



Sawahlunto Revisited: Some Notions on Urban Regeneration of Former Old Mining Town

Peninjauan Kembali Kota Sawahlunto: Beberapa Catatan Tentang Regenerasi Eks-Kota Tambang

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ABSTRACT

Adaptive reuse is one of the dynamic intervention activities following