural heritage in several studies. For instance, the ESS-net Culture report 2012 distinguishes between activities related to producing, disseminating and preserving the heritage (core functions) and the activities of education and management/regulation that are linked to heritage (support functions). More recent studies (IDEA Consult et. al., 2017; Vanhoutte 2019) identify four core functions (creation, production, dissemination/trade and exhibition/reception) and a few support functions (e.g. research/education and management/regulation) as well as activities related to other economic sectors for the supply of ancillary goods and services that are critical for value creation.

A model of the different functions in the MCH value chain is presented in Figure 1, based on the baseline model to analyse creative value chains⁷⁶ proposed by IDEA Consult and al. (2017, p. 37), which complements the ESSnet-Culture approach to the creative value chains' functions with UNESCO's 2009 framework for cultural statistics.

⁷⁶ Creative value chain

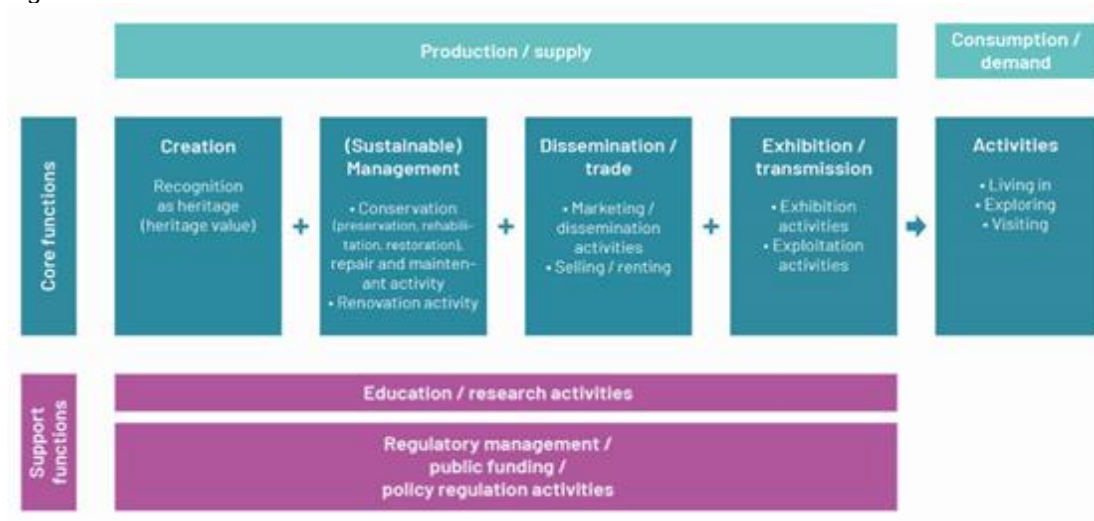
Figure 1: Baseline model for MCH value chain



Source: *Mapping the Creative Value Chains (2017)*

This study has proposed a revised model of the value chain compared to previous studies to better reflect the specificities of MCH. Some functions of the value chain need to be interpreted in a way that takes into consideration that MCH is a non-reproducible resource inherited from the past. Notably, the creation function should be understood as the recognition of an objects as heritage and the production function should be understood as (sustainable) management of MCH resources⁷⁷ (while sustainability is desired for MCH management, it is not always achieved). In addition, activities related to consumption/use of MCH (such as heritage-led tourism) should be considered as an integral part of the value chain, since users' expenditures on MCH sites and in the local economy (e.g. local hospitality business) generate important economic impacts at territorial level. It is also important to note that the value creation process is not linear and MCH can be enjoyed by many parts of society (e.g. owners, local inhabitants, tourists, etc.) on several occasions not just once. The MCH value chain model proposed by the study is represented in Figure 2.

Figure 2: MCH value chain



Source: *Elaboration of the service provider and the Stakeholder Committee (2018)*

⁷⁷ while sustainability is desired for MCH management, it is not always achieved

Normally, the value chain model focuses on business activities and relations amongst firms. However, it is important to underline that national and local authorities, MCH managers and specialists employed by the public sectors; networks of cultural heritage organizations, local communities who develop, exchange and make available expertise play an important role all along the value chain for the protection and valorisation of MCH. For these reasons, this study will also consider:

- Not-for-profit organisations: heritage associations, often active on a local level and driven by volunteers, play an important role in all the core functions of the MCH value chain to manage, raise awareness, inform and valorise local heritage. Several studies explore the contribution of civil society and volunteer organisations to the conservation and enhancement of MCH (e.g. BOP Consulting for HLF, 2011). Moreover, the contribution of volunteers is vital to many archives, libraries and museums. For instance, the European Group on Museum Statistics (EGMUS) data suggests that volunteers can represent from 30% up to 70% of all museum staff in European countries;⁷⁸ and
- The public sector: the public sector plays an important role in the MCH value chain, as explained in the following paragraphs.

As visualised in Figure 2, the systemic approach offered by the value chain model gives a broader picture of the economic relevance of MCH in local and national economy beyond the activities of conservation, dissemination and exhibition carried out by organisations traditionally associated to MCH (e.g. museums, archives and libraries) as some activities are carried out by different actors which overlap with other value chains and economic sectors (e.g. specialised constructors, real estate agencies).

The value chain model used in this study does not lead to a full economic impact assessment as understood in other evaluation studies.⁷⁹ This would require the assessment of the additionality created by MCH, on top of external factors such as the effects of broad national or regional economic growth trends or the impact caused by the interaction with other sectors (e.g. general growth in tourism). However, current data are not of sufficient quality (e.g. in terms of definitions, reliability and comparability) to support such a detailed economic analysis. One can wonder whether a full economic impact assessment can ever be reached, as it is hardly possible to identify the substitutes of MCH to calculate the opportunity cost of MCH.

⁷⁸ Source: www.egmus.eu

⁷⁹ See for example: M. Florio *Applied Welfare Economics; cost-benefit analysis of projects and policies*, Routledge (2014).

It should also be noted that there are different types of actors involved in delivering and in financing the economic activities related to MCH (i.e. actors from the non-profit, private and public sectors). The activities of all these actors are intertwined (e.g. volunteers in public institutions, public institutions subsidising other organisations) (Vanhoutte, 2019) which makes it challenging to represent such a complex ecosystem in a standard model. In this respect, however, the value-chain model proposed in this study offers a new perspective to look at value creation, not limited to profit value creation but also non-profit value creation.

The following paragraphs present a detailed overview of the core and supporting functions and ancillary services of the MCH value chain, including economic activities, main actors involved and potential economic impact at territorial level based on existing literature and available evidence.⁸⁰

Core functions

Creation / Recognition of the heritage value

The recognition of heritage value has been traditionally managed by public authorities at local, national or international level (e.g. the UNESCO World Heritage sites). Such recognition often involves an established process of listing or certification which might have regulatory consequences for MCH owners, for instance in terms of protection and maintenance. As explained in Annex I, it should be noted that new participatory approaches to MCH are emerging also in relation to the recognition of heritage value.

Management

The management of MCH includes activities related to MCH conservation (which may involve preservation, rehabilitation and restoration activities), repair and maintenance as well as renovation of immovable MCH. Such activities are usually under the responsibility of the owners or managers of movable or immovable MCH, whether they are public institutions, private organisations or individuals. The management of complex sites such as archaeological sites, cultural landscapes or historic town centres requires a coordinated approach involving different stakeholders and professional figures (e.g. public authorities, site managers, town planners, etc.).

In most cases, movable MCH is collected, conserved, repaired, maintained, researched and displayed to the public by institutions like museums, archives and libraries. Professional actors usually involved in management activities of movable MCH include curators, archivists and librarians, responsible for collections care; conservators/restorers, responsible for the conservation of movable artworks (or artistic components of immovable MCH, for example in

⁸⁰ Literature review has been carried out in particular by the European Experts Network on Culture on the Social and Economic Value of Cultural Heritage (2013) and by the CHCfE Consortium (2015).

case of wall paintings and frescoes) based on the respect for the original material, archaeologists. These experts are often directly employed by museums, libraries and archives. In relation to immovable MCH, interventions beyond day-to-day maintenance of buildings such as physical rehabilitation, repair and renovation activities are usually carried out by specialised companies in the construction sector, which might be publicly certified to perform their work according to strict rules and norms (depending on the legal framework of each country). In some cases, works on listed buildings need specific authorization from public authorities. Professional actors include construction professionals such as construction supervisors, structural engineers, masons, tinsmiths, carpenters, plumbers, etc.

Artistic crafts activities are also highly relevant for MCH. Craftsmen provide high-qualified services especially in relation to pre-1919 buildings (usually constructed before the diffusion of concrete walls using traditional techniques and materials) which require particular skills, know-how and expertise for interventions both on the façade and sometimes the interior.⁸¹ Other specialised activities and actors linked to the management of MCH include:

- *Archaeological activities* including studies and research, educational activities, archaeological surveys related to archaeological sites and associated objects, building archaeology⁸²;
- *Architectural activities* including project design and technical consultancy, town and city planning, spatial planning, landscape architecture, garden design and planning related to conservation, maintenance and repair of MCH. Several architectural firms carry out studies and projects for museums, libraries and archives, public authorities or private owners of heritage properties. Architects increasingly use new technologies like Geographic Information Systems, remote sensing and 3D modelling in the process of documentation and conservation of immovable MCH; and
- *Mapping and surveillance activities* involving highly specialised techniques (e.g. terrestrial or aerial laser scanning, high-resolution satellite imagery) carried out by professionals such as cartographers and surveyors.

Economic impact

Economic impacts generated by the above-mentioned activities are mostly related to:

⁸¹ Source: <https://historicengland.org.uk/services-skills/training-skills/heritageskills-cpd/traditional-building-skills/>.

⁸² Building archaeology can be defined as historical research of built heritage, using direct observations of structures or its remains as a primary source. Looking at materials, construction principles and building traces, the building archaeologist can reconstruct the history of a building (De Vos in Vandesande and al., forthcoming).

- Employment: contrary to all major industrial sectors where the tendency is for increased production with a reduced work force, MCH is labour-intensive (Nypan, 2006). Most of the conservation, maintenance and repair works carried out on MCH require special skills and cannot be automatized. In particular, the potential of building rehabilitation regarding job generation has been explored in several studies (World Bank, 2002; Meijer and al, 2012); and
- Revenues of companies involved in MCH management activities (e.g. specialised constructors, architectural firms).

Literature shows that physical restoration, repair and renovation activities generate relevant economic impact in terms of revenues and employment. A study conducted by the Flanders Heritage Agency in 2015 showed that the construction sector related to heritage generated a turnover of almost EUR 383 million (for 503 contractors) and 2,431 jobs (FTE) in 2013. According to Heritage Counts 2017 (UK), repair and maintenance of historic buildings directly generated £9.6 billion in construction sector output (which is equivalent to 7% of total construction output or 20% of the repair and maintenance output).

In relation to the activities of architectural firms, there are few studies which try to quantify the generated economic impact. A study commissioned by the Flanders Heritage Agency (Belgium) in 2010 and carried out by SUM Research and the Center for Economic Studies (KU Leuven) includes an estimation of employment, turnover and value added in the built heritage conservation industry in Flanders in 2009, including architects. The results indicate 284 FTE, EUR 25 million turnover and EUR 22 million value added. Another report commissioned by le Conseil d'Analyse Économique (CAE) in France in 2011 presents data on the employment generated by heritage in France in 2007, showing 63,500 employees in architecture-related activities.

Research studies and data on the economic contribution of archaeological activities to the economy are also scarce and there is no harmonised data on the number and nature of archaeological firms. The above-mentioned study commissioned by the Flanders Heritage Agency (Belgium) in 2010 also includes an estimation of employment, turnover and value added in archaeology in Flanders in 2009. The figures are 513 (FTE), EUR 45 million turnover and EUR 39 million added value.

However, the profession of archaeologist is not recognised in many countries.⁸³ Archaeologists are often self-employed and many of the ones not working for the construction industry

⁸³ Source: EU-funded project "Discovering Archaeologists in Europe". More information on the project can be found here: <http://www.discovering-archaeologists.eu/>

specialised in historic properties are employed in public institutions, research centres or heritage organisations, which makes counting the number of employed persons a challenge. On a side note, archaeological excavations can also generate additional economic impacts, since they are often sources of employment as well as value creation to local communities through the procurement of equipment and supplies, accommodation expenses, fees as well as leisure spending by visiting archaeological sites (Burtenshaw 2013). It can be argued, however, that most sites would be better preserved without excavations; thus, it is not straightforward to consider these activities as (sustainable) management.

Besides the economic impacts on value of production and employment, it is worth to consider other financial flows related to (sustainable) management of MCH that have an impact on the economy:

- Expenses of private owners to preserve and maintain MCH (e.g. purchase of decoration/repair materials and supplies, sundry maintenance costs) or investing in prevention work;
- Public expenditures for sustainable management of publicly owned MCH; and
- Subsidies from governments and/or other local public authorities to owners of MCH (e.g. museums, individuals) in the form of grants or payments for the conservation, repair, maintenance and renovation activities.

Dissemination and Trade

Dissemination and marketing activities include advertising and publication of promotional material about MCH sites and other attractions / hospitality services in the surrounding areas, both offline (e.g. newspapers) and online (e.g. websites). Museums and heritage sites increasingly employ specific professionals such as Social Media managers, Communication/Audience engagement specialists, marketing/branding experts, graphic designers. In relation to trade, it is worth to distinguish between movable and immovable MCH:

- *Movable Heritage*: trade activities are related to the commercial market of arts and antiquities, dominated by actors such as art galleries and auction houses.⁸⁴ Export is also strictly regulated, including at EU level, in order to fight illicit trafficking.⁸⁵ Professionals involved include collectors, art dealers, art advisors, auctioneers or curators working for auction houses, and museums curators (when purchasing work of arts for the museums' collections). The role of art advisors is increasingly sought in the wealth management sector including for MCH (Deloitte and ArtTactic, 2017); and

⁸⁴ According to the scope of the study and the definition of MCH provided in Section 2, these activities (including export of heritage objects) will not be covered by the study.

⁸⁵ Source: https://ec.europa.eu/culture/policy/culture-policies/trafficking_en

- *Immovable Heritage*: trade activities (the selling and renting of heritage property) are related to the real estate market, where realtors act as intermediaries between the seller and the buyer. Professional figures involved include real estate agents, traders and property managers.

Economic impact

Economic impacts generated by the above-mentioned activities are mostly related to:

- Effects of MCH on the real estate market (in relation to immovable MCH); and
- Employment and revenues of companies involved in MCH dissemination and trade activities (e.g. real estate agencies).

Most literature focuses on the effects of heritage on the real estate market in terms of price (e.g. Damen et al., 2017; ELTINGA Centre for Real Estate Research, 2016; Realdania and Incentive, 2015). Evidence shows a positive effect both in relation to the market value of listed properties (selling/renting price) and the non-market value (e.g. willingness to pay). The economic impact might also concern the surrounding of MCH; a house located close to a heritage site or a listed building might have a higher selling/renting price because the proximity to MCH increases the willingness to pay. More details on selected literature and main findings are presented below:

Table 3: Selected literature on impact of cultural heritage on the real estate market (value and prices of properties)

Study	Method used	Object of the study	Main findings
Damen, et al., 2017	Desk research, hedonic pricing, case studies	To quantify the willingness of people in Flanders to pay for the heritage characteristics of their homes and their living environment	Built cultural heritage listed in the inventory of established heritage has an added value of 6%. Protected monuments have an additional positive effect on the house price of 6%. A house located in a protected city or townscape has an added value of 3%. Landscapes included in the established inventory do not have a positive impact on house values, unless they are protected (+11%). An additional protected monument within a 50m radius of a house has a price-boosting effect of 1,8 to 2,2%.
MENON PUBLICATION, 2017	Mixed	To quantify the willingness to pay to live in a house with cultural heritage characteristics or in areas with high density of cultural heritage in Norway.	The study shows that there is greater willingness to pay for living in a home with cultural heritage characteristics than in comparable homes without these attributes (between 2.3 to 2.4 percent higher). The study also shows that there is a greater willingness to pay to live in neighbourhoods with a higher density of cultural heritage.
Ahlfeldt & Maenning, 2010	Hedonic pricing	Impact of cultural heritage on housing prices in Berlin, DE	Ahlfeldt and Maenning show that the external heritage effect embedded in property values in Berlin amounts to as much as 1.4 billion euro
Ahlfeldt, et al., 2012	Hedonic pricing, interviews and questionnaires	Costs and benefits of a location near cultural heritage in England, UK	The analysis (covering over a million transactions on the real estate market in the period 1995–2010) of the costs and benefits of properties within or near to a conservation area shows increase in property values of circa 23%.
Lazrak, et al., 2011	Hedonic pricing	Economic effect of listed heritage in Zaanstad, NL	Besides the conclusion that monuments gain the premium of 22.8% in relation to properties without this status, the authors claim also that there is a positive correlation between the value people ascribe to buildings and the passage of time.

Source: CHCfE, 2015 and Stakeholder Committee

Furthermore, heritage properties can also play an important role in attracting new businesses or commercial activities in a given area (Ecorys 2017) or be used as luxurious business locations (Haspel, 2011), which can contribute to further increasing the economic value of surrounding properties.

Exhibition and transmission

Activities related to the exhibition and transmission of MCH are essential to make it accessible to society and represent the main source of revenues for owners, museums, libraries and

archives, for instance through ticketing. However, it should be noted that only a small part of movable and immovable MCH is publicly accessible, and even fewer cultural heritage objects have an entry fee (churches, monuments, museums and archaeological sites or public buildings).

In relation to movable MCH, exhibition and transmission activities are mostly carried out by museums, archives, libraries through permanent or temporary exhibitions of the collections, against the payment of a fee (tickets) or free or charge. Events such as heritage days or museum nights often have a large promotional function to attract visitors. The set-up and management of temporary exhibitions are increasingly outsourced to external freelance experts and consultancy and PR businesses. Designers are also progressively employed by museums and heritage sites for creating exhibitions and/or display their collections (NEMO, 2017) or designing new user experiences also for guided tours. Interesting examples are the ARoS museum and Moesgård museum in Denmark.⁸⁶

The exhibition and transmission function can be a source of additional revenues for museums, archives, libraries, heritage sites or privately-owned properties through valorisation activities such as:

- *Guided tours;*
- *In-house publications*⁸⁷, including audio-visual material, sold in bookshops;
- *Catering:* several museums and heritage sites propose quality food and drinks in bars and restaurants as a pull factor to complement the exhibition experience;
- *Licensing of copyrighted images of heritage objects:* an example is the policy of the Van Gogh Museum (The Netherlands) in relation to the use of the images from the museum's collection for publications, media or merchandise, which distinguishes between non-commercial, commercial and corporate purposes;⁸⁸
- *Retail activities and merchandising:* heritage sites often have their own shops where they can sell reproductions of their own collections or sites;
- *Renting spaces for private events or for cultural events.* In particular, cultural and creative industries can play a big role in the valorisation of MCH:
 - *Festivals:* festivals can rent heritage spaces as an important driver of tourism inflows (IDEA Consult et. al., 2017). At the same time, festivals can be a good medium to present MCH and attract new public and audience;
 - *Audio-visual sector (e.g. film, music video):* museums, heritage sites or cultural landscapes can be used as a location for scene to produce films, videos and audio-visual materials against payment because of the attractiveness of the sites. There is

⁸⁶ More information available at <http://www.cultureforcitiesandregions.eu/culture/resources/Case-study-Aarhus-City-of-museums-WSWE-9XMLR8>.

⁸⁷ See for example the Louvre: <https://www.louvre.fr/publications>

⁸⁸ Source: <https://www.vangoghmuseum.nl/en/organisation/conditions-use-and-permissions-of-images>

a growing literature which explores how heritage sites can be used as film location and their influence on tourism (Reynolds 2016; Bowyer 2017). The increased awareness about the site can, in turn, increase the tourism flow in the area;

- *Performing arts*: there are several examples of historic buildings used as location for performances or artistic residences. An interesting example is “Le Dimore del Quartetto”, an Italian association that promotes concerts by young string quartets in the early phase of their career in heritage of historic houses in a circular economy context.⁸⁹ According to a study carried out by NEMO (2017), 15 of 22 of the surveyed museums hosts theatre performances and concerts.

Economic impact

Economic impacts generated by the above-mentioned activities are mostly related to:

- Employment and revenues of museums, archives, libraries and other heritage sites (also due to valorisation activities such as festivals, concerts, movies, etc.); and
- Employment and revenues of companies involved in exhibition and transmission of MCH (e.g. cultural and creative industries).

In the age of the knowledge economy, museums are increasingly considered as a pull factor to support local economic development by supporting creative economic activities such as design and innovation for the benefit of local and international enterprises and entrepreneurs (OECD and ICOM, 2017).

There is a vast literature focused on the economic impact of museums in the local economy (Grefe 2011; TBR 2015; NEMO 2016; QUORUM and CCS-EBLA, 2018, to name a few). However, there is little literature specifically exploring the economic impact of MCH on the cultural and creative industries (CCI) in quantitative terms (CHCfE, 2015).

Consumption and use

The value creation process resulting from the above-mentioned activities and the interaction of all the actors in the value chains are instrumental for the consumption of MCH by the owners, local inhabitants and communities, tourists for different purposes such as research, learning, working, housing or recreation. If not open to use and consumption by society, the mere presence of MCH in a territory has little potential to drive economic activities, attract social capital and investment and overall contribute to territorial development and regeneration.

Notably, heritage is considered by some the single most important resource for international tourism (Graham et al, 2000) and might be one of the most important ‘pull’ factor to increase

⁸⁹ Source : <http://www.ledimoredelquartetto.eu/?lang=en>

local tourism and hospitality business. According to a recent study of the UNWTO (2018, page 25), culture (including material cultural heritage) is the primary reason to travel for a core market of tourists (around 30%). Evidence suggests that MCH is highly used by CCI as source of inspiration notably in visual arts, fashion or design ⁹⁰, for new products and services (e.g. Summatavet, 2015; Boccardi and al, 2016) and to stimulate creativity and innovation (KEA, 2009).

Economic impacts

- Development of local economy (for instance in terms of local hospitality businesses);
- Increased value of production for local heritage sites/institutions, for instance due to tourism; and
- Employment and revenues of companies involved in tourism or other activities related to the use/consumption of MCH.

In relation to heritage-led tourism, numerous studies investigate the effects of heritage on tourism in economic terms and the contribution to regional attractiveness, for instance in terms of increased tourists' spending not only in heritage sites but also in local economy (ancillary spending) such as restaurants, hotels, purchase of traditional products and services (e.g. HLF, 2010; Ecorys, 2012; Realdania and Incentive, 2015; Oxford Economics, 2013 and 2016). For example, research commissioned by the Heritage Lottery Fund (UK) estimated that for every pound spent as part of a heritage visit, 32 pence are spent on site, and the remaining 68 pence is spent in local businesses: restaurants, cafés, hotels and shops (HLF, 2010). According to Oxford Economics, the heritage tourism sector itself generated GBP 8.8 billion GVA contribution to UK GDP and 191,000 jobs, making the heritage tourism sector larger than other major cultural sectors. According to Heritage Counts 2017 (UK), Heritage tourism generated GBP 16.4 billion in spending by domestic and international visitors. A study conducted by Menon Economics (2017) in Norway shows that cultural environments and cultural heritage attracts tourists and leads to increased value in terms of increased employment and wealth creation.

Some studies have underlined the leverage effect that cultural heritage can have on economy's creativity. In France, for example, it was shown that while jobs connected with the management of heritage sites accounted for 0.4% of the working population, the number of jobs in the economy that transformed heritage resources into creative ones stood at nearly 3% (Grefe and Pflieger, 2003).

⁹⁰ Examples of products inspired by heritage and/or collaborations with heritage institutions are particularly frequent in the fashion industry (e.g. https://www.itsnicethat.com/news/vans-vincent-van-gogh-product-design-270718?utm_source=facebook&utm_medium=social&utm_campaign=intsocial).

Furthermore, some studies suggest a correlation between the concentration of heritage assets and CCI. A study carried out in The Netherlands (Kourtit et. al., 2013) shows a positive correlation between local cultural heritage and the presence of the creative industry at the municipality level. According to Heritage Counts 2017 (UK), CCI are 29% more likely to be found in a listed building than in a non-listed building in England, and a very high proportion of CCI based in historic buildings are start-ups or creative hubs. It is worth mentioning that several members of the European Network of Creative Hubs⁹¹ are located in heritage sites.⁹² However, it is very difficult to quantify how much of the economic impacts generated by firms located in an MCH site are actually attributable to MCH.

Supporting Functions

Besides the activities and actors in the core functions of the value chain, there are several facilitating or supporting activities which support the value creation process.

Regulatory management, public funding and policy regulation activities

Several activities related to MCH (e.g. conservation, trade, exploitation) are heavily regulated by competent authorities at national (e.g. cultural ministries, national heritage agencies), regional or local level to ensure the conservation/enhancement of the public value of MCH (regardless the public or private ownership). In some cases, listing implies specific obligations or restrictions for the owners (e.g. limit to export in case of movable MCH or to renovation works in case of immovable MCH). On the other hand, public regulation might serve to support heritage conservation and improve spatial planning, especially in relation to immovable MCH. Heritage legislation can help to find a balance between protecting heritage sites and the need to accelerate the renovation of certain quarters and buildings, or the increasing pressure from tourism or other activities (Guštin and Nypan, 2010). It should be noted, however, that strong legal protection for MCH is important but not enough to ensure sustainable conservation and management; MCH can be damaged or destroyed both deliberately and accidentally or suffer from lack of stewardship and neglect; hence the importance of education and awareness amongst local communities.

In relation to public funding, many of the institutions involved in managing MCH are either full public sector organisations, or dependent on public funding and subsidies for their functioning. Heritage's public good characteristics (Navrud and Ready, 2002; Rizzo and Throsby, 2006; Towse 2010)⁹³ are considered as the rationale for public intervention to correct market failure

⁹¹ <https://www.creativehubs.eu/>

⁹² For example, the Cable Factory in Finland (<https://www.kaapelitehdas.fi/en/info>) or La Salle located in the Chateau La Salle in France (<https://www.creativehubs.eu/hub/la-salle/>)

⁹³ According to economic theory, public goods are non-excludible (meaning that it is technically impossible to keep users from enjoying the good) and non-rival in consumption (meaning that more people can enjoy

connected to the existence of positive 'externalities'. MCH assets may typically generate a range of important benefits for society which are not fully reflected in market transactions (). According to a study commissioned by the French General Inspection of Cultural Affairs (Kancel et. al., 2015), French public spending in the domain encompasses subsidies for restoration and maintenance work on historic buildings, various tax provisions and exemptions (built heritage, acquisitions of national treasures ...), funding of large national institutions operators and direct expenditures on state-owned monuments. The study estimates that this funding accounts for around 15% of the value added generated in cultural heritage in France.

Furthermore, the economic valorisation of MCH is to a large extent dependent on public policies and financial investment both at national and regional level, as well as on the leeway and opportunities that the regulatory framework offers for this (IDEA Consult et. al., 2017).

Education and research

Heritage education is an essential component for the transmission of MCH. Educational activities are not only carried out by museum educators, museum and heritage site curators and directors but also by schoolteachers, professors and academics. At this regard, it is possible to differentiate between different types of education/training relevant for different functions of the value chain:

- Generalist education (e.g. Humanities, Art, History of Art, etc.);
- Oriented professional education / training (e.g. archaeology, restoration, heritage management, museology, Library and Documentation, Heritage-based craftsmanship, restoration, cultural landscape management);
- Complementary training especially related to exhibition / exploitation such as museography (design of exhibition spaces), cultural management, cultural tourism, cultural didactics, cultural communication (including social media officer / digital officer for MCH sites), edition and production of cultural contents based on MCH, marketing and fundraising, Customer Relationship Management;
- Academic research in MCH: research and academic institutions play an important role for the development of new expertise and competences in relation to MCH (e.g. new conservation techniques, new business models, audience development strategies); and
- Training / capacity building for MCH owners (e.g. repair and maintenance).

– consume - the public good at the same time without interfering with each other's enjoyment). MCH goods vary in their degree of excludability (e.g. museums with entry fee, private collections) and might have intermediate levels of non-rivalry (e.g. a too crowded exhibition diminishes the visitor's enjoyment of the experience (Navrud and Ready, 2002)

The economic impact of education activities is mostly related to employment and value of production of education institutions or private companies offering specialised courses. However, no literature has been found on this subject.

Ancillary goods and services

Ancillary goods and services are not directly associated with MCH but facilitate or enable the core functions of the value chain notably sustainable management, dissemination/trade or exhibition. Ancillary goods and services are critical in the value creation process as might be necessary to protect, sustain and valorise MCH. The supply of ancillary goods and services to MCH is related to different sectors, notably:

- *Insurance*: Insurance companies are important suppliers of the MCH value chain, as usually immovable and movable MCH objects are insured. The value of the insurance is directly correlated to the type of MCH object (e.g. national or international importance vs. regional or more local importance) and the conservation status (originally constructed or altered). For movable MCH, specialised insurances are important to cover the risks related to exhibitions and the mobility of collections;
- *Information and Communications Technologies (ICT)*: Following the digital shift, there is a growing demand for digital solutions and ICT services (both software and hardware) for MCH in relation to different functions of the value chain:
 - Management: ICT technologies can be instrumental for heritage management, conservation and restoration. For example, the use of remote sensing technologies and platforms, 3D modelling, the Geographical Information Systems (GIS) are widely engaged for monitoring, analysis and environmental impact assessment of immovable MCH⁹⁴;
 - Dissemination: ICT tools such as website, social media and other digital platforms (such as TripAdvisor) have becoming increasingly important for promotional purposes and serve as attractive channels for promoting heritage sites;
 - Exhibition: besides online ticketing, ICT solutions can improve the availability and accessibility of heritage sites and collections, for instance through apps or sensors (IDEA Consult et al., 2017). An example is the project “Art For the Blind” promoted by the Ara Pacis museum in Rome (Italy) which allows visitors with vision problems or blindness to 'get in touch' with the museum collection through an innovative multi-sensory exploration path.⁹⁵ Online platforms Digitisation of historical documents, cultural artefacts, collections and intangible assets can also improve access,

⁹⁴ Source : <https://www.interregeurope.eu/policylearning/news/1675/use-of-ict-in-protection-of-natural-and-cultural-heritage/>

⁹⁵ More information at: http://www.arapacis.it/en/didattica/progetti_speciali/art_for_the_blind

promotion and better management of the data. Several museums and heritage sites have been implementing digital asset management systems to better manage their digital collection.

- *Security systems*: the assurance of the physical security of MCH against criminal activity (looting, theft), vandalism or other anti-social behaviour or other damages is essential considering the irreplaceability of heritage resources, both for the owners and for society. Furthermore, the surrounding territory can be devalued due to the loss or damage of MCH. For instance, the loss of a heritage site changes the aesthetic features of a place making it less attractive to tourists. Damages causing temporary closure of a heritage site can cause a loss of income not only for the site itself but also to nearby businesses due to the decrease of tourists' inflows. Similarly, nighthawking (illegal metal-detecting) may also damage farmland, destroy crops, disturb animals and frighten local people.⁹⁶ For these reasons, companies providing security services (e.g. alarm systems, guardianship) are important suppliers to MCH;
- *Cultural and creative industries (CCI)*: CCI can supply ancillary services to facilitate the exhibition and valorisation of heritage sites and collections:
 - *Advertising and communication agencies* can provide support in promotion of MCH, for instance to organise/advertise/brand an exhibition;
 - *Video games / multimedia companies* can collaborate with museums and libraries and archives to develop and commercialise innovative solutions for awareness raising, engagement and learning. Video games, and in particular serious games, have proved to be powerful entertainment tools for audience development as well as to stimulate dissemination of knowledge about heritage sites and collections, especially for small or local museums (Anderson and al., 2010; Mortara et. al., 2014; IDEA Consult et. al., 2017). An example of successful heritage-related video game is "Father and Son" published by the National Archaeological Museum of Naples (Italy) which exponentially increased the number of visitors of the museum.⁹⁷ The use of Virtual Reality and Augmented Reality tools for MCH is also growing. An interesting example is the initiative "L'ARA COM'ERA" by Zètema Progetto Cultura for the Ara Pacis museum in Rome (Italy), an innovative storytelling of the Ara Pacis through Augmented Reality.⁹⁸
 - *Publishing houses* can provide publications for bookshops in museums or other cultural heritage sites (e.g. catalogues of exhibitions) or maps/tourists guides.

⁹⁶ <https://www.bsia.co.uk/Portals/4/Publications/188-security-of-heritage-property-guide.pdf>

⁹⁷ More information at <http://www.fatherandsongame.com/> and <http://www.tuomuseo.it/gaming/game-tourism-in-italia-il-caso-di-father-and-son-a-napoli/>.

⁹⁸ More information at: http://www.arapacis.it/en/mostre_ed_eventi/eventi/l_ara_com_era.

Economic impact

The supply of ancillary goods and services to MCH creates important economic impacts in different sectors, notably in terms of employment and value creation for related companies. However, there is little literature exploring the impact of MCH on these sectors in quantitative terms. A survey carried out for Heritage England on Listed Building Owners explores more in depth the link between MCH and insurance, but not in terms of economic impact (ECORYS, 2017). Interestingly, the study shows that the majority of listed building respondents indicated that their property was insured for a higher sum than the average price of a property in England.⁹⁹

There is increasing academic literature exploring the relations between cultural heritage and video games, especially serious games (Anderson and al, 2010) but there is no literature exploring the economic impact of ICT or CCI activities related to MCH in quantitative terms. In relation to security systems, a study conducted by the Universidad Politecnica of Madrid (2012) for Spain's Ministry of Culture showed that security activities accounted for 1% of the total added value of the heritage sector (including all arts and crafts and cultural tourism).

⁹⁹ According to the UK House Price Index, the average at April 2017 was £237,000. See: <https://www.gov.uk/government/statistics/uk-house-price-index-england-april-2017>

Annex V – Measurement of economic impact – literature review

This annex provides an elaboration of the approach of the coefficients and presents complementary details to what has been discussed in the Main Report.

During the inception phase, a desk research has been carried out to identify existing studies attempting to quantify the impacts of cultural heritage in the wider economy. This overview aimed to compare current methodologies and indicators and to assess their relevance to the objectives and scope of this study.

In recent years, a growing number of research studies have sought to gather data on the economic value or impact of material cultural heritage. The Handbook on Economics of Cultural Heritage (Rizzo and Mignosa, 2013), the literature review on the social and economic value of cultural heritage carried out by the European Experts Network on Culture (EENC, 2013) and the Cultural Heritage Counts for Europe project (CHCfE, 2015) offer an extensive overview of recent studies. In particular, the CHCfE report presents an overview of the most common methods to assess the economic impact of cultural heritage (page 82). Extensive research has particularly been carried out in Flanders (De Baerdemaeker et al, 2011; Damen et al, 2017), France (e.g. Passamar H and Marchetti M, 2009; Greffe 2011), Norway (e.g. Nypan, 2009; Menon Economics, 2017) and the UK through studies and reports commissioned by Historic England (e.g. AMION & Locum Consulting, 2010; ECORYS 2012; Ortus Economic Research, 2017).¹⁰⁰ Interesting methodologies have also been explored by the Economic Task Force of the European Heritage Heads Forum.

However, the adaptation of these approaches and methods to the current study is not straightforward. Several studies are limited in geographical and/or thematic scope, while the current study focuses on 11 countries/regions and considers the impact of MCH in different economic activities and sectors. A brief overview of the most relevant studies and limitations related to the study is presented below.

¹⁰⁰ Examples of studies and research are available at: <https://historicengland.org.uk/research/heritage-counts/> and <https://historicengland.org.uk/research/current/social-and-economic-research/value-and-impact-of-heritage/economic-impact-of-heritage/>.

Table: Overview of the most relevant studies and limitations related to the study

Study	Short description	Limitations in relation to this study
Passamar H and Marchetti M, 2009 for the Regional Agency of Cultural Heritage of Provence-Alpes-Côte d'Azur	The study aims to quantify the economic and social impacts of material cultural heritage in France.	The study is country-specific (France). The methodology is based on primary data collected through an online survey considering listed material heritage sites and museums open for more than 40 days per year with a ticket office and/or included in a guided tour at charge. The methodology is very accurate but not replicable in the context of this study considering the timeframe, the resource and the geographical scope.
ESS-net Culture, 2012 and 2016	The report ESS-net Culture 2012 was the main result of two years of works of the European workgroup on cultural statistics with the aim to provide harmonised and comparable statistics on culture at European level including cultural heritage, compatible with the framework that UNESCO adopted in 2009.	The ESS-net Culture is the main EUROSTAT's reference for the production of cultural statistics. The 2012 report defines cultural employment by crossing two classifications: NACE (economic activities) and ISCO (occupations). ¹⁰¹ This methodology has been used in subsequent studies and researches. However, the scope of this study goes beyond cultural employment and this methodology will not provide data on the economic impact of MCH.
Universitat de Valencia, 2012	The objective of the study commissioned by the Spanish Ministry of Culture and Sport was to investigate and quantify the economic activities related to cultural heritage in Spain and to explore the feasibility of a cultural observatory for cultural heritage.	The study looks at the contribution of cultural heritage to the economy in terms of GVA and employment using available statistics. However, the methodology is based on data sources and data specific for Spain (which has a Satellite Account for Culture) thus it is difficult to replicate in the context of this study.
EHHF, 2016	The scope of the study is to collect economic indicators on immovable heritage in Flanders. Indicators include production (turnover; value added); expenditure (government; private donations); income (employment)	The methodology is based on a survey submitted to all Flemish building contractors asking, among others, how much of their activity is attributable to heritage-related works (e.g. % of turnover; % of employment / FTE). The methodology is very accurate but not replicable in the context of this study considering the timeframe, the resource and the scope (namely the number of sectors and countries/regions).
Ortus Economics, 2017	The scope of the study commissioned by Historic England was to create an interactive data workbook that evidences the impact of the heritage sector to regional and national economies in England.	The study considers direct, indirect and induced impacts. Data sources have been grouped into 5 broad themes: economy, workforce, tourism, property, public investment. A sixth theme was added: volunteering. However, the methodology is based on data sources and data specific for the UK which are not available at pan-European level, thus it is difficult to fully replicate it in the context of the study.

Source: elaboration of the service provider (2019)

¹⁰¹ Every employee working in a cultural sector should be considered, whether her/his occupation is cultural or not. Similarly, any cultural occupation should enter in the cultural employment statistics, even if exercised in non-cultural activities.

Based on the feasibility assessment considering data and time constraints for this study, the most promising methodology is the one used by Terje Nypan in Van Balen and Vandesande, 2015. The paper explores a methodological design to use available statistics (EUROSTAT) for reporting on indicators¹⁰² for economic and employment contributions of the physical cultural heritage to the economy. The methodology is based on previous studies notably the ESS-net Culture. The paper considers 4 economic sectors: construction, real estate, tourism and CCI. In the design, the author proposes to use 'Keys' to 'unlock' the statistical data and find the share related to material cultural heritage from available indicators in EUROSTAT. The 4 'Key' figures, one for each sector, are taken and adapted from available literature. The applicability of the 'Keys' to this study seems promising considering the current data availability and the specificity of each sector in the selected countries/regions.

¹⁰² The indicators are: A: % share of total gross value added (GVA) and the sum in €; B: % share of employment in the non-financial business economy and the sum of employed.

Annex VI – Complete database of the baseline data on MCH

The correspondent annex has been provided as a separate file. It includes the database of the baseline population of MCH in all the countries/regions as well as overview tables per country/region of the main categories and subcategories of MCH.

Annex VII – Regional distribution of MCH per country/region

The correspondent annex has been provided as a separate file. It includes overview tables per country/region with the regional distribution of MCH per category.

Annex VIII – Complete database of the socio-economic indicators

The correspondent annex has been provided as a separate file. It includes the database of the baseline population of MCH in all the countries/regions as well as overview tables per country/region of the main categories and subcategories of MCH.

Annex IX –Data analysis per sector/activity (Annex to Chapter 4)

4.2 Main sectors/activities

4.2.1 Archaeology

4.2.2.1 Methodology

As archaeology is fully related to heritage, the main indicators can be fully considered as MCH impacts and no coefficient is necessary for this activity. No NACE code exists for archaeology, and economic indicators relating to the activity are not collected in the same way by all National Statistical Institutes. Moreover, research studies and data on the economic contribution of archaeological activities to the economy are scarce. There is no harmonised data on the number of archaeologists or the number and nature of archaeological companies and other institutions. Furthermore, the profession of archaeologist is organised differently in each country/region. Archaeologists can be self-employed or working for private companies, public institutions, academic and research institutions or heritage organisations. Furthermore, the archaeological profession can be regulated requiring archaeological permits, monitored by issuing certificates or organised as an unregulated profession.

As there is no harmonised data on archaeology in national statistical institutes (NSIs), data for the selected indicators has been collected from reports of archaeology associations in the stakeholder countries/regions. Additionally, a good source of information is formed by the DISCO Project (Discovering the Archaeologists of Europe), which combines the perspective of archaeology associations and experts from several countries. This an EU-funded transnational project, examining archaeological employment and barriers to transnational mobility within archaeology across twenty-one European countries.¹⁰³ The disadvantage of this project is that it was conducted several years ago (the latest report was published in 2014); therefore, some of the information and data gathered by the project might have become outdated in the meantime. Moreover, the project does not cover Brussels and Sweden. However, as it provides a comparable overview of the archaeology profession in most of the countries/regions covered by this study, it forms one of the most important data sources for archaeology. Both the transnational 2012-2014 report and the nine individual country reports have been analysed. In all countries/regions, except for Romania, archaeology associations exist. In addition, there is an overarching Europe-wide association (see Table 4).

¹⁰³ <https://www.discovering-archaeologists.eu/>.

Table 4: Archaeology associations in the stakeholder countries/regions

Stakeholder country	Archaeological association
Austria	International Austrian Archaeology Forum (<i>Internationales Österreichisches Archaeologie Forum</i>)
Brussels	Royal Society of Archaeology of Brussels (<i>Société Royale d'Archéologie de Bruxelles</i>)
Europe-wide	European Association of Archaeologists (EEA)
Flanders	Flemish Entrepreneurs in Archaeology (<i>Vlaamse Ondernemers in Archeologie</i>)
Italy	National Association Archaeologists (<i>Associazione Nazionale Archeologi</i>)
Netherlands	Dutch Association of Archaeological Extraction Companies (<i>Nederlandse Vereniging van Archeologische Opgravingsbedrijven</i>)
Norway	Norwegian Archaeological Society (<i>Norsk Arkeologisk Selskap</i>)
Portugal	Portuguese Archaeologist Association (<i>Associação dos Arqueólogos Portugueses</i>)
Romania	-
Slovakia	Archaeology Institute (<i>Archeologický ústav SAV</i>)
Slovenia	Slovenian Archaeological Society (<i>Slovensko Arheološko Društvo</i>)
Sweden	Swedish Archaeological Society (<i>Svenska Arkeologiska Samfundet</i>)

Source: elaboration of the service provider (2019)

Seven interviews in six stakeholder countries/regions (Austria, Italy, Norway, Slovenia, Flanders and Sweden) have been carried out with either the organisations listed in Table 4 or with academic experts from the countries/regions to verify desk research findings and to supplement them with additional qualitative data and assessments. For Brussels, no data has been found. During interviews it has been confirmed that archaeology is a niche activity in Brussels and that its impact is minimal.¹⁰⁴

For the calculation of the number of active archaeologists, a specific approach has been suggested: to count the number of people with archaeological degrees and then cross this information with a database on economic professions to exclude those with archaeological degrees who are active in non-archaeological professions. This approach has proven effective to count the number of active archaeologists in Norway already. However, as this approach has proven to not be possible in all countries/regions covered by this study (e.g. the Netherlands, as confirmed by the NSI), this approach has not been further developed in this study. However, it has been included in **Error! Reference source not found.** as a possible approach to calculate the number of archaeologists in the future, provided that the necessary data is collected by all countries/regions.

The turnover of archaeological activities can be calculated in two ways: for independent archaeologists, the salaries can be used as a proxy as these salaries are the value they put on their own work. For archaeological companies and other institutions, salaries only form a part of their costs. Therefore, the total expenditure of these companies and institutions can be used as a proxy for their turnover. As there is no data available on the share of independent archaeologists and archaeologists employed by archaeological companies or other institutions,

¹⁰⁴ Interview with *Vlaamse Ondernemers in Archeologie* (30/11/2018).

the calculation to estimate the turnover of all archaeological activities has been made for two scenarios: if all archaeologists were independent and if all archaeologists were employed by archaeological companies or other institutions. Subsequently, the middle point between these two numbers has been taken as the estimation for the turnover of archaeological activities with an error margin of the difference between the two values.

The GVA of archaeological activities could be calculated by subtracting the costs of the intermediate consumption (total expenses) from the turnover. However, exact turnover figures would be required, while the turnover is now a proxy, which is partly based on the total expenses. Therefore, it has not been possible to calculate the GVA of archaeological activities within the context of this study.

4.2.1.2 Indicators and data

The DISCO Project provides the estimated number of archaeologists in 2014 based on surveys and estimates from national associations (see Table 5).

Table 5: Estimated number of archaeologists in stakeholder countries/regions, 2014

Stakeholder country/region	Estimated number of active archaeologists
Austria	1,219
Brussels	-
Flanders	483
Italy	4,383
Netherlands	1,335
Norway	641
Portugal	862
Romania	858
Slovakia	224
Slovenia	257
Sweden *	240
Total	10,502

Source: https://www.discovering-archaeologists.eu/national_reports/2014/transnational_report.pdf
 Data for Sweden in FTE, from: <https://tillvaxtverket.se/statistik/kulturella-och-kreativa-naringar/kreametern---statistik/foretagsekonomiska-matt.html>

The DISCO Project also provides the estimated average gross salary of archaeologists based on surveys and estimates from national associations (see Table 6). This data has been adjusted for inflation to provide estimates for 2017.

Table 6: Estimated average gross salary of archaeologists in stakeholder countries/regions

Stakeholder country/region	Estimated average gross salary of archaeologists (Thousands EUR), 2014	Estimated average gross salary of archaeologists (Thousands EUR), 2017
Austria	27,1	28.2
Brussels	-	-
Flanders	30.8	32.3
Italy	10.7	10.8
Netherlands	38.9	39.6
Norway	53.5	57.8
Portugal	12.5	12.8
Romania	7.0	7.0
Slovakia	9.3	9.3
Slovenia	19.3	19.4
Sweden *	28.4	29.6

Source: https://www.discovering-archaeologists.eu/national_reports/2014/transnational_report.pdf
 Estimate for Sweden: based on the average of the other countries, adjusted for Purchasing Power Parity, from Eurostat: Purchasing power parities (PPPs), price level indices and real expenditures for ESA 2010 aggregates [prc_ppp_ind]
 Inflation numbers from: Eurostat: HICP annual data (average index and rate of change) [prc_hicp_aind]

For Sweden and Flanders, data has been collected on the GVA of archaeological activities, see Table 7.

Table 7: GVA of archaeological activities (EUR million)

	Flanders	Sweden
2011	39.0	-
2013	-	8.1
2014	-	6.4
2015	-	7.8
2016	-	8.3

Sources:

Flanders: https://www.onroerendergoed.be/assets/files/projects/downloads/Indicatorenfiches_socio_economische_impact_OE_Vlaanderen.pdf

Sweden: <https://tillvaxtverket.se/statistik/kulturella-och-kreativa-naringar/kreametern---statistik/foretagsekonomiska-matt.html>

4.2.2 Architecture

4.2.2.1 Methodology

The relevant NACE code for architecture is M71.1.1 related to *architectural activities*. However, not all these activities are related to MCH. In the context of this study, pre-1919 dwellings and listed and protected buildings are considered as the categories of MCH having impacts in architectural activities (e.g. reconstruction and renovation projects).

Although many architects work with cultural heritage in one way or another at some point, there are also architects who are specialised in this kind of projects. When working with cultural heritage, the architect needs to have a thorough knowledge of architectural history, as well as of the relevant technology and materials. Specialised architects work together with people with diverse professional backgrounds. Architects also need to have good creative abilities in order to keep any changes or additions aligned with what is already built.¹⁰⁵

¹⁰⁵ Interview with Architects Sweden (17/10/2018).

No available or harmonised data has been found which isolates the share of architecture activities that relate to these categories of buildings. Therefore, this study has used a coefficient to isolate this share. The isolated impact has been calculated for pre-1919 dwellings. It has also been considered to separately calculate the impact from listed and protected buildings but because the number of listed and protected is marginal compared to pre-1919 dwellings, because a considerable overlap exists as well and lastly, because buildings is conceptually not the same as dwellings, the decision has been made to only consider pre-1919 dwellings. The coefficient that has been used to isolate the share that can be attributed to pre-1919 dwellings is:

$$\frac{\text{pre-1919 dwellings}}{\text{total number of dwellings}}$$

The Interim Report foresaw that this coefficient might have to be adjusted depending on the characteristics of conservation projects, such as the probability that conservation projects on pre-1919 dwellings involve architects. However, interviews with eleven sector organisations or sector experts from eight stakeholder countries/regions (Brussels, Flanders, the Netherlands, Norway, Romania, Slovakia, Slovenia, and Sweden) and at the EU-level suggest that there is no reason to adjust these coefficients. The estimations from these sector organisations and sector experts were in line with the estimates based on the coefficient, therefore, this coefficient has been used without adjustment for architecture.

4.2.2.2 Indicators and data

Data for the main indicators for architecture has been extracted from Eurostat for the years 2013-2016, see

Table 8, Table 9 and

Table 10.

Table 8: Number of employees (FTE) in architectural activities (NACE M71.1.1)

Stakeholder country/region	2013	2014	2015	2016
Austria	7,875	7,805	7,801	7,905
Brussels ¹⁰⁶	442	417	438	419
Flanders	1,691	1,597	1,699	1,634
Italy	2,978	2,275	2,114	2,056
Netherlands	8,746	8,072	7,166	7,426
Norway	4,630	4,658	4,607	4,690
Portugal	4,959	4,942	5,073	5,405
Romania	9,469	8,904	8,612	8,822
Slovakia	2,648	1,494	2,658	2,698

¹⁰⁶ For all three main indicators and both Brussels and Flanders: estimated based on the figure for all of Belgium multiplied by the share of Brussels/Flanders in the national number for all sectors.

Slovenia ¹⁰⁷	1,337	1,262	1,202	1,125
Sweden	6,855	7,121	7,527	8,068
Total	51,630	48,547	48,897	50,247

Source: Eurostat: Annual detailed enterprise statistics for services [sbs_na_1a_se_r2]

Table 9: Turnover (EUR million) in architectural activities (NACE M71.1.1)

Stakeholder country/region	2013	2014	2015	2016
Austria	1,738.5	1,698.5	1,704.2	1,718.6
Brussels	493.6	535.1	555.2	524.9
Flanders	1,067.6	1,141.0	1,142.5	1,130.9
Italy	2,657.9	2,518.7	2,635.9	2,589.4
Netherlands	1,004.6	1,017.5	997.8	1,122.1
Norway	845.2	804.7	785.5	785.9
Portugal	282.4	286.4	318.5	346.2
Romania	209.1	221.5	248.7	266.3
Slovakia	203.9	156.7	289.9	305.3
Slovenia	165.0	164.2	158.4	131.4
Sweden	934.3	908.7	967.6	1,093.6
Total	9,602.1	9,453.0	9,804.2	10,014.6

Source: Eurostat: Annual detailed enterprise statistics for services [sbs_na_1a_se_r2]

Table 10: Gross Value Added (EUR million) in architectural activities (NACE M71.1.1)

Stakeholder country/region	2013	2014	2015	2016
Austria	929.9	826.2	827.6	892.6
Brussels	139.5	132.9	145.6	155.5
Flanders	441.0	431.6	470.9	508.7
Italy	1,832.8	1,747.0	1,770.5	1,782.1
Netherlands	572.0	624.7	626.6	681.7
Norway	587.3	566.3	548.5	550.8
Portugal	121.6	127.9	143.2	157.7
Romania	97.6	104.7	141.8	116.8
Slovakia	53.4	62.2	111.6	128.5
Slovenia	50.7	43.7	58.1	49.8
Sweden	580.7	573.8	625.2	715.9
Total	5,406.5	5,240.9	5,469.7	5,740.1

Source: Eurostat: Annual detailed enterprise statistics for services [sbs_na_1a_se_r2]

The coefficients to calculate the share that can be attributed to MCH for all countries/regions are based on the baseline mappings of Material Cultural Heritage and presented in

Table 11. The coefficient for listed and protected buildings is just presented to inform but, as discussed before, it will not be used in the actual impact analysis.

Table 11: Coefficients to calculate the share of the main indicators for architectural activities that can be attributed to MCH, percentage

Stakeholder country/region	Coefficient for pre-1919 dwellings	Coefficient for listed and protected buildings
Austria	17.8%	0.8%
Brussels	31.7%	0.4%
Flanders	13.3%	0.2%
Italy	11.6%	0.6%
Netherlands	7.3%	0.3%
Norway	9.3%	0.1%
Portugal	4.3%	0.2%
Romania	3.4%	0.9%

¹⁰⁷ FTE is estimated based on the average ratio Number of employees/FTE of the other countries/regions covered by this study.

Slovakia	2.2%	2.9%
Slovenia	14.4%	2.2%
Sweden	7.6%	0.8%

Source: elaboration of the service provider (2019) based on national databases

4.2.2.3 Impact analysis

Table 12: Employees (FTE) in architectural activities (NACE M71.1.1), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Attributed to MCH				
Austria	1,403	1,391	1,390	1,408
Brussels	140	132	139	133
Flanders	225	212	226	217
Italy	344	263	244	238
Netherlands	641	591	525	544
Norway	431	434	429	437
Portugal	213	212	218	232
Romania	324	304	294	302
Slovakia	59	33	59	60
Slovenia	193	182	174	162
Sweden	520	540	571	612
Total	4,492	4,295	4,268	4,344

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 13: Turnover (EUR million) of architectural activities (NACE M71.1.1), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Attributed to Pre-1919 dwellings				
Austria	309.7	302.6	303.6	306.2
Brussels	156.5	169.7	176.1	166.4
Flanders	141.8	151.5	151.7	150.2
Italy	307.1	291.0	304.6	299.2
Netherlands	73.6	74.6	73.1	82.2
Norway	78.7	75.0	73.2	73.2
Portugal	12.1	12.3	13.7	14.9
Romania	7.1	7.6	8.5	9.1
Slovakia	4.5	3.5	6.4	6.8
Slovenia	23.8	23.7	22.9	19.0
Sweden	70.9	68.9	73.4	82.9
Total	1,185.9	1,180.3	1,207.1	1,210.0

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 14: Gross Value Added (EUR million) of architectural activities (NACE M71.1.1), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Attributed to Pre-1919 dwellings				
Austria	165.7	147.2	147.4	159.0
Brussels	44.2	42.1	46.2	49.3
Flanders	58.6	57.3	62.5	67.5
Italy	211.8	201.9	204.6	205.9
Netherlands	41.9	45.8	45.9	49.9
Norway	54.7	52.8	51.1	51.3
Portugal	5.2	5.5	6.1	6.8
Romania	3.3	3.6	4.8	4.0
Slovakia	1.2	1.4	2.5	2.8
Slovenia	7.3	6.3	8.4	7.2
Sweden	44.0	43.5	47.4	54.3
Total	637.9	607.3	627.0	658.1

Source: elaboration of the service provider (2019) based on national databases and Eurostat

4.2.3 Museums, libraries and archives activities

4.2.3.1 Methodology

As all activities of museums, libraries and archives can be related to MCH, the economic indicators can be fully considered as related impacts. Hence, assessing the economic relevance of these activities does not require any additional estimations or coefficients.

However, relevant data for these activities is scarce and cannot be estimated using proxies. The best source of information for museums is formed by the EGMUS (The European Group on Museum Statistics) database. This group was established in 2002 and counts 30 European countries at present. The main objective of the group is to collect and to publish comparable statistical data on museums. The data comes from national museum statistics and surveys and is compiled, updated and stored in the so-called Abridged List of Key Museum Indicators (ALOKMI) table. The ALOKMI table can be considered a first step towards the harmonisation of museum statistics in Europe. The EGMUS database covers all the stakeholder countries (Belgium is covered as a whole and does not separate for Brussels and Flanders), but the most recent year for which data is available depends on the country (ranging from 2004 to 2017 for the stakeholder countries/regions).¹⁰⁸

4.2.3.2 Indicators and data

As mentioned before, data on the museums, libraries and archives activities is scarce, especially data on turnover and GVA is missing. Table 15 shows the number of museums, libraries and archives in the covered countries.

Table 15: Number of Museums, libraries and archives

	Museums	Libraries	Archives
Austria	747	1,387	94
Brussels	69	255	8
Flanders		466	27
Italy	4,261	13,925	132
Netherlands	688	170	293
Norway	140	675	30
Portugal	1,454	2,868	36
Romania	762	9,584	42
Slovakia	155	1,857	39
Slovenia	369	113	10
Sweden	755	2,223	13
Total	9,400	33,523	724

Source: national databases

In 2017, there were about 173,000 people employed in libraries, archives, museums and other cultural activities (NACE R91), see Table 16. Data on employment in FTE has not been found.

¹⁰⁸ <https://www.egmus.eu/> (consulted 05/03/2019).

Table 16: Employment in libraries, archives, museums and other cultural activities (NACE R91), in thousand persons employed

	2013	2014	2015	2016	2017
Austria	7.9	9.8	9.3	9.3	11.4
Belgium	13	14.4	15.3	16.1	15.7
Italy	52.4	55.5	56.4	56.2	51.5
Netherlands	22.8	23	24.3	23.9	22.6
Norway	8.6	8.4	8.3	8.7	8.4
Portugal	8.8	12.1	12.4	11.6	11.3
Romania	9.2	8.6	9.3	11.9	14.5
Slovakia	6.6	7.1	7.0	5.3	8.1
Slovenia	5.2	5.2	4.7	3.9	4.3
Sweden	20.7	21.7	20.6	22.7	24.8
Total	155.2	165.8	167.6	169.6	172.6

Source: Eurostat - Cultural employment by NACE Rev. 2 activity [cult_emp_n2]

Data on turnover is limited and available only for Italy, Norway, Portugal and Sweden, see Table 17. Data on GVA is available only for Austria, Brussels, Italy, and Portugal and Sweden, see Table 18.

Table 17: Turnover of museums, library and archives activities (EUR million)

	2013	2014	2015	2016
Italy	494.7	497.1	553.8	-
Norway	119.4	109.3	125.4	130.2
Portugal	54.3	30.4	34.2	33.6
Sweden	93.8	92.4	91.5	85.3

Source: national databases

Table 18: GVA of Museums, library and archives activities (EUR million)

	2013	2014	2015	2016
Austria	5.7	6.0	6.2	-
Brussels	62.3	61.7	62.6	63.8
Italy	302.3	300.1	320.3	-
Portugal	24.3	16.9	14.2	10.8
Sweden	30.4	35.5	34.4	38.8

Source: national databases

Additionally, the EGMUS database collects comparable information for museums in several countries. Table 19 shows the turnover of museums for the countries and years available in the database.

Table 19: Turnover of museums (EUR million)

	2013	2014	2015	2016	2017
Austria	-	338.8	-	346.0	-
Brussels	-	-	-	-	-
Flanders	-	21.6	21.7	22.1	22.6
Italy	125.8	-	-	191.4	193.9
Netherlands	878.0	909.0	1,053.0	1,055.0	-
Norway	417.4	440.1	475.9	489.1	476.8
Portugal	19.8	14.7	17.7	18.0	-
Romania	-	-	-	-	-
Slovenia	49.9	49.2	51.0	46.4	50.8
Slovakia	-	-	-	62.5	64.8
Sweden	54.3	57.2	60.4	54.2	-

Source: EGMUS database

4.2.4 Tourism

4.2.4.1 Methodology

Expenditure of tourists is the key element that should be considered to estimate the impact of MCH on the sector. Tourists spend money on local activities, primarily restaurants and accommodation facilities (ancillary spending). Hence, the main impact of tourism is on the accommodation sector (NACE code I55) and restaurants and food service activities (NACE code I56). However, not all tourists' expenditure is necessarily a product of MCH consumption, as it might be linked to other activities or travel purposes (e.g. family visits or business travels). Therefore, the total spending on these activities needs to be linked to tourist travelling to consume MCH or activities linked to MCH.

Ideally, statistics on tourists travelling to consume MCH and their spending on the different sectors would be needed. However, this data is rarely available. National statistics vary greatly, usually only providing the total number of tourists and their expenditure without classifying the tourists in different categories. In some cases, the expenditure is broken down in categories (e.g. accommodation, food and drinks, cultural activities, etc.). However, these statistics are rarely linked to the travel purpose (e.g. travelling for cultural reasons or leisure purposes) and when this is the case, the definitions used are broader than the mere consumption of MCH. Hence, proxies have been used to isolate the share of expenditure that can be related to MCH.

The number of cultural tourists could be used as a proxy to isolate the spending of tourists travelling to consume MCH. However, only very few countries have statistics on the number of cultural tourists and definitions used are not uniform. In Norway, the definition used changed over time and, in 2018, it was based on the importance that certain activities had had for the respondents (e.g. 'visit museums', 'experience festivals, national celebrations and national events', 'go to theatre, ballet, concerts or opera performances', etc.).¹⁰⁹ In Italy, statistics collected by *Banca d'Italia* define cultural tourist as travellers who visit *cittá d'arte* (cities of recognised heritage and cultural value). These statistics thus consider activities not necessarily linked to the consumption of MCH (such as going to a ballet or a concert).

Alternatively, Eurostat provides comparable statistics for all stakeholder countries/regions on tourist expenditure on transport, accommodation, food and drinks in cafés or restaurants, and other expenditure distinguishing by travel purpose. In particular, it considers the following categories:

¹⁰⁹ Source: Innovation Norway.

- Professional, business;
- Holidays, leisure and recreation;
- Visits to friends and relatives; and
- Other personal reasons.¹¹⁰

The share of expenditure made by tourists travelling for holidays, leisure and recreation can be used to exclude the spending of people whose main reason for travelling does not include consuming MCH. Of course, this approach has a clear limitation. Not necessarily all people travelling for business purposes do not consume heritage, and not all of people travelling for holidays, leisure and recreation purposes do so in order to consume MCH. There is no data available on activities of travellers, hindering the possibility to further refine the number of tourists consuming heritage. With regards to business tourists consuming MCH, given the purpose and scope of the study, the focus here is on those tourists whose main reason for travelling was to consume MCH (or, as a proxy in this case, for leisure).

Once the expenditure of leisure tourists in the different sectors (accommodation and food and beverages service activities) has been estimated, it has been used as a proxy to isolate the share of the turnover of the relevant sectors or activities that can be related to MCH. Employment due to tourist expenditure has been estimated by dividing the expenditure by the turnover per FTE.

Calculating the share of GVA due to MCH is more complex due to the lack of relevant data. In order to correctly isolate the share of GVA related to MCH tourism, it would be necessary to know whether services offered to tourists travelling to consume MCH are more expensive compared to those offered to other travellers and vice versa, or whether the related costs for companies are higher. However, this information is not available. Therefore, it is assumed that these elements are similar between the different categories of tourists, so that the share of turnover that is estimated as attributed to MCH tourism can also be used to isolate the impact on GVA.

4.2.4.2 Indicators and data

As Table 20 indicates, over the past few years, the number of tourists increased constantly in the countries/regions covered by the study reaching more than 300 million in 2017.

¹¹⁰ The dataset does not segment the expenditure by category (e.g. transport or accommodation) but only provides total expenditure.

Table 20: Number of tourists (in million persons)

	2013	2014	2015	2016	2017
Austria	32.9	33.6	35.4	37.1	38.6
Brussels	3.3	3.4	6.4	5.2	6.3
Flanders	7.9	8.2	9.0	7.3	8.9
Italy	103.9	106.6	113.4	116.9	122.7
Netherlands	34.1	35.9	37.3	38.9	42.2
Norway	12.6	12.7	13.3	14.1	14.8
Portugal	12.6	13.9	15.5	19.1	16.2
Romania	7.9	8.5	9.9	11.0	12.1
Slovakia	4.0	3.7	4.3	4.9	5.3
Slovenia	3.4	3.5	3.9	4.3	4.9
Sweden	24.6	25.9	28.1	29.1	29.9
Total	247.2	255.8	276.5	287.9	301.9

Source: national databases and Eurostat: Arrivals at tourist accommodation establishments by NUTS 2 regions [tour_occ_am2]

Table 21 provides an overview of total tourist expenditure by country/region and year.

Table 21: Tourists' spending (EUR million)

	2013	2014	2015	2016	2017
Austria	36,790.0	37,715.0	38,742.0	40,062.0	41,494.0
Brussels	2,737.7	3,011.1	3,055.7	2,569.3	3,220.5
Flanders	6,120.7	6,617.4	8,412.7	6,881.6	9,311.6
Italy	39,274.2	37,876.1	40,907.3	43,569.9	54,074.5
Netherlands	15,101.7	14,855.6	14,940.7	16,062.0	21,470.4
Norway	6,086.2	4,844.0	5,699.3	7,539.6	9,216.0
Portugal	3,326.9	3,736.3	4,024.9	4,970.2	5,019.6
Romania	1,868.4	1,868.3	1,976.7	2,167.5	2,424.8
Slovakia	1,774.5	1,81.0	2,263.0	2,315.7	2,736.8
Slovenia	823.0	896.1	920.5	1,045.8	1,287.3
Sweden	24,481.1	25,469.5	26,821.5	28,669.9	30,786.7
Total	138,385	138,706	147,764	155,835	181,043

Source: national databases and Eurostat: Expenditure by purpose [tour_dem_expur]

As mentioned before, Eurostat provides the shares of tourist expenditure by travel purpose.

Table 22 provides the share of expenses made by those tourists travelling for holidays, leisure and recreation purposes.

