Adaptive Reuse of Colomadu Sugar Factory: Between Preserving Heritage and Social Media Setting

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Abstract. Heritage building not only has historical value but also serves as a collective memory for the society. When it is older and no longer used, preservation needs to be done to keep its history. One way to preserves a heritage building through adaptive reuse, which also adds economic value to it. The historic Colomadu sugar factory built in Colomadu district area, near Solo city, Central Java, Indonesia, and then abandoned, now converted into a museum and amusement area named De Tjolomadoe. This adaptive reused tell histories and memories of the Sugar Factory's glorious past. The presence of this space is increasingly popular, in part because of the growing existence of social media. How the visitors of the museum interprets the functions of real space and virtual space, becomes the context discussed in this study. From the results of this study, we will find out how the visitors engaged in adaptive reuse of space which is associated with the visitor's needs of social media.

1. Introduction
In a suburb of Solo city, Central Java Province, Indonesia, there is an old sugar factory that the function converted into a museum, meeting area and business center named De Tjolomadoe (Figure 1). The sugar factory, which was built during the Dutch colonial era in 1861, has Empire Indische design style (Figure 2). This site named Colomadu Sugar Factory, was founded by Mangkunegara IV, an aristocrat from the island of Java, according to Wasino [1]. The ownership of this factory shows the power of Mangkunegaran Palace nobility among other kings in Nusantara (before it was named Indonesia). This factory creates a socio-economic life of the surrounding community and creates cultural memory on this industrial site. During the Dutch colonial period, sugar production from Java was one-fifth of the world's sugar needs, Knight [2]. This demand became Mangkunegara IV's starting point to build his sugar factory on his land. The Dutch government at that time has acted as the supervisor that gives permission and manages factories professionally. R. Kamp, an administrator from Germany who worked in Indonesia during Dutch colonial era, designed the factory building with European style. The factory building was surrounded by Indische imperial style houses, which was once reserved for factory employees from Europe.

Colomadu sugar factory in 1998 was declared officially closed by the government. This industrial building, which was once the largest sugar factory in Southeast Asia ended their production. The aging equipment conditions, the Indonesian economic crisis, the increasing amount of imported sugar, and the decreasing sugar cane land as the main ingredient for sugar making, which was increasingly erode due to housing developments, was allegedly caused the closure of this plant. The setbacks process before factory finally closed has begun in the 1992. Hundreds of contract workers whose lives depend on the sugar factories were laid off. There was a change in socio-economic conditions of the surrounding community, as a result effect of the closure of the Colomadu sugar factory.
The combination of European buildings characteristics juxtaposed with the style in the tropics area, bring up the architectural and interior forms. The high ceiling and walls as the characteristic of European style, combined with the tropical roof shape and the use of leaner steel columns replacing a Roman model that usually used thick columns. The dominant feature in this sugar factory is the presence of a chimney, which is 45 meters high and exceed other viewpoints from a distance. In the 1990s, sugar cane land still dominated the factory’s surrounding area, so that the position of the sugar factory was very stand out among the surrounding environment. Time changing have shifted the dominance of the building, which began to erode slowly with the emergence of residential buildings, hotels, and offices that emerged between the paddy fields or sugar cane that remained. Since it was closed in 1998, Colomadu Sugar Factory was not used as an industrial space and was ignored without optimal utilization. As a result, the building becomes neglected and damaged. In 2016, the government of the Republic of Indonesia decided to conserve factory buildings that has been abandoned for two decades. The government converted this building that is on 13 ha of land into museums and business center with adaptive reuse concept [3]. This utilization raises tourist’s interest who come to Surakarta city. They were come to witness how the government converted this space with the history stored in it, then upload it on their social media.

The aim of this paper is to explore how heritage building supposed to convert to meet nowadays needs that still can support the building to keep profitable and also sustainable. When people cannot utilized the building into the previous function as an industrial site, then adaptive reuse into commercial facilities become a better choice. As this building converted from production facility into a museum as a place of education and also as an entertainment venue, it can allow people to use it in urban needs to take their picture in a historical place and share it to social media so that the building can get economical value, social and environmental benefits more.

2. Method
The aim of the study is to explore how heritage building should be transformed to meet contemporary needs; not only to support the building, but also to make it profitable and sustainable. To achieve this aim, qualitative research used as the methodological approach.

Based on the determined approach, data collecting was done qualitatively in two stages. First stage is collecting secondary data or desk research. In this stage, all relevant data from various sources, such as books, journal articles and websites regarding heritage building and social media setting to give general information about the topic as well to analyse previous studies that had been done in relation to the topic. The literature data are used to support the understanding of how a heritage building as cultural material related to space as a social media setting. The next stage was the primary data collection through observations to see visitor’s behaviors that comes to the location, whether they were looking for historical information about the site or just treat it as a place that bring previous nostalgic environment so it can become a site for taking photographs.
Both primary and secondary data is analysed using descriptive analysis method to gain conclusion related to how the visitors use the heritage space whether the heritage building has meet the contemporary needs or not.

