The positive and negative values of brownfields have been defined in the Methodology for the Evaluation and Protection of Industrial Heritage from the Perspective of Heritage Management,[58] which presents an analysis of their historical, typological and technical development; brownfields have also been the subject of numerous expert studies, and the state authorities take a particular interest in these sites. For museums, brownfields represent a potential resource for acquisitions as well as an inspiration for educational and presentational activities. One option for the new utilization of brownfields that has successfully been tried in other countries[59] is their conversion for cultural activities – including use as museums.

The final period in the development of industrial production, from the mid-20th century to the present day, is known as the post-industrial period. When documenting, recording and evaluating this era, museums use a technique referred to as documentation of the present.

In the evaluation of industrial heritage, emphasis is placed on the technical or technological value of a particular monument for its specific industry or sector, including knowledge related to production, transportation and storage.

05.02. Terminology

In specialist literature as well as texts aimed at the general public (in both written and spoken forms), descriptions of industrial heritage frequently include terms such as technical monument (Czech: technická památka) or industrial monument (Czech: průmyslová památka, industriální památka). It should be pointed out that the Czech legislation governing the country's system of heritage management does not use these terms in its categorization. The Czech word "památka" (meaning "monument") is used in the phrases "kulturní památka" (cultural monument) and "národní kulturní památka" (national cultural monument); these terms denote movable or immovable objects, sites etc. which have been granted special legal protection and to which special care is devoted by the National Heritage Institute (Národní památkový ústav, NPÚ) in accordance with the application of Act no. 20/1987 Sb. and subsequent related legal regulations. The phrases "technical monument" or "industrial monument" thus do not always denote items movable or immovable heritage as defined in the relevant legislation.

The phrases cited above are often used in an attempt to provide an appropriate description of reality. The term "industrial heritage" denotes items associated with the process of industrialization, while the term "technical monument" is used with a wider, more general meaning.[60] In the Czech Republic, the phrase "technická památka" (technical monument) is used to denote buildings and items that have been granted legal heritage protection particularly on the basis of ethnographic research: mills, forges, small bridges, drying kilns, and similar structures. Act no. 20/1987 Sb. on heritage management defines the mechanisms for the protection of movable and immovable monuments by means of granting the status of cultural monuments or national cultural monuments. Territorial protection is granted by means of the delineation of a protective zone ("ochranné pásmo"), which applies to individual monuments. A higher level of territorial protection is provided by the delineation of a heritage zone ("památková zóna"), which can apply to urban areas, villages, or landscapes. The highest level of territorial protection is provided by a heritage reservation ("památková rezervace"), which can likewise apply to urban areas, villages, or landscapes. Cultural monument status is granted by the Czech Ministry of Culture, while national cultural monument status (as well as territorial protection by means of heritage zones and heritage reservations) is granted by the Czech Government.

The term industrial heritage is codified by the Nizhny Nagil Charter (see above), and it can thus be used in the sense of a clearly defined item of terminology. According to the Nizhny Nagil Charter, industrial heritage "consists of

58) MATĚJ, Miloš – RYŠKOVÁ, Michaela. *Methodology for the Evaluation and Protection of Industrial Heritage from the Perspective of Heritage Management*. Ostrava 2018.

59) The integration of a museum institution or museum operations into a revitalized building does not automatically mean that the building will be saved. From a museum's operational perspective, not all buildings are suitable for this purpose, as a museum's needs are wide-ranging and variable. Museums must take into consideration constantly evolving requirements regarding climate control and security at depositories and exhibition spaces, facilities for visitors, educational activities, etc.

60) For more details see MATĚJ, Miloš – RYŠKOVÁ, Michaela. *Methodology for the Evaluation and Protection of Industrial Heritage from the Perspective of Heritage Management*. Ostrava 2018.

the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education."[61]

In the case of industrial and technical heritage, it is necessary to distinguish between movable and immovable heritage. Immovable heritage denotes buildings, while movable heritage denotes the fittings of such buildings (in the sense of technological equipment) or individual tangible objects.

05.03. Classification of industries and sectors

For both practical and theoretical purposes, industrial heritage may be classified depending on individual industries or sectors. Czech museums and heritage professionals do not yet use a single standardized system of classification. The following chapter (08) therefore describes several possible classifications used by Czech museums.

61) Section 1. Definition of industrial heritage. In: THE NIZHNY TAGIL CHARTER FOR THE INDUSTRIAL HERITAGE [online]. ICOMOS [retrieved 1. 9. 2018]. Available at https://www.icomos.org/18thapril/2006/nizhny-tagil-charter-e.pdf.