Table 22: Share of expenditure done by tourists travelling for holidays, leisure and recreation purposes, percentage

	2013	2014	2015	2016	2017
Austria	70	69	70	69	70
Belgium	90	93	88	87	89
Italy	67	69	71	72	72
Netherlands	79	81	83	81	65
Norway	44	39	40	40	36
Portugal	63	60	58	60	62
Romania	62	60	64	65	65
Slovakia	61	56	59	58	65
Slovenia	65	71	70	71	69
Sweden	40	40	45	41	29

Source: Eurostat: Expenditure by purpose [tour_dem_expur]

Innovation Norway runs a survey in order to identify activities of tourists, allowing to isolate for cultural tourists.¹¹¹ It reports that, on average, about 30% of domestic tourists and 60% of foreign tourists can be considered cultural tourists. Out of these, about 75% have visited an historic building or place, hence actively consuming MCH. As shown in Table 23, in 2017 an estimated 4.2 million tourists consumed MCH for an estimated EUR 2.6 billion of spending. This represents about 30% of the total number of tourists and their spending. Compared to Eurostat data, the resulting figures are substantially lower (around two third of the Eurostat figure in terms of spending of leisure tourists, see **Error! Reference source not found.**). The difference can be explained by the fact that the Norwegian survey only considers tourists actively consuming MCH, while the Eurostat data considers all leisure tourists, which is a larger group. However, the fact that the difference is not that big (the Norwegian figure is around two third of the Eurostat figure), seems to suggest that a large part of the leisure tourists is actively consuming MCH, or at least that the coefficients used in this study is accurate.

Table 23: Number of tourists that have consumed MCH in Norway and their spending

Year	Number of tourists (in million persons)	Share of cultural tourists (percent age)	Number of cultural tourists (in million persons)	Number of tourists that consumed MCH (in million persons)	Average spending (EUR)	Total spending of tourists that consumed MCH (EUR million)
Domestic tourists						
2013	9.5	30	2.8	2.1	473	1,008.9
2014	9.4	32	3.0	2.3	375	849.7
2015	9.7	30	2.9	2.2	424	925.0
2016	10.0	29	2.9	2.2	531	1,157.3
2017	10.6	30	3.2	2.4	613	1,462.3
Foreign tourists						
2013	3.2	62	2.0	1.5	506	745.1
2014	3.2	59	1.9	1.4	402	576.8
2015	3.6	58	2.1	1.6	440	690.9
2016	4.1	57	2.3	1.7	546	944.3
2017	4.2	57	2.4	1.8	651	1,161.4
Total tourists						
2013	12.6		4.8	3.6		1,754.0
2014	12.7		4.9	3.7		1,426.5
2015	13.3		5.0	3.8		1,615.9
2016	14.0		5.2	3.9		2,101.5
2017	14.8		5.6	4.2		2,623.7

Source: data provided by Innovation Norway

Sweden has a similar survey for foreign tourists. The reliability of the results of these surveys also depends on the way the questions are asked; for instance, whether the options tourists can answer are mutually exclusive or not; this makes it impossible to say which of the activities

¹¹¹ The definition used for cultural tourists is: holidaymakers who have stated that at least two of the following activities have "small", "something", "big" or "decisive" significance for their journey to Norway: experience local history and legends, experience local culture and way of life, experience traditions and national parties, visit historic buildings/locations, visit museums and experience modern art.

actually attracted the tourists in case. Therefore, more research is needed here. For Brussels and Flanders, a biannual report provides figures on expenditure of recreational tourists, see

Table 24.¹¹²

Table 24: Expenditure of tourists travelling to Brussels and Flanders for leisure (in EUR million)

	2014		2016	
	National data	Eurostat	National data	Eurostat
Brussels	954	2,809	898	2,232
Flanders	3,718	6,174	3,858	5,978

Source: national databases and Eurostat

As emerges from

Table 24, the difference between national figures and those calculated based on Eurostat data is substantial. The difference can be explained by the different methodologies followed to collect this data. For the purpose of this study, where available, national data is prioritised over Eurostat data. However, in order to develop comparable national data, a common methodology should be developed to ensure that the same categories of spending and similar data collection tools are used.

Data on the average share of spending in accommodation and food and beverages by tourists travelling for leisure is available for several countries that run specific surveys to identify tourists' expenditure (both domestic and foreign tourists), see

Table 25.

Table 25: Average share of spending in accommodation and food and beverages for tourists travelling for leisure, percentage

	Accommodation	Food and drinks
Austria	28	28
Brussels	17	31
Flanders	22	28
Italy	36	19
Norway	-	30
Slovenia	46	18
Average	30	26

Source: national databases

Table 26 provides available figures for the accommodation and food service activities (NACE code I).

¹¹² The category of recreational tourists is a rest category after all business tourists (tourists traveling for meetings, incentives, conferences and events and tourists traveling for other professional purposes) have been removed from the total number of tourists.

Table 26: Turnover, GVA and FTE of accommodation and food service activities sector (NACE I)

	Austria	Brussels¹¹³	Flanders	Italy	Netherlands	Norway	Portugal	Romania	Slovakia	Slovenia¹¹⁴	Sweden	Total
Turnover (EUR million)												
2013	15,421.4	2,650.2	7,038.7	69,305.3	19,803.0	6,957.7	4,001.7	2,350.3	2,061.5	1,596.3	11,470.7	142,656.9
2014	15,845.8	2,800.6	7,424.8	71,642.1	20,861.8	7,255.2	5,261.8	2,594.3	2,081.9	1,581.3	12,090.8	149,440.5
2015	16,658.7	2,889.0	7,784.1	76,176.7	22,517.6	7,598.0	6,423.1	3,256.7	2,183.1	1,642.6	13,062.7	160,192.2
2016	17,719.9	2,883.9	8,103.8	79,542.4	24,171.1	8,045.6	8,577.7	3,777.5	2,464.9	1,794.8	14,110.8	171,192.4
2017	18,114.8	2,451.6	8,625.2	80,657.1	24,482.6	8,192.7	8,710.6	3,818.3	2,499.1	1,822.7	14,373.1	173,747.7
GVA (EUR million)												
2013	7,540.4	1,303.0	3,691.6	26,530.2	8,727.9	3,515.9	2,639.8	715.4	393.7	555.9	4,888.3	52,292.4
2014	7,679.9	1,365.0	3,919.6	27,455.0	9,237.3	3,699.9	2,799.6	923.2	315.4	582.3	5,230.1	55,305.9
2015	8,208.8	1,383.0	4,062.8	29,203.7	10,052.0	3,898.8	3,159.5	1,099.2	358.9	623.1	5,817.6	89,070.2
2016	8,804.3	1,344.0	4,260.0	31,165.1	10,559.9	4,130.8	3,563.0	1,356.3	389.5	704.8	6,358.3	64,113.6
Employment (FTE)												
2013	165,360	14,427	34,833	455,898	162,123	45,337	141,355	111,807	77,669	17,709	116,088	1,342,606
2014	168,216	14,626	35,463	391,310	169,374	48,124	147,799	110,679	73,003	17,241	120,697	1,296,532
2015	171,549	14,947	36,554	406,608	143,925	48,731	159,209	120,352	82,726	16,939	127,069	1,328,609
2016	176,031	15,711	39,385	417,811	153,717	58,511	174,820	129,208	84,064	17,855	138,928	1,406,041
Turnover per FTE (EUR)												
2013	93,259.4	183,699.2	202,068.9	152,019.3	122,148.0	153,467.0	28,309.5	21,021.2	26,542.5	90,140.6	98,810.7	106,253.7
2014	94,199.1	191,480.9	209,367.2	183,082.7	123,170.0	150,761.4	35,600.8	23,440.2	28,518.3	91,719.4	100,174.5	115,261.7
2015	97,107.6	193,278.5	212,948.6	187,346.8	156,453.7	155,918.1	40,343.7	27,059.6	26,389.5	96,972.0	102,800.0	120,571.4
2016	100,663.7	183,559.1	205,761.2	190,378.9	157,244.2	137,505.3	49,065.7	29,235.7	29,322.2	100,521.2	101,569.0	121,755.0

Source: Eurostat: Annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2) [sbs_sc_sca_r2]

¹¹³ For all three main indicators and both Brussels and Flanders: estimated based on the figure for all of Belgium multiplied by the share of Brussels/Flanders in the national number for all sectors.

¹¹⁴ As data on FTE was not available for Slovenia, FTE is estimated based on the average ratio number of employees/FTE of other countries considered.

4.2.4.3 Impact analysis

Table 27: Estimated leisure tourists spending in accommodation and food and beverage service activities (tourists travelling for leisure) and contribution to sector turnover (EUR million)

	Austria	Brussels	Flanders	Italy	Netherlands	Norway	Portugal	Romania	Slovakia	Slovenia	Sweden	Total
2013												
Estimated impact	7,665.9	390.7	1,728.9	14,570.9	7,558.7	1,048.8	1,157.9	642.5	605.1	341.5	5,444.2	41,155.2
Sector turnover	15,421.4	2,650.2	7,038.7	69,305.3	19,803.0	6,957.7	4,001.7	2,350.3	2,061.5	1,596.3	11,470.7	142,656.9
Share of sector turnover	49.7%	14.7%	24.6%	21.0%	38.2%	15.1%	28.9%	27.3%	29.4%	21.4%	47.5%	28.8%
2014												
Estimated impact	7,649.8	443.6	1,823.3	14,619.7	7,502.2	853.0	1,252.7	627.2	569.3	410.6	5,702.1	41,453.4
Sector turnover	15,845.8	2,800.6	7,424.8	71,642.1	20,861.8	7,255.2	5,261.8	2,594.3	2,081.9	1,581.3	12,090.8	149,440.5
Share of sector turnover	48.3%	15.8%	24.6%	20.4%	36.0%	11.8%	23.8%	24.2%	27.3%	26.0%	47.2%	27.7%
2015												
Estimated impact	7,537.9	487.6	2,371.1	16,177.2	7,590.4	966.3	1,301.3	704.6	743.6	411.5	6,696.8	44,988.4
Sector turnover	16,659	2,889	7,784	76,177	22,518	7,598	6,423	3,257	2,183	1,643	13,063	160,192
Share of sector turnover	45.2%	16.9%	30.5%	21.2%	33.7%	12.7%	20.3%	21.6%	34.1%	25.1%	51.3%	28.1%
2016												
Estimated impact	8,154.9	403.7	1,983.1	17,445.1	8,024.7	1,256.7	1,651.6	782.9	747.2	478.4	6,582.6	47,510.8
Sector turnover	17,720	2,884	8,104	79,542	24,171	8,046	8,578	3,777	2,465	1,795	14,111	171,192
Share of sector turnover	46.0%	14.0%	24.5%	21.9%	33.2%	15.6%	19.3%	20.7%	30.3%	26.7%	46.6%	27.8%
2017												
Estimated impact	8,295.9	579.5	2,573.2	21,651.0	10,307.7	1,568.9	1,738.9	872.8	985.0	567.0	4,889.0	54,029.0
Sector turnover	18,114.8	2,451.6	8,625.2	80,657.1	24,482.6	8,192.7	8,710.6	3,818.3	2,499.1	1,822.7	14,373.1	173,747.7
Share of sector turnover	45.8%	23.6%	29.8%	26.8%	42.1%	19.2%	20.0%	22.9%	39.4%	31.1%	34.0%	31.1%

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 28: Estimated impact of leisure tourism on sector GVA (EUR million)

	Austria	Brussels	Flanders	Italy	Netherlands	Norway	Portugal	Romania	Slovakia	Slovenia	Sweden	Total
2013												
Total GVA	7,540.4	1,303.0	3,691.6	26,530.2	8,727.9	3,515.9	2,639.8	715.4	393.7	555.9	4,888.3	60,502.1
% of total turnover due to leisure tourism	49.7%	14.7%	24.6%	21.0%	38.2%	15.1%	28.9%	27.3%	29.4%	21.4%	47.5%	29.4%
GVA due to leisure tourists	3,748.3	192.1	906.8	5,577.8	3,331.4	530.0	763.8	195.6	115.6	118.9	2,320.1	17,800.3
2014												
Total GVA	7,679.9	1,365.0	3,919.6	27,445.0	9,237.3	3,699.9	2,799.6	923.2	315.4	582.3	5,230.1	63,197.4
% of total turnover due to leisure tourism	48.3%	15.8%	24.6%	20.4%	36.0%	11.8%	23.8%	24.2%	27.3%	26.0%	47.2%	28.2%
GVA due to leisure tourists	3,707.6	216.2	962.5	5,600.6	3,321.9	435.0	666.5	223.2	86.2	151.2	2,466.6	17,837.5
2015												
Total GVA	8,208.8	1,383.0	4,062.8	29,203.7	10,052.0	3,898.8	3,159.5	1,099.2	358.9	623.1	5,817.6	67,867.4
% of total turnover due to leisure tourism	45.2%	16.9%	30.5%	21.2%	33.7%	12.7%	20.3%	21.6%	34.1%	25.1%	51.3%	28.6%
GVA due to leisure tourists	3,714.4	233.4	1,237.6	6,201.8	3,388.4	495.8	640.1	237.8	122.3	156.1	2,982.5	19,410.2
2016												
Total GVA	8,804.3	1,344.0	4,260.0	31,165.1	10,559.9	4,130.8	3,563.0	1,356.3	389.5	704.8	6,358.3	72,636.1
% of total turnover due to leisure tourism	46.0%	14.0%	24.5%	21.9%	33.2%	15.6%	19.3%	20.7%	30.3%	26.7%	46.6%	28.2%
GVA due to leisure tourists	4,051.9	188.2	1,042.5	6,835.1	3,505.8	645.2	686.0	281.1	118.1	187.9	2,966.1	20,507.8

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 29: Estimated leisure tourism contribution to employment (FTE) in accommodation and food and beverage service activities

	Austria	Brussels	Flanders	Italy	Netherlands	Norway	Portugal	Romania	Slovakia	Slovenia	Sweden	Total
2013												
Estimated impact (EUR million)	7,665.9	390.7	1,728.9	14,570.9	7,558.7	1,048.8	1,157.9	642.5	605.1	341.5	5,444.2	41,155.2
Turnover per FTE (EUR)	93,259.4	83,699.2	202,068.9	52,019.3	122,148.0	53,467.0	28,309.5	21,021.2	26,542.5	90,140.6	98,810.7	
Estimated FTE	82,200	2,127	8,556	95,849	61,881	6,834	40,901	30,565	22,798	3,789	55,097	410,597
Total FTE	165,360	14,427	34,833	455,898	162,123	45,337	141,355	111,807	77,669	17,709	116,088	1,342,606
Share of sector FTE	49.7%	14.7%	24.6%	21.0%	38.2%	15.1%	28.9%	27.3%	29.4%	21.4%	47.5%	30.6%
2014												
Estimated impact (EUR million)	7,649.8	443.6	1,823.3	14,619.7	7,502.2	853.0	1,252.7	627.2	569.3	410.6	5,702.1	41,453.4
Turnover per FTE (EUR)	94,199.1	191,480.9	209,367.2	183,082.7	123,170.0	150,761.4	35,600.8	23,440.2	28,518.3	91,719.4	100,174.5	
Estimated FTE	81,209	2,317	8,708	79,853	60,909	5,658	35,187	26,758	19,961	4,476	56,922	381,959
Total FTE	168,216	14,626	35,463	391,310	169,374	48,124	147,799	110,679	73,003	17,241	120,697	1,296,532
Share of sector FTE	48.3%	15.8%	24.6%	20.4%	36.0%	11.8%	23.8%	24.2%	27.3%	26.0%	47.2%	29.5%
2015												
Estimated impact (EUR million)	7,537.9	487.6	2,371.1	16,177.2	7,590.4	966.3	1,301.3	704.6	743.6	411.5	6,696.8	44,988.4
Turnover per FTE (EUR)	97,107.6	193,278.5	12,948.6	187,346.8	156,453.7	155,918.1	40,343.7	27,059.6	26,389.5	96,972.0	102,800.0	
Estimated FTE	77,624	2,523	11,135	86,349	48,516	6,197	32,255	26,040	28,180	4,244	65,144	388,206
Total FTE	171,549	14,947	36,554	406,608	143,925	48,731	159,209	120,352	82,726	16,939	127,069	1,328,609
Share of sector FTE	45.2%	16.9%	30.5%	21.2%	33.7%	12.7%	20.3%	21.6%	34.1%	25.1%	51.3%	29.2%
2016												
Estimated impact (EUR million)	8,154.9	403.7	1,983.1	17,445.1	8,024.7	1,256.7	1,651.6	782.9	747.2	478.4	6,582.6	47,510.8
Turnover per FTE (EUR)	100,663.7	183,559.1	205,761.2	190,378.9	157,244.2	137,505.3	49,065.7	29,235.7	29,322.2	100,521.2	101,569.0	
Estimated FTE	81,011	2,200	9,638	91,634	51,033	9,139	33,660	26,778	25,481	4,759	64,810	400,142
Total FTE	176,031	15,711	39,385	417,811	153,717	58,511	174,820	129,208	84,064	17,855	138,928	1,406,041
Share of sector FTE	46.0%	14.0%	24.5%	21.9%	33.2%	15.6%	19.3%	20.7%	30.3%	26.7%	46.6%	28.5%

Source: elaboration of the service provider (2019) based on national databases and Eurostat

4.2.5 Construction

4.2.5.1 Methodology

For the purpose of this study, only one of the three subsectors of construction has been included in the analysis: specialised construction activities (NACE Code F43), as this is the only sector where MCH is considered to have an impact. NUTS 0 (national) data has been extracted from Eurostat for this NACE code for all countries/regions to ensure comparability and this data has been used for the impact analysis for the three main indicators in all countries/regions during the years 2013-2016.

The impact of MCH on the construction sector is similar to the impact it has on the architecture sector, as the activities of architects and construction are also similar. Like for architecture, construction activities are related to pre-1919 dwellings and listed and protected buildings. However, no available or harmonised data has been found which isolates the share of construction activities that relate to these categories of buildings. Therefore, this study has used coefficients to isolate this share; these are the same coefficients that have been used for architecture.

The Interim Report foresaw that these coefficients might have to be adjusted depending on the average cost of restoration activities, the estimated investment in restoration activities on pre-1919 dwellings and/or the characteristics of restoration works on heritage buildings. However, based on interviews with fifteen sector organisations or sector experts from nine stakeholder countries/regions (Austria, Flanders, the Netherlands, Italy, Norway, Portugal, Romania, Slovenia, and Sweden) and at the EU-level, no clear reason has been distinguished to adjust these coefficients. Moreover, the estimations provided by the interviewees were in line with the estimates based on the coefficients. Therefore, these coefficients have been used without adjustment for construction.

4.2.5.2 Indicators and data

Data for the three main indicators for construction has been extracted for all the countries/regions for the years 2013-2016, see Table 30, Table 31 and Table 32.

Table 30: Employees (FTE) in construction (NACE F43)

Stakeholder country/region	2013	2014	2015	2016
Austria	152,090	154,846	153,096	155,784
Brussels ¹¹⁵	15,509	15,715	15,572	15,546
Flanders	59,289	60,162	60,423	60,649
Italy	432,828	390,580	389,593	397,452
Netherlands	162,013	152,474	153,501	153,342
Norway	99,472	100,815	100,080	103,235
Portugal	84,992	83,002	84,989	88,988
Romania	116,677	111,150	111,889	113,860
Slovakia	29,451	32,697	32,620	34,060
Slovenia ¹¹⁶	24,996	25,131	25,924	25,868
Sweden	179,977	186,471	193,880	202,214
Total	1,357,294	1,313,044	1,321,567	1,350,998

Source: Eurostat: Annual detailed enterprise statistics for construction [sbs_na_con_r2]

Table 31: Turnover (EUR million) in construction (NACE F43)

Stakeholder country/region	2013	2014	2015	2016	2017
Austria	21,982.5	22,206.7	22,264.4	23,097.8	23,975.5
Brussels	6,224.4	6,664.0	7,231.6	7,489.7	7,875.5
Flanders	13,463.8	14,210.6	14,880.6	16,136.9	16,563.7
Italy	86,160.7	88,327.7	81,523.8	81,228.8	81,240.8
Netherlands	33,728.4	33,753.5	35,718.5	38,050.1	39,441.9
Norway	22,668.7	22,443.7	21,434.0	21,862.4	23,168.7
Portugal	4,824.6	4,856.5	4,984.0	5,055.0	5,563.2
Romania	4,017.3	3,723.4	4,478.5	4,206.5	4,615.5
Slovakia	2,739.7	3,428.1	3,842.8	3,952.4	4,455.5
Slovenia	2,144.6	2,226.6	2,211.6	2,279.3	2,561.1
Sweden	32,349.9	32,744.9	35,305.4	36,835.5	39,666.8
Total	230,304.5	234,585.6	233,875.2	240,194.4	249,128.2

Source: Eurostat: Annual detailed enterprise statistics for construction [sbs_na_con_r2]

Table 32: Gross Value Added (EUR million) in construction (NACE F43)

Stakeholder country/region	2013	2014	2015	2016
Austria	8,973.8	9,038.1	9,280.0	9,779.1
Brussels	1,584.1	1,651.7	1,660.0	1,756.2
Flanders	5,009.6	5,364.1	5,368.2	5,746.2
Italy	30,231.6	29,400.3	29,880.9	30,674.9
Netherlands	12,723.4	12,797.2	13,095.7	13,957.8
Norway	9,477.2	9,372.4	9,000.3	9,031.3
Portugal	1,785.8	1,836.3	1,890.6	1,975.0
Romania	1,025.6	1,071.5	1,139.3	1,288.0
Slovakia	830.1	936.6	1,010.0	1,048.1
Slovenia	682.8	728.2	739.7	778.9
Sweden	12,836.5	13,067.0	13,770.3	14,511.9
Total	85,160.5	85,263.4	86,835.0	90,547.4

Source: Eurostat: Annual detailed enterprise statistics for construction [sbs_na_con_r2]

The coefficients to calculate the share that can be attributed to MCH for all countries/regions are based on the baseline mappings of Material Cultural Heritage and the same as for architecture (see Table 11).

¹¹⁵ For all three main indicators and both Brussels and Flanders: estimated based on the figure for all of Belgium multiplied by the share of Brussels/Flanders in the national number for all sectors.

¹¹⁶ FTE is estimated based on the average ratio Number of employees/FTE of other countries considered.

4.2.5.3 Impact analysis

Table 33: Employees (FTE) in the construction sector (NACE F43), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	27,096	27,587	27,275	27,754
Brussels	4,918	4,983	4,938	4,930
Flanders	7,872	7,988	8,023	8,053
Italy	50,010	45,128	45,014	45,922
Netherlands	11,871	11,172	11,247	11,236
Norway	9,268	9,393	9,324	9,618
Portugal	3,650	3,564	3,650	3,821
Romania	3,988	3,799	3,824	3,892
Slovakia	653	725	723	755
Slovenia	3,609	3,629	3,743	3,735
Sweden	13,648	14,141	14,703	15,335
Total	136,582	132,108	132,464	135,050

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 34: Turnover (EUR million) of the construction sector (NACE F43), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016	2017
Austria	3,916.3	3,956.3	3,966.5	4,115.0	4,271.4
Brussels	1,973.8	2,113.2	2,293.2	2,375.0	2,497.3
Flanders	1,787.6	1,886.8	1,975.8	2,142.6	2,199.2
Italy	9,955.2	10,205.6	9,419.4	9,385.3	9,386.7
Netherlands	2,471.3	2,473.2	2,617.1	2,788.0	2,890.0
Norway	2,112.0	2,091.0	1,996.9	2,036.9	2,158.6
Portugal	207.2	208.5	214.0	217.1	238.9
Romania	137.3	127.3	153.1	143.8	157.8
Slovakia	60.7	76.0	85.2	87.6	98.7
Slovenia	309.6	321.5	319.3	329.1	369.8
Sweden	2,453.2	2,483.1	2,677.3	2,793.3	3,008.1
Total	25,384.3	25,942.4	25,717.9	26,413.6	27,276.4

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 35: Gross Value Added (EUR million) of the construction sector (NACE F43), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	1,598.7	1,610.2	1,653.3	1,742.2
Brussels	502.3	523.8	526.4	556.9
Flanders	665.1	712.2	712.8	762.9
Italy	3,493.0	3,397.0	3,452.5	3,544.2
Netherlands	932.3	937.7	959.5	1,022.7
Norway	883.0	873.2	838.5	841.4
Portugal	76.7	78.9	81.2	84.8
Romania	35.1	36.6	38.9	44.0
Slovakia	18.4	20.8	22.4	23.2
Slovenia	98.6	105.1	106.8	112.5
Sweden	973.4	990.9	1,044.2	1,100.5
Total	9,276.6	9,286.3	9,436.6	9,835.4

Source: elaboration of the service provider (2019) based on national databases and Eurostat

4.2.6 Real estate

4.2.6.1 Methodology

The biggest challenge in estimating the impact of MCH on the real estate sector is the lack of relevant data. Information for this sector is scarce, fragmented and difficult to access, because much of the information is considered as sensitive by the sector and its companies.

It is also difficult to define assumptions as interviews conducted presented different findings (interviews were conducted with five sector organisations from four stakeholder countries/regions: Austria, the Netherlands, Slovenia and Sweden). In some cases, interviewees reported that older buildings have a higher value, while in other cases they mentioned that the value is lower due to additional renovation works that might need to be done. The methodological approach for this sector aims at testing the potential use of the same coefficient to isolate the impact of MCH on the sector as for architecture and construction: the share of pre-1919 dwellings and listed and protected buildings in the total number of dwellings.

4.2.6.2 Indicators and data

Table 36 provides data on the total number of real estate transactions.

Table 36: Number of real estate transactions

	2013	2014	2015	2016	2017
Austria	46,087	58,186	66,696	71,685	73,709
Belgium	124,400	135,200	105,600	117,400	125,700
Italy	406,000	421,000	449,000	534,000	-
Netherlands	110,094	153,511	178,293	214,793	-
Norway	81,857	84,216	88,116	80,507	85,860
Portugal	79,775	84,215	107,302	127,106	153,292
Romania	824,989	824,951	890,168	831,254	824,989
Slovenia	5,783	7,448	9,316	10,652	10,788
Slovakia	-	-	-	-	-
Sweden	151,582	159,536	168,298	160,200	162,929

Source: European Central Bank, <https://sdw.ecb.europa.eu/browse.do?node=9689360> (accessed 29/01/2019), Norway¹¹⁷, Romania¹¹⁸ and Slovenia: national databases¹¹⁹

Additional data was available for a few countries. For instance, in Slovenia, the Surveying and Mapping Authority provided data on the number of pre-1919 buildings sold and the total transaction value (Table 37).

Table 37: Sale of pre-1919 buildings - Slovenia

	Number of buildings sold	Value of transactions (EUR)	Average value of transaction (EUR)
2013	1,522	98,000,659	64,389
2014	1,479	89,146,601	60,275
2015	1,958	209,175,060	106,831
2016	2,285	168,883,229	73,910
2017	2,521	205,417,007	81,482

Source: Surveying and Mapping Authority

¹¹⁷ <http://eiendomnorge.no/en/boligprisstatistikken/#nokkeltall>.

¹¹⁸ <http://www.ancpi.ro/index.php/presa-3/statistici>.

¹¹⁹

https://pxweb.stat.si/pxweb/Dialog/varval.asp?ma=0419001E&ti=&path=../Database/Economy/04_prices/04190_Housing_price/&lang=1.

The Dutch association of real estate agents, *Nederlandse Vereniging van Makelaars*, collects data on real estate transactions. Table 38 compares data for the monumental housing market to data for the regular housing market for the years 2013-2017.

Table 38: Characteristics of monumental housing market sales and regular housing market sales – the Netherlands

	Monumental housing market			
	Average transaction price (EUR)	Average price per square metre of living space (EUR)	Average time of sales (days)	Shortage indicator¹²⁰
2013	364,000	2,836	182	31.3
2014	386,000	2,846	175	21.5
2015	426,000	3,045	154	15.9
2016	457,000	3,199	121	8.7
2017	481,000	3,391	117	6.8
	Regular housing market			
	Average transaction price (EUR)	Average price per square metre of living space (EUR)	Average time of sales (days)	Shortage indicator
2013	206,000	1,886	159	23.4
2014	214,000	1,958	128	16
2015	222,000	2,025	104	12
2016	238,000	2,113	83	6.4
2017	260,000	2,245	58	4.3

Source: *Nederlandse Vereniging van Makelaars (NVM)*¹²¹ 2018

For Belgium, the ERA database reports that, out of 28,663 total transactions during the period 2005 – August 2016, 372 involved listed buildings (about 1.30%).¹²² Although indicative, this data is not representative as the ERA database only covers approximately 5% of the total real estate market.

Data for the three main indicators for real estate has been extracted from both Eurostat and national databases for all the countries/regions for the years 2013-2016, see Table 39, Table 40 and Table 41. These figures are for activities related to buying and selling real estate (NACE Code L681). This sub-sector represents about 10% of the turnover of the whole real estate sector (NACE Code L).

¹²⁰ The shortage indicator is used by the NVM to calculate how much choice potential buyers have on the housing market. It is calculated by dividing the supply of houses at the beginning of the year by the number of transactions during the year.

¹²¹ For more information, see: <https://www.nvm.nl/> (consulted 07/03/2018).

¹²² Source: <https://oar.onroerenderfgoed.be/publicaties/OAOE/83/OAOE083-001.pdf> (consulted 07/03/2018).

Table 39: Employees (FTE) in the real estate sector (NACE L681)

Stakeholder country/region	2013	2014	2015	2016
Austria	1,023	1,001	1,094	1,273
Brussels ¹²³	97	104	87	77
Flanders	371	400	338	301
Italy	6,203	5,024	4,884	4,953
Netherlands	3,999	3,904	4,244	4,269
Norway	1,401	1,400	1,327	1,260
Portugal	9,804	9,742	10,752	12,199
Romania	3,020	2,798	2,950	2,893
Slovakia	519	268	67	62
Slovenia ¹²⁴	409	361	286	273
Sweden	364	313	345	424
Total	27,210	25,316	26,375	27,984

Source: Eurostat: Annual detailed enterprise statistics for construction [sbs_na_con_r2]

Table 40: Turnover (EUR million) in the real estate sector (NACE L681)

Stakeholder country/region	2013	2014	2015	2016	2017
Austria	1,129.4	958.9	1,228.5	1,458.4	1,462.7
Brussels	278.5	305.1	355.0	375.3	449.1
Flanders	602.4	650.5	730.5	808.5	944.6
Italy	8,290.3	7,362.8	7,277.9	8,174.8	8,127.8
Netherlands	1,558.2	1,620.3	2,331.2	2,908.0	3,219.2
Norway	1,513.2	1,408.6	1,367.7	1,456.5	1,742.3
Portugal	2,173.6	2,350.7	2,860.0	3,273.7	4,251.9
Romania	326.3	372.1	428.5	457.7	486.7
Slovakia	23.3	17.2	5.6	32.2	50.1
Slovenia	124.0	103.3	89.8	116.9	115.6
Sweden	237.0	249.6	275.9	323.2	443.4
Total	16,256.2	15,399.1	16,950.6	19,385.2	21,293.5

Source: Eurostat: Annual detailed enterprise statistics for construction [sbs_na_con_r2]

Table 41: Gross Value Added (EUR million) in the real estate sector (NACE L681)

Stakeholder country/region	2013	2014	2015	2016
Austria	355.9	258.3	352.0	558.6
Brussels	87.0	83.1	105.2	127.1
Flanders	275.2	269.9	340.3	415.8
Italy	1,731.0	1,304.5	1,487.0	1,739.7
Netherlands	-	-	-	-
Norway	604.7	568.4	563.3	591.7
Portugal	458.8	449.6	556.2	715.5
Romania	88.9	177.2	126.5	156.7
Slovakia	10.5	7.0	0.6	16.4
Slovenia	35.4	45.6	30.0	20.9
Sweden	84.6	79.7	120.9	133.6
Total	3,732.0	3,243.3	3,682.0	4,476.0

Source: Eurostat: Annual detailed enterprise statistics for construction [sbs_na_con_r2]

The coefficients to calculate the share that can be attributed to MCH for all countries/regions are based on the baseline mappings of Material Cultural Heritage and the same as for architecture and construction (see

¹²³ For all three main indicators and both Brussels and Flanders: estimated based on the figure for all of Belgium multiplied by the share of Brussels/Flanders in the national number for all sectors.

¹²⁴ FTE is estimated based on the average ratio Number of employees/FTE of other countries considered.

Table 11).

4.2.6.3 Impact analysis

Table 42: Employment (FTE) in the real estate sector (NACE L681), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	182	178	195	227
Brussels	31	33	28	24
Flanders	49	53	45	40
Italy	717	580	564	572
Netherlands	293	286	311	313
Norway	131	130	124	117
Portugal	421	418	462	524
Romania	103	96	101	99
Slovakia	12	6	1	1
Slovenia	59	52	41	39
Sweden	28	24	26	32
Total	2,025	1,857	1,898	1,989

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 43: Turnover (EUR million) in the real estate sector (NACE L681), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	201.2	170.8	218.9	259.8
Brussels	88.3	96.7	112.6	119.0
Flanders	80.0	86.4	97.0	107.3
Italy	957.9	850.7	840.9	944.5
Netherlands	114.2	118.7	170.8	213.1
Norway	141.0	131.2	127.4	135.7
Portugal	93.3	100.9	122.8	140.6
Romania	11.2	12.7	14.6	15.6
Slovakia	0.5	0.4	0.1	0.7
Slovenia	17.9	14.9	13.0	16.9
Sweden	18.0	18.9	20.9	24.5
Total	1,723.4	1,602.5	1,739.0	1,977.8

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 44: Gross Value Added (EUR million) in the real estate sector (NACE L681), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	63.4	46.0	62.7	99.5
Brussels	27.6	26.4	33.4	40.3
Flanders	36.5	35.8	45.2	55.2
Italy	200.0	150.7	171.8	201.0
Netherlands	-	-	-	-
Norway	56.3	53.0	52.5	55.1
Portugal	19.7	19.3	23.9	30.7
Romania	3.0	6.1	4.3	5.4
Slovakia	0.2	0.2	0.0	0.4
Slovenia	5.1	6.6	4.3	3.0
Sweden	6.4	6.0	9.2	10.1
Total	418.4	350.0	407.3	500.8

Source: elaboration of the service provider (2019) based on national databases and Eurostat

4.3 Ancillary sectors/activities

4.3.1 ICT

4.3.1.1 Methodology

Information on the type of services provided by ICT companies to MCH is generally not available, neither is data on the specific contributions of MCH to the ICT sector. Hence, only estimations based on assumed expenditure on ICT can be provided. This study considers two categories of expenses: website development and digitalisation of collections.

With regards to website development, it has been considered that the following institutions and heritage sites might have a website:

- Archaeological sites;¹²⁵
- Archives;
- Buildings;
 - Buildings with parks and gardens;
 - Castles, country houses and parks;
 - Defensive works and military buildings;
 - Memorial buildings and places;
 - Parks and gardens;
 - Religious buildings;
 - Scientific and technological heritage;
 - Technical/Industrial memory.
- Historic areas/landscapes;
- Libraries;
- Monuments;
- Museums; and
- UNESCO World Heritage Sites.

While desk research has confirmed that most museums have a website,¹²⁶ for the other institutions no information has been found. Hence, estimations have been provided for three scenarios (scenarios for 25%, 50% and 75% of these institutions having a website). Moreover, ICT solutions are increasingly adopted by museums, archives and libraries. An important expense in this category relates to the digitalisation of collections. Data on the average

¹²⁵ In Sweden, the category of ancient remains includes many different sub-categories. Among these only the following have been considered: settlement remains (*bebyggelseämningar*), fortification remains (*befästningsanläggningar*), hunt and catch (*jakt och fångst*), cult, offerings, folklore (*kult, offer och folketro*) and carvings, rock paintings and monuments (*ristningar, hållmålningar och minnesmärken*).

¹²⁶ Source: EGMUS database, https://www.egmus.eu/nc/en/statistics/complete_data/z/0/. Data available for: Austria (80%), Italy (100%), Slovakia (80%), the Netherlands (100%).

expenditure on digitalisation from the ENUMERATE Project has been used to estimate the total expenditure of all museums, libraries and archives assuming that the average expenditure is the same for all institutions (both those covered by the ENUMERATE Database and those not covered by it).¹²⁷

4.3.1.2 Indicators and data

Data for the ICT sector (NACE codes J62 and J63) is available for the years 2013 – 2016. Table 45, Table 46 and Table 47 provide an overview of the main economic indicators.

Table 45: Employment (FTE) in the ICT sector (NACE J62 & J63)

Stakeholder country/region	2013	2014	2015	2016
Austria	44,900	47,796	48,109	51,144
Brussels ¹²⁸	10,726	10,140	9,878	10,122
Flanders	29,976	31,857	32,891	34,800
Italy	245,838	238,078	249,328	263,893
Netherlands	131,746	141,591	147,319	156,227
Norway	41,605	41,577	41,207	41,252
Portugal	43,411	45,288	48,065	51,806
Romania	62,525	68,939	82,494	92,555
Slovakia	24,664	25,928	29,308	32,239
Slovenia ¹²⁹	9,445	9,281	9,728	10,187
Sweden	193,174	199,511	236,180	239,731
Total	838,010	859,986	934,507	983,955

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 46: Turnover (EUR million) in the ICT sector (NACE J62 & J63)

Stakeholder country/region	2013	2014	2015	2016
Austria	9,528.1	10,226.1	10,280.8	11,079.1
Brussels	3,165.4	3,314.9	3,240.4	3,319.2
Flanders	7,428.1	8,385.3	9,273.9	9,959.8
Italy	42,984.9	44,126.6	46,183.4	48,603.7
Netherlands	25,500.5	29,434.5	32,762.7	36,186.2
Norway	8,731.7	9,139.9	9,663.5	10,070.3
Portugal	7,462.4	7,809.9	4,426.5	4,680.9
Romania	7,892.6	8,779.3	9,540.5	10,339.8
Slovakia	2,642.8	2,814.3	3,405.5	3,585.9
Slovenia	1,134.0	1,114.1	1,253.5	1,223.3
Sweden	17,807.1	19,543.9	27,316.2	27,564.7
Total	134,277.6	144,688.7	157,347.0	166,612.9

Source: elaboration of the service provider (2019) based on national databases and Eurostat

¹²⁷ Source for ENUMERATE Project database: <http://enumeratedatapatform.digibis.com/>.

¹²⁸ For all three main indicators and both Brussels and Flanders: estimated based on the figure for all of Belgium multiplied by the share of Brussels/Flanders in the national number for all sectors.

¹²⁹ FTE is estimated based on the average ratio Number of employees/FTE of the other countries/regions covered by this study.

Table 47: Gross Value Added (EUR million) in the ICT sector (NACE J62 & J63)

Stakeholder country/region	2013	2014	2015	2016
Austria	4,241.5	4,609.1	4,724.9	5,145.5
Brussels	1,521.0	1,429.0	1,459.0	1,513.0
Flanders	4,050.0	4,370.9	4,584.6	4,998.0
Italy	20,238.7	21,538.0	22,332.3	-
Netherlands	12,951.3	13,866.2	14,926.3	17,706.2
Norway	4,104.3	4,393.0	4,525.6	4,679.7
Portugal	3,614.0	3,795.7	1,818.9	2,385.4
Romania	1,282.9	1,615.5	2,015.7	2,506.1
Slovakia	1,194.9	1,173.0	1,375.9	1,426.6
Slovenia	1,300.0	1,369.0	1,401.0	1,441.0
Sweden	8,054.4	8,767.0	11,172.8	10,484.9
Total	62,553.0	66,926.4	70,336.9	52,286.4

Source: elaboration of the service provider (2019) based on national databases and Eurostat

As estimated in section 3.1.3.5, about 50% of museums expenditure is allocated to non-staff expenditure (about one billion). Four interviews conducted with museums in Slovenia provided data on the average yearly expenditure on their websites. Although this expenditure has not been constant and has changed over the years, it seems that a very small share of the total expenses is invested into website development and maintenance (about 0.1%). However, a better tracking of these expenses, also for the other countries/regions, would be needed in order to provide more exact estimations.

In the context of digitalisation, the ENUMERATE project is a survey run among cultural heritage institutions (amongst which archives, libraries and museums) in European countries on the digitalisation of their collections. The last survey was conducted in 2015 and collected about 1,000 answers, 460 from countries/regions covered in this study. The survey results are publicly available and represent the only data source in relation to digitalisation activities conducted by archives, libraries and museums. The survey reports that 85% of respondent organisations from the covered countries have digital collections or are currently involved in collection digitisation activities. Full survey results are shown in Table 48. Table 49 shows the number of museums, libraries, archives and heritage sites that are considered relevant for the ICT sector.

Table 48: Enumerate 2015 survey results

	Share of respondents engaged in digitalisation activities	Total Institutional expenditure (internal budget): €	Average Institutional expenditure (internal budget): €	Total Temporary funded project expenditure (external budget): €	Average Temporary funded project expenditure (external budget): €	Total expenditure	Average total expenditure	Average in-house costs, %	Average outsourced costs, %	Average incidental costs, %	Average structural costs, %
Austria	93%	3,811,700	224,218	416,100	24,476	4,227,800	248,694	80%	20%	37%	63%
<i>Archive/records office</i>	100%	253,500	50,700	30,500	6,100	284,000	56,800	79%	21%	19%	81%
<i>Library</i>	83%	2,520,000	840,000	60,000	20,000	2,580,000	860,000	80%	20%	40%	60%
<i>Museum</i>	92%	323,200	64,640	75,600	15,120	398,800	79,760	79%	21%	39%	61%
<i>Other type of institution</i>	100%	715,000	178,750	250,000	62,500	965,000	241,250	83%	18%	53%	48%
Belgium	100%	1,000,750	200,150	760,000	152,000	1,760,750	352,150	77%	23%	61%	39%
<i>Archive/records office</i>	100%	150,000	150,000	110,000	110,000	260,000	260,000	95%	5%	90%	10%
<i>Library</i>	100%	800,000	800,000	400,000	400,000	1,200,000	1,200,000	75%	25%	75%	25%
<i>Museum</i>	100%	50,750	25,375	50,000	25,000	100,750	50,375	73%	28%	25%	75%
<i>Other type of institution</i>	100%	-	-	200,000	200,000	200,000	200,000	70%	30%	90%	10%
Italy	85%	2,191,238	81,157	460,115	17,041	2,651,353	98,198	73%	27%	52%	48%
<i>Archive/records office</i>	80%	100,988	25,247	2,000	500	102,988	25,747	64%	36%	49%	51%
<i>Library</i>	93%	1,702,000	170,200	113,000	11,300	1,815,000	181,500	79%	21%	45%	55%
<i>Museum</i>	78%	280,125	56,025	40,125	8,025	320,250	64,050	75%	25%	53%	47%
<i>Other type of institution</i>	84%	108,125	13,516	304,990	38,124	413,115	51,639	69%	31%	59%	41%
Netherlands	94%	21,652,154	248,875	15,525,350	178,452	37,177,504	427,328	69%	31%	40%	60%
<i>Archive/records office</i>	100%	1,538,000	56,963	7,258,200	268,822	8,796,200	325,785	56%	44%	38%	62%
<i>Library</i>	100%	6,794,510	1,132,418	4,800,010	800,002	11,594,520	1,932,420	47%	53%	51%	49%
<i>Museum</i>	91%	1,094,801	24,329	266,140	5,914	1,360,941	30,243	80%	20%	42%	58%
<i>Other type of institution</i>	92%	12,224,843	1,358,316	3,201,000	355,667	15,425,843	1,713,983	64%	36%	33%	67%
<i>Norway</i>	100%	1,200,000	1,200,000	200,000	200,000	1,400,000	1,400,000	100%	0%	70%	30%
<i>Archive/records office</i>	100%	1,200,000	1,200,000	200,000	200,000	1,400,000	1,400,000	100%	0%	70%	30%
Portugal	75%	3,801,496	200,079	1,207,300	63,542	5,008,796	263,621	78%	22%	43%	57%
<i>Archive/records office</i>	90%	2,046,000	511,500	36,800	9,200	2,082,800	520,700	80%	20%	46%	54%
<i>Library</i>	66%	539,996	60,000	5,500	611	545,496	60,611	80%	20%	46%	54%
<i>Museum</i>	100%	10,500	3,500	50,000	16,667	60,500	20,167	86%	14%	26%	74%
<i>Other type of institution</i>	80%	1,205,000	401,667	1,115,000	371,667	2,320,000	773,333	57%	43%	43%	57%
Romania	100%	4,000	2,000	5,000	2,500	9,000	4,500	80%	20%	50%	50%
<i>Library</i>	100%	4,000	2,000	5,000	2,500	9,000	4,500	80%	20%	50%	50%
Slovenia	93%	983,730	23,993	504,171	12,297	1,487,901	36,290	62%	38%	58%	42%

Archive/records office	100%	118,900	29,725	264,800	66,200	383,700	95,925	63%	38%	66%	34%
Library	87%	625,441	29,783	152,071	7,241	777,512	37,024	54%	46%	62%	38%
Museum	100%	234,189	16,728	86,300	6,164	320,489	22,892	73%	27%	46%	54%
Other type of institution	100%	5,200	2,600	1,000	500	6,200	3,100	90%	10%	63%	37%
Sweden	83%	29,210,699	389,476	2,838,771	37,850	32,049,470	427,326	80%	20%	52%	48%
Archive/records office	81%	5,002,605	312,663	399,505	24,969	5,402,110	337,632	71%	29%	49%	52%
Library	70%	10,461,000	1,162,333	297,000	33,000	10,758,000	1,195,333	67%	33%	57%	43%
Museum	90%	6,641,093	154,444	1,902,266	44,239	8,543,359	198,683	87%	13%	53%	47%
Other type of institution	75%	7,106,001	1,015,143	240,000	34,286	7,346,001	1,049,429	86%	14%	56%	44%
Total	87%	63,855,767	233,050	21,916,807	79,988	85,772,574	313,039	73%	27%	48%	52%

Source: Enumerate project: <http://enumeratedataplatform.digibis.com/>

Table 49: Number of museums, libraries, archives and heritage sites relevant for the ICT sector

	Austria	Brussels	Flanders	Italy	Netherlands	Norway	Portugal	Romania	Slovakia	Slovenia	Sweden	Total
Archives	94	8	27	132	293	30	36	42	39	10	13	724
Libraries	1,387	255	466	13,925	170	675	2,868	9,584	1,857	113	2,119	33,419
Museums	747	69		4,261	688	140	1,454	762	155	369	749	9,400
UNESCO World Heritage sites	10	4	48	49	9	8	14	6	7	2	15	172
Archaeological sites	918	-	41	1,118	1,459	-	-	9,672	-	4,684	66,531	84,423
Buildings	11,918	54	-	54	12,353	2,125	-	-	107	8,254	-	34,865
Monuments	-	33	11,329	5,199	2,056	4,543	4,521	2,568	16,740	-	37,326	84,315

Source: National databases

4.3.1.3 Impact analysis

Table 50: Employment (FTE) in the ICT sector (NACE J62 and J63), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	855	848	849	838
Brussels	118	107	106	106
Flanders	378	356	332	327
Italy	2,112	1,992	1,994	2,005
Netherlands	1,375	1,281	1,197	-
Norway	361	345	323	310
Portugal	129	128	240	245
Romania	569	564	621	643
Slovakia	828	818	764	798
Slovenia	113	113	105	113
Sweden	4,142	3,898	3,301	-
Total	10,980	10,449	9,833	5,385

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 51: Turnover (EUR million) in the ICT sector (NACE J62 and J63), attributed to MCH

Stakeholder country/region	Average per year	Total 2013-2017
Austria	181.5	907.3
Brussels	34.8	174.2
Flanders	93.7	468.6
Italy	369.3	1,846.4
Netherlands	266.2	1,331.1
Norway	75.8	378.9
Portugal	22.1	110.7
Romania	71.8	359.0
Slovakia	88.7	443.7
Slovenia	13.5	67.7
Sweden	381.8	1,909.0
Total	1,599.3	7,996.7

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 52: Gross Value Added (EUR million) in the ICT sector (NACE J62 and J63), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	80.8	81.8	83.4	84.3
Brussels	16.7	15.0	15.7	15.9
Flanders	51.1	48.9	46.3	47.0
Italy	173.9	180.2	178.6	-
Netherlands	135.2	125.4	121.3	130.3
Norway	35.6	36.4	35.5	35.2
Portugal	10.7	10.8	9.1	11.3
Romania	11.7	13.2	15.2	17.4
Slovakia	40.1	37.0	35.9	35.3
Slovenia	15.5	16.7	15.1	16.0
Sweden	172.7	171.3	156.2	145.2
Total	744.1	736.6	712.2	537.9

Source: elaboration of the service provider (2019) based on national databases and Eurostat

4.3.2 Insurance

4.3.2.1 Methodology

This study exclusively considers the non-life insurance subsector (NACE K6512), as it is considered that this is the only subsector where MCH has impacts. The relationship between MCH and the non-life insurance sector is complex and varied. Countries have different systems in place to insure publicly and privately owned MCH and insurance companies apply non-uniform regimes to MCH; in some countries/regions, there is no insurance of MCH at all. This is particularly the case in countries/regions (e.g. Norway and Sweden), where the State owns a large amount of heritage buildings or museum collections, because it is more convenient for the State to assume the risk instead of paying an insurance premium, which can be quite high. Collecting additional information on these aspects was particularly difficult as insurance companies were rarely available to participate in interviews (interviews with four sector organisations from three stakeholder countries/regions, Italy, the Netherlands and Sweden, were conducted). Therefore, the variables relating to the different insurance regimes cannot be taken into consideration in this study when isolating the impact of MCH on the sector. However, it is important for future studies to investigate the sector and its country/region-specific characteristics more in-depth.

It should also be considered that the few contributions that have been received from representatives of the sector seem to point to a relatively limited contribution of MCH to the overall insurance sector. In order to correctly identify the contribution of MCH on the non-life insurance sector it would be required to clarify national insurance regimes for:

- Museum collections (private and public);
- Listed and protected buildings (private and public); and
- Pre-1919 dwellings (private and public).

In this study, only the latter two categories are considered because of the limited availability on the first category. In order to isolate the contribution of MCH, the share of listed and protected buildings and pre-1919 dwellings out of the total number of dwellings has been used as a coefficient. This approach is not without limitations, as it does not consider differences between premium costs for listed and protected and older buildings on the one hand and other buildings on the other hand, nor does it consider country/region specificities concerning publicly owned buildings. However, with the current data this coefficient provides the best possible estimation of the impact of MCH in the insurance sector that can be attributed to MCH.