3. Results and Discussions

3.1. Adaptive Reuse Colomadu Sugar Factory
Colomadu Sugar factory has existed for 157-years and the adaptive reuse concept was used to preserve this heritage building. The Ministry of State-Owned Enterprises is the organizer and manager of the conservation of the former sugar factory Colomadu. The selection adaptive reuse of the building utilization related to economic, social and environmental sustainabilty based on Bullen [4], Conejos, Langston, & Smith [5] and Mısırlısoy & Günsç [6]. With this concept, the value of buildings that are not functioning can be used into more profitable space by attracting as many visitors as possible optimally. Based on research by Shen & Langston [7] the authorities must act quickly to reap economic, social, and environmental benefits through the concept of potential adaptive reuse (ARP). When heritage buildings have a lot of potentials and being late in action of conservation, it will impact on accelerating the damages. Breathing ‘new life’ into existing buildings carries with it environmental and social benefits and helps to retain our national heritage.

The process of implementing adaptive reuse has many obstacles due to the occurrence of many vital damages due to the age of the building, the weather, and also vandalism. The effort in converting this old building is to adapt into a new function, by returning it into the original form of the building. The conservation team must work harder to collect minimal information and data due to lack of regular recording stored at the Colomadu sugar factory (Figure 3). When the factory was declared closed in 1998, Indonesia was experiencing economic crisis and political instability with the changes in the power of the New Order regime to the reformation era. Many of the records and data about the Colomadu Sugar are lost or not managed well. Following Blozies [8], preservation is not linked to the merits of the old structure in place on site. It is a political tool to oppose a project that may have a perceived undesirable consequence, such as increased traffic congestion or blockage of view.
The ongoing political rulers decide how a place need to be converted and utilized according to the interests of their program. In this context, the Indonesian government in 2018 determined that the former Colomadu sugar factory which had been abandoned to be converted and utilized for economic and social values that were more profitable for the country. There are many building maintenance problems that wordiness must be considered related to the conservation. This old building that holds a history of human life was then designed and processed by the adaptive reuse team of architects to preserve the value of memory stored on objects found in sugar factories. The name of the place formerly known as the Colomadu sugar factory, was changed into De Tjolomadoe (Figure 4). This word is pronounce with the same sound and meaning, although the form of writing is different between Colomadu and Tjolomadoe. The main room of De Tjolomadoe functions as a museum that displays the historicity of the Colomadu Sugar factory's establishment until it was closed. The function of the museum as a place of education but also as an entertainment venue [9] and this is the most offered to visitors.

The historical setting seems to manifest themselves in the configuration of the spatial program, intervention by socio-cultural, and economic dimensions around the object [10]. The tourist needs that captured through the procurement of this place make the design planning focused on fulfilling urban human desire as De Tjolomadoe's target market. This museum is then equipped with a restaurant and meeting room inside with historical visualization as a room setting. Watson & Waterton [11] argued that visual culture is interpreted as a narrative of identity, which formed of visuality that is a part of the process by which cultural heritage is produce. The visualization that raise from heritage buildings on the ex Colomadu Sugar factory is an embodiment of the concept of contemporary interior design and architecture, by utilizing a former of the sugar factory that has been rusted, damaged and useless (Figure 5). The color of the sugar cane grinding wheels which were previously black iron was coated with gray anti-rust material. The floor is combination yellow-black squares, according the origin factory floor design patron, with the ornament on the high wood door and the red pole as typical of buildings influenced by the European style. The interior design in this room bring up an atmosphere unlike in a factory, but a comfortable museum, with large machines and kettles as material that tells the condition of the sugar factory in the previous year's laments (Figure 6).

3.2 Tourist and Social Media
Visitors and tourists who visit the De Tjolomadoe museum tend to see this former factory as a setting to take pictures. Social media play a role in keeping tourists connected to those who stayed in the place. Some visitors do selfie activities or ask for help from other visitors to document themselves with the settings in the room. Various types of social media sites like Facebook, Tumblr, Flickr, and Instagram, the selfie has become a powerful means for self-expression [12]. The need to document themselves in rooms that have settings, is a habit that has emerged since the discovery of digital’s technologies that facilitate human relations to their social media. Major news like The Guardian and The New York Times reported the phenomenon of compulsive self-representation on social media sites, Carr [13]. This dual position as actors and narrators give reason to believe that social media not only shape tourist photography, but also the gaze at the destination builds on networked travel the concepts of audience
awareness in tourism. Most of the research fixates on the tourist gaze and social media has glanced at the role of social media mediating the tourist gaze, Joel & Laura [14].