- combustion engines: stable combustion engines, historic automobiles (especially Z and Wikov), tractors (Zetor, Wikov), motorcycles, velocipedes,
- metallurgy for mechanical engineering: examples of historic iron production, models of metallurgical facilities, iron castings for decoration and practical use,
- household equipment: lamps, grinding machines, robots, irons, mangles, sewing machines, weighing scales, clocks
- equipment for trades and crafts: tools, instruments and accessories for blacksmiths, locksmiths, cobblers, butchers, bookbinders, lumberjacks, barrel-makers, wheelwrights, carpenters, bag-makers, barbers and knife-makers,
- textile machinery and equipment: manual and mechanical weaving machines, spinning machines, knitting machines, finishing machines, trial machines and equipment, samples of raw materials for textile production,
- water management: pumps, equipment from water works and treatment plants, models of water structures, irrigation equipment,
- computing/information technology: simple calculation devices, mechanical and electromechanical calculators, invoicing and accounting machines, control tills, hole-punch machines, automatic digital and analogue computers, structural elements and operating documentation of calculating machines and computers,
- medical technology: X-ray machines, electrocardiographs, massage machines, dental instruments, laboratory equipment,
- militaria: the South Moravian fortification system, weapon systems technology, military technology
- special documents, photographs, films, slides, company brochures, posters, maps, plans of production facilities, technical drawings,
- posthumous estates of important technical experts, scientists, historians and others: Viktor Kaplan, František Píšek, Vladimír List, Erich Roučka, Vítězslav Veselý, Antonín Smrček, Josef Sumec, Konrád Hruban, Jaroslav Jičínský, Vilém Jičínský, Jiří Wellner, Leopold Grimm, Stanislav Kratochvíl, František Houšť, Vladimír Bárta, Jan Krumbach, Jan Anderle, Zdeněk Zavřel, etc.,
- archive documents related to important blind or partially sighted figures (Josef Smýkal, Jaroslav Had, Klement Lukeš, etc.),
- industrial archeology,
- aids for blind and partially sighted people,
- work clothing, protective devices,
- didactic devices, technical games,
- customs administration.[93]

06.05.02. Evaluation

06.05.02.01. Development of the field and degree of authenticity

After classifying an item (object, building) with regard to its historical period and type of industry, the item is evaluated from the perspective of the development of the relevant industry in terms of predicted frequency of occurrence and degree of authenticity:

Here it is necessary to assess whether the item is an example of a widespread type of technology or production process, or whether it exemplifies a rare or exceptional solution.[94]

Depending on the frequency of occurrence, the item (object/building) is evaluated as rare (an entirely exceptional item which enables us to determine what is typical, e.g. a machine with rare modifications); unique (the only example of a rare item, e.g. the only prototype or the only surviving example, or one of very few surviving examples); a remnant (a surviving example of a certain aspect of reality, of which only a limited number of examples now exist); or an example (a

93) Technické muzeum v Brně. Available at www.technicalmuseum.cz.

94) MATĚJ, Miloš – RYŠKOVÁ, Michaela – GUSTAFSSON, Ulf Ingemar (eds.). *Technical Monuments in Norway and the Czech Republic. Technické památky v Norsku a České republice.* Ostrava 2016, p. 17.

typical item characterizing a particular situation, production process etc., which offers an appropriate illustration and demonstration of the industry/field in question, and which is widespread and still exists in large numbers in situ or in museum collections – it can be borrowed, and it documented at more than one location). A specific group consists of artworks – paintings, drawings, engravings, sculptures, etc.

In museology, the degree of authenticity (genuineness) depends on the relation between the item and the phenomenon (location, person, period) in question. As a result, the degree of authenticity of collection items may fluctuate depending on the topic. This potential fluctuation covers a range from the highest degree of authenticity (items surviving in their complete form and in their original location, items associated with producers or designers, e.g. prototypes) to the lowest degree of authenticity (fragments, partial remains, or merely information about the item). An item may only demonstrate a particular process or phenomenon if it can be demonstrably and verifiably linked with that process or phenomenon. This originality must be proved and documented using scholarly methods.[95] In the case of industrial heritage management, the degree of authenticity is essentially identical to the degree to which the item has survived intact – i.e. whether it still exists as a complete entity, in situ, or merely as a fragment or partial remains, or in the form of historical information.[96]

06.05.02.02. Heritage value

In the case of industrial heritage taking the form of a building or site (complex), the architectural importance, aesthetic value and topographic value are also evaluated; see the methodological publication for heritage management.[97] When industrial heritage takes the form of objects, it is necessary to assess whether the objects are present at a location historically linked with the technology in question (e.g. on a historic mill-stream) and whether or not the objects are present at a location that is typical of the industry in question.

For the purposes of museums, fundamental criteria for evaluating a building include the presence of the building's technological contents and the completeness of this technology (continuity of the technological flow), the presence of machinery in situ, and (if applicable) the presence of sources of energy at the site (mill-streams, boiler halls, turbine houses, steam engine halls, transmission systems, etc.).[98]

Aesthetic value is an umbrella term denoting various values which are assessed having made an impression on the evaluator when perceiving the item (building, site, object). The assessment focuses on what can be termed the final aesthetic value of the item.