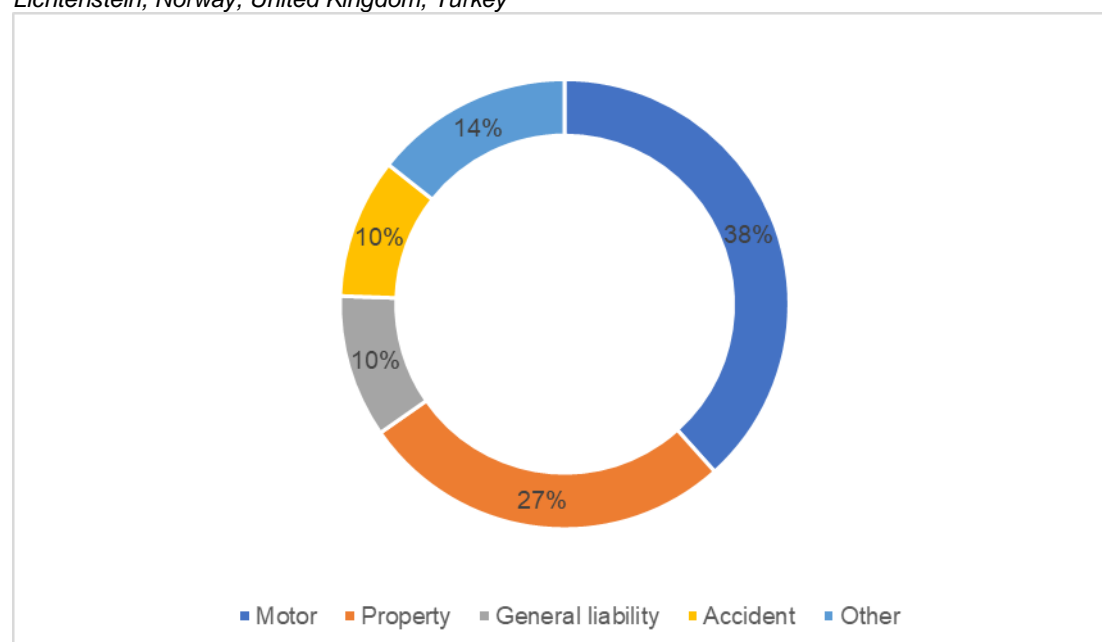
4.3.2.2 Indicators and data

Data on the financial service sector is generally more difficult to collect compared to other economic sectors. Obtaining data at low NUTS levels for non-life insurance services is particularly challenging. The only data available at a level lower than NUTS 0 was for either for

the whole financial sector (NACE Code K) or the whole insurance sector (NACE Code K65). Evidently, this data is not comparable and given the size of the sector could not be used in the context of this study (it should be considered that the non-life insurance sector represents about 40% of the insurance sector on average in the covered countries).¹³⁰

Data on the number of museums and their expenses is presented in section 3.1.5, data on the number of pre-1919 dwellings and listed and protected buildings is presented in section 2.5. The non-life insurance sector is divided between several business lines. Figure 1 provides an overview of the different business lines and of their contribution to the sector. As shown in the figure, property premium, which is considered the business line where MCH has impacts, corresponds to about 30% of the total non-life insurance sector or about 12% of the total insurance sector.

Figure 1: Breakdown of average non-life premium by business line (2013 – 2017 data), EU, Iceland, Lichtenstein, Norway, United Kingdom, Turkey



Source: Insurance Europe, Key facts – annual issue

Table 53, Table 54 and Table 55 provide the key figures at NUTS 0 level for the non-life insurance sector.

¹³⁰ Source: Eurostat: Annual detailed enterprise statistics for services (NACE Rev. 2 H-N and S95) [sbs_na_1a_se_r2].

Table 53: Employment (FTE) in the non-life insurance sector (NACE K6512)

Stakeholder country/region	2013	2014	2015	2016
Austria	4,773	4,714	4,720	4,820
Brussels ¹³¹	112	111	112	113
Flanders	429	425	436	441
Italy	6,097	6,339	6,265	5,726
Netherlands	4,517	4,284	4,295	-
Norway	1,058	1,119	1,105	1,102
Portugal	2,377	2,364	2,292	2,441
Romania	2,712	2,526	2,030	1,847
Slovakia	667	791	1,104	1,082
Slovenia ¹³²	1,286	1,289	1,288	1,270
Sweden	3,876	3,835	3,633	-
Total	27,905	27,797	27,280	18,843

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 54: Turnover (EUR million) in the non-life insurance sector (NACE K6512)

Stakeholder country/region	2013	2014	2015	2016
Austria	3,390.7	3,480.9	3,511.0	3,790.2
Brussels	236.1	319.0	334.2	319.6
Flanders	510.6	680.2	687.7	688.6
Italy	9,741.8	10,012.8	9,807.1	9,448.4
Netherlands	5,464.0	5,162.3	5,133.0	5,130.0
Norway	1,442.8	1,420.7	1,457.4	1,472.0
Portugal	1,220.1	1,237.8	1,291.3	1,684.1
Romania	371.0	391.4	355.7	404.0
Slovakia	246.4	253.5	260.6	261.6
Slovenia	384.8	379.3	381.7	393.8
Sweden	2,645.4	2,833.1	2,460.6	2,700.0
Total	25,653.7	26,171.1	25,680.2	26,292.2

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 55: Gross Value Added (EUR million) of the non-life insurance sector (NACE K6512)

Stakeholder country/region	2013	2014	2015	2016
Austria	647.2	673.9	726.9	660.3
Brussels	26.9	42.8	33.5	34.0
Flanders	85.2	139.0	108.5	111.4
Italy	1,547.0	1,485.8	1,521.1	1,336.0
Netherlands	1,302.2	1,332.0	1,115.0	-
Norway	50.0	687.7	677.7	793.3
Portugal	297.7	301.8	324.1	296.6
Romania	193.5	195.2	219.3	254.1
Slovakia	99.0	56.5	32.0	50.0
Slovenia	87.7	80.8	86.1	79.9
Sweden	1,614.3	1,855.1	1,455.8	-
Total	5,950.7	6,850.5	6,300.0	3,615.7

Source: elaboration of the service provider (2019) based on national databases and Eurostat

¹³¹ For all three main indicators and both Brussels and Flanders: estimated based on the figure for all of Belgium multiplied by the share of Brussels/Flanders in the national number for all sectors.

¹³² FTE is estimated based on the average ratio Number of employees/FTE of the other countries/regions covered by this study.

4.3.2.3 Impact analysis

Table 56: Employees (FTE) of the non-life insurance sector (NACE MK6512), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	850	840	841	859
Brussels	36	35	36	36
Flanders	57	56	58	59
Italy	704	732	724	662
Netherlands	331	314	315	-
Norway	99	104	103	103
Portugal	102	101	98	105
Romania	93	86	69	63
Slovakia	15	18	24	24
Slovenia	186	186	186	183
Sweden	294	291	276	-
Total	2,766	2,764	2,730	2,093

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 57: Turnover (EUR million) of the non-life insurance sector (NACE MK6512), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	604.1	620.1	625.5	675.3
Brussels	74.9	101.2	106.0	101.3
Flanders	67.8	90.3	91.3	91.4
Italy	1,125.6	1,156.9	1,133.1	1,091.7
Netherlands	400.4	378.2	376.1	375.9
Norway	134.4	132.4	135.8	137.1
Portugal	52.4	53.2	55.4	72.3
Romania	12.7	13.4	12.2	13.8
Slovakia	5.5	5.6	5.8	5.8
Slovenia	55.6	54.8	55.1	56.9
Sweden	200.6	214.8	186.6	204.7
Total	2,733.8	2,820.9	2,782.9	2,826.3

Source: elaboration of the service provider (2019) based on national databases and Eurostat

Table 58: GVA (EUR million) of the non-life insurance sector (NACE MK6512), attributed to MCH

Stakeholder country/region	2013	2014	2015	2016
Austria	115.3	120.1	129.5	117.6
Brussels	8.5	13.6	10.6	10.8
Flanders	11.3	18.5	14.4	14.8
Italy	178.7	171.7	175.8	154.4
Netherlands	95.4	97.6	81.7	-
Norway	4.7	64.1	63.1	73.9
Portugal	12.8	13.0	13.9	12.7
Romania	6.6	6.7	7.5	8.7
Slovakia	2.2	1.3	0.7	1.1
Slovenia	12.7	11.7	12.4	11.5
Sweden	122.4	140.7	110.4	-
Total	570.6	658.7	620.1	405.6

Source: elaboration of the service provider (2019) based on national databases and Eurostat

4.4.1 Public expenditure

Table 59: Government expenditure in cultural services (EUR million and as a share of total expenditure)

	2013		2014		2015		2016	
	Expenditure on cultural services	Share of total government expenditure	Expenditure on cultural services	Share of total government expenditure	Expenditure on cultural services	Share of total government expenditure	Expenditure on cultural services	Share of total government expenditure
Austria	1,842	0.5%	1,799	0.4%	1,794	0.4%	1,866	0.4%
Belgium	4,067	0.8%	4,155	0.8%	4,118	0.8%	4,424	0.8%
Italy	11,306	0.6%	11,250	0.6%	12,957	0.7%	10,848	0.6%
Netherlands	6,421	0.9%	6,211	0.9%	6,511	0.9%	6,440	0.9%
Norway	4,678	1.3%	4,608	1.2%	4,586	1.3%	4,683	1.3%
Portugal	1,084	0.6%	876	0.5%	693	0.4%	861	0.5%
Romania	1,130	1.0%	1,335	1.1%	1,399	1.1%	1,252	0.9%
Slovakia	701	1.1%	739	1.1%	869	1.1%	738	1.0%
Slovenia	596	1.3%	605	1.5%	596	1.4%	555	1.4%
Sweden	5,162	1.0%	4,887	1.0%	4,909	1.0%	5,035	1.0%
Total	35,144	0.8%	34,666	0.8%	36,639	0.9%	34,836	0.8%

Source: Eurostat, General government expenditure by function (COFOG) [gov_10a_exp]

Annex X – Meta data fiches

The correspondent annex has been provided as separate files. It consists of an Excel containing meta-data fiches in Excel where details are listed per indicator that will have to be collected in order to estimate the impact of MCH. It presents these data fiches setting out for each indicator:

- *Relevance;*
- *Unit of measure;*
- *Periodicity of collection;*
- *Geographical coverage;*
- *NUTS level;*
- *Data source;*
- *Collection method;*
- *Collecting authority;*
- *Compiling authority;*
- *Strengths; and*
- *Weaknesses.*

In addition, these meta data fiches provide information on the necessary formulas that have to be used once the indicators are collected in order to estimate the impact of MCH.

Annex XI – Overview of sources used for the project

The correspondent annex has been provided as separates files. It consists of nine Excel files: one file for each sector/activity each (eight in total) containing all the sources used per country/region for that sector/activity and one file containing all the sources used to map the baseline population in all countries/regions.

Annex XII – Overview of interviews conducted for the project

This annex provides an overview of all the interviews that have been conducted within the scope of this project.¹³³

Sector	Organisation	Date
EU		
Archaeology	EAA (European Association of Archaeologists) <i>Written contribution</i>	14/11/2018
Construction	ECTP (European Construction Technology Platform)	31/10/2018
Architecture	ECTP-CEU (European Council of Spatial Planners)	14/11/2018
Construction	European Confederation of Conservator-Restorers' Organisations	09/11/2018
Austria		
Archaeology	DISCO project responsible	15/11/2018
Construction, Architecture	Kammer der Ziviltechnikerinnen, Architektinnen und Ingenieurinnen	11/07/2018
Real Estate	ARE Austrian Association of Real Estate Experts	11/08/2018
Museums, libraries and archives activities	Museumverbund <i>Written contribution</i>	06/11/2018
Tourism	Austria Info	12/11/2018
Tourism	Turismus Bilanz Wien <i>Written contribution</i>	25/10/2018
Museums, libraries and archives activities	Österreichische Nationalbibliothek <i>Written contribution</i>	13/12/2018
Brussels and Flanders		
Museums, libraries and archives activities	Conseil Bruxellois des Musées (written contribution by e-mail)	20/11/2018
Architecture	ARiB (ARchitects in Brussels) (written contribution by e-mail)	13/11/2018
Archaeology	Flemish Entrepreneurs in Archaeology (Vlaamse Ondernemers in Archeologie)	30/11/2018
Architecture	Gorduna	21/11/2018
Museums, libraries and archives activities	Faro	26/11/2018
Construction	Flemish Construction Confederation	19/11/2018
Italy		
Archaeology	National Association Archaeologists (Associazione Nazionale Archeologi)	07/11/2018
Museums, libraries and archives activities	Direzione Generale Archivi (Directorate General Archives) - MiBAC	14/11/2018
Construction	ANCE (National Association of Building Constructors)	29/11/2018
Museums, libraries and archives activities	MiBAC (Ministry for Culture and Tourism)	06/11/2018
Insurance	ANIA (National Association for Insurance Companies)	27/11/2018

¹³³ Unless otherwise indicated, all interviews were conducted in the form of telephone interviews.

Tourism	Banca d'Italia	20/11/2018
The Netherlands		
Architecture	Association of architects working in restauration (Vereniging van Architecten Werkzaam in de restauratie)	23/11/2018
Museums, libraries and archives activities	Museum association (Museumvereniging)	31/10/2018
Construction	Branch organisation for restauration (Vakgroep restuaratie)	13/11/2018
ICT	Digitaal Erfgoed Nederland	08/11/2018
Insurance	Rijksdienst voor Cultureel Erfgoed	22/11/2018
Insurance	Klap	22/11/2018
Real estate	Dutch association of real estate agents (Nederlandse vereniging van makelaars)	30/10/2018
Tourism	NBTC Holland Marketing	05/11/2018
Norway		
Archaeology	Norwegian Institute for Cultural Heritage	15/11/2018
Archaeology	Norwegian Association of Researchers (NAR)	15/11/2018
Architecture	National Association of Norwegian Architects	26/11/2018
Museums, libraries and archives activities	Norwegian Museum Association	08/11/2018
Tourism	Innovation Norway	27/11/2018
Construction	The Federation of Norwegian Construction Industries (BNL)	22/11/2018
Construction	Norwegian Institute for Cultural Heritage	15/11/2018
Romania		
Libraries	National Association of Public Libraries and Librarians from Romania	03/12/2018
ICT	Employers' Association of ICT industry and services of Romania <i>Written contribution</i>	29/11/2018
Tourism	Employers' Association of Tourism Agencies of Romania	20/11/2018
Slovakia		
Architecture	Chamber of Architects	26/11/2018
Museums, libraries and archives activities	Slovak National Museum	26/11/2018
Slovenia		
Archaeology	University of Primorska	23/11/2018
Architecture	Association of Architects of Ljubljana	22/11/2018
Museums, libraries and archives activities	Ministry of Culture	21/11/2018
Real Estate	Surveying and Mapping Authority of the Republic of Slovenia	07/11/2018
Tourism	Slovenian Tourist Board	12/11/2018
Sweden		
Real estate	National Property Board Sweden	01/11/2018
Construction	Association for construction companies specialised in cultural heritage buildings	30/10/2018
Insurance	Insurance Sweden	26/10/2018

Real estate	Association of Swedish real estate agents	22/10/2018
Archaeology	Association for archaeologists	31/10/2018
Architecture	Architects Sweden <i>Written contribution</i>	30/10/2018
Construction	Association working to protect and conserve built cultural heritage	22/10/2018

Annex XIII – References

This annex provides an overview of all the literary and online sources that have been conducted within the scope of this project.

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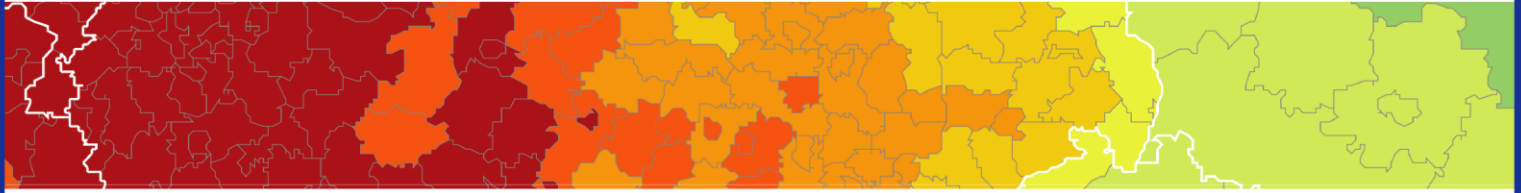
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The ESPON EGTC is the Single Beneficiary of the ESPON 2020 Cooperation Programme. The Single Operation within the programme is implemented by the ESPON EGTC and co-financed by the European Regional Development Fund, the EU Member States and the Partner States, Iceland, Liechtenstein, Norway and Switzerland.