Based on the observation that the researcher did, about two out of the three visitors present at the De Tjolomadoe museum are more in taking photo activities (Figure 7) at the museum location in comparison to those observing the components of the former sugar factory which told the history of the success of the Colomadu sugar factory (Figure 8). It seems that this phenomena need to be analyzed further by the management of the Adaptive Reuse Colomadu sugar factory. Some damaged building walls are processed and used as an attractive visual media as photo settings. Likewise, the tree trunk inside the building are deliberately not cut down, but exposed to the cafe room, so that they appear as accessories for space components. In the museum itself, there are two additional room for photo activities using spotlight. Some visitors are willing to queue to do photo sessions in this room, which are then they displayed on their social media. They are preserving the value of this heritage building juxtaposition with the needs for using as a photography setting area.
The technology generates selfie phenomenon, Senft & Baym [15] argued that theorists see this as a cultural artefact and social practice. A selfie as a way of speaking, also an object to which actors (both human and nonhuman) respond (Figure 9 and Figure 10). This need cannot be deny becoming a human communication trend through the use of technology. Cross-media interaction between various media and technology supports social production of heritage and creates ‘infrastructures’ that act as places of cultural production and lasting values at the service of living heritage practice, according to statement Giaccardi & Palen [16].

The social and technical ‘infrastructures’ of cross-media interaction allow for new experiences with tangible and intangible forms of heritage and natural and cultural heritage. Exploration of technology has created media that make it easier for humans to convey to the world what they have seen and observed and shared to enjoy together. Millions of people are taking and sharing selfies and viewing of others every moment. It's constructing the social and cultural importance of the digitally shared self-portrait [17]. Photography is a material culture that marks the presence of someone in a location that has a memory bond for the owner. The visitors' ties with a heritage building, including museums, are not only interpreted by the visitor’s activities that paying attention and observing display objects presented in the museum space, but also with social media exploration.

Social media can enable informal ways of drawing together this knowledge by providing tools for participatory engagement. It has the potential to distribute new forms of learning. In social media, users/visitors can organize ideas and interpretations to create meaningful associations between their own and others experiences [18]. Through focus at visitors' interest changing in a heritage building that is divide between the need to get information about the history and cultural memory found on the site, there is a link between visitors and the need for existence on social media. That problems becomes an assignment for those who develop the museum De Tjolomadoe by developing spots to take pictures around spaces that display objects and historical explanations.

As an adaptive reuse site to increase economic value from heritage building, the developer should optimize every space in De Tjolomadoe museum to attract visitors as much as it can. The purpose of the museum being educational and entertaining at least should give benefits to the owners. The others, the visitor’s engaged not only focusing on getting information connected to historical and memorial experiences, which was kept in the heritage building. They need new explorations to mark their social media as the area history setting kept in this place.

4. Conclusions
In 1998, the Colomadu sugar factory was officially closed by the government. For many reasons, such as the aging conditions of the equipment, the Indonesian economic crisis, and so on, this industrial building, which was once the largest sugar factory in Southeast Asia ended their production. Abandoned for many years without certain use and function, in 2016, the Indonesian Government decided to reuse the building and converted it into museum and business center with the adaptive reuse concept. The abandoned building then transform into a facility that meets nowadays need that is not only sustainable but also profitable. Combination of historical value and grandeur building with Empire Indische style design, make De Tjolomadoe soon enough, become a popular tourist destination for visitors not only from Surakarta but also from another area.

As a museum, this building serves as a place of education where visitors able to receive information and knowledge about history and memories of the sugar factory in the past and how it works, who the employee, and so on. The interior space itself brings up an atmosphere unlike in a factory, but a comfortable museum, with large machines and kettles as material that tells the condition of the sugar factory in the previous year's laments. However, with the popularity of social media in the recent years, visitors and tourists who come to the De Tjolomadoe museum tend to see this former factory as a setting for a space to take pictures. The observation shows that two out of three visitors are more excited in taking pictures and share them in their social media, rather than observing the components and getting more knowledge about the former sugar factory which told the history of the Colomadu sugar factory glorious past. Although, there is no doubt that social media play an important role as a marketing tool to make De Tjolomadoe more popular and also to make tourists connected to those who stayed at place, however, one cannot be sure what messages the visitors received when they visited the museum. They whether learn and get new knowledge about the sugar factory, its history,
and memories or only to have pictures to be shared with their social media. It is true that social media enable informal ways of drawing together this knowledge by providing tools for participatory engagement. It has the potential to distribute new forms of learning. And at its peak of popularity, social media should be used as smart and as wise as possible. Rather than just preparing and unique spaces for visitors' to take pictures only, the museum should also use these spaces to deliver the museum's information and knowledge as part of the learning experience. To meet the need of today's urban visitors of sharing the experience through social media, museums today should prepare to use social media not to promote their facility, but also as part of the learning experience.

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