06.05.02.03. Museum value

Museum value is a specific property of items assessed from the perspective of the requirements of museum practice. The item is evaluated with reference to numerous criteria derived from the museum's collection concept (see above), including its explanatory capacity and ability to be a bearer of museality; i.e. whether the item embodies information making it an appropriate subject for study and presentation, and whether it is able to bear witness to reality thanks to the information it embodies and its links with the broader context. The item is thus evaluated as being either able or unable to be a bearer of museality.

An item is always evaluated with consideration given to the development of the particular industry in the particular territory or location, compared with developments in the same industry elsewhere in Europe or beyond. What may be common in one territory may be rare – and thus important – in another territory.

In order to assist in the evaluation of items as part of the process of selection and based on the criteria outlined

95) WAIDACHER, Friedrich. *Príručka všeobecnej muzeológie.* Bratislava 1999, p. 111.

96) MATĚJ, Miloš – RYŠKOVÁ, Michaela – GUSTAFSSON, Ulf Ingemar (eds.). *Technical Monuments in Norway and the Czech Republic. Technické památky v Norsku a České republice.* Ostrava 2016, p. 16.

97) MATĚJ, Miloš – RYŠKOVÁ, Michaela. *Methodology for the Evaluation and Protection of Industrial Heritage from the Perspective of Heritage Management.* Ostrava 2018.

98) JAROŠ, Jiří. Vodní mlýn ve Slupi. Expozice mlynářské techniky. (Principy a praxe památkové obnovy). In *Muzejní a vlastivědná práce,* vol. 30. *Časopis společnosti přátel starožitností,* vol. 100, no. 3, 1992, p. 141.

Chazelles-sur-Lyon (France), Atelier-Musée du Chapeau. An authentic production site with functioning machinery – a hat workshop at a hat museum. Photograph Petra Mertová, 2002.

Chazelles-sur-Lyon (France), Atelier-Musée du Chapeau. A museum installation of original machinery in an authentic space – a hat museum – the figurine illustrates working techniques. Photograph Petra Mertová, 2002.

Chazelles-sur-Lyon (France), Atelier-Musée du Chapeau. A museum installation of original machinery with images, at a hat museum. Photograph Petra Mertová, 2002.

Stará huť u Adamova, Technical Museum in Brno (Technické muzeum v Brně). A museum exhibition of ironmaking in the Moravian karst region, installed in a former foundry. Photograph Eva Řezáčová, 2005.

09.01.01.02. Collections at an authentic space/building

Museums may work with a collection at an authentic space/building which is itself an example of industrial heritage and can thus be used for museum purposes. In such cases the building is not a collection item in its own right (though under Act no. 122/2000 Sb. it could be classified as such); it becomes an exhibited item thanks to its quality and history. On the basis of research by the National Heritage Institute, a building may be declared a cultural monument or a national cultural monument. The building may be used to present arranged exhibitions (display cases, dioramas, information panels, etc.) in an authentic space that has been adapted for museum purposes; this represents a combination of approaches typical of museums and those that are typical of heritage professionals. The topic is presented in the form of an exhibition featuring a combination of collection items and other substitutes without a direct connection to the space in which they are displayed. Visitors appreciate the overall impression of the exhibition, its attractiveness and information content. If models and functioning systems (e.g. machinery) are used, the impression and information value of the exhibition are higher than if the exhibition is static (non-functioning). The exhibition need not necessarily be directly connected with the history or original purpose of the building.

- Steyrdorf (Austria), Museum Arbeitswelt. Occupying two former factory buildings (which used to produce knives and cutlery) in Wehrgraben, a part of Steyr, the museum was created by an association which acquired the buildings in 1985. The establishment of the museum was part of a wider project to revitalize the entire area on the basis of a decision taken by Austria's Federal Heritage Authority in 1966. The museum owns mainly two-dimensional collections on the topic of labour. Its exhibitions present the transformation of the world of labour during the past 150 years.[134)]
- Kerschbaum (Austria), Horse-Drawn Railway Museum (Pferdeeisenbahn Museum & Gaststätte). This museum has been created in an original station building from the former horse-drawn railway from České Budějovice (Czech Republic) to Linz (Austria). It was built by the municipality of Rainbach. The building also houses a restaurant, training centre and apartments.[135)]
- Nový Knín, Museum of Gold Mining and Processing (Muzeum zlata). The museum is located in a historic former mint building from the 15th century on the town's main square, the former location of the Burgomaster's office in this historic Central Bohemian royal mining town. The exhibits present the history of gold mining and processing in the region from the earliest period to the 20th century, as well as showcasing the town's history, local crafts and industry, and the history of the gold panning world championship.[136)]

134 See http://museum-steyr.at/.
135 See http://www.pferdeeisenbahn.at/.
136) See http://muzeum-pribram.cz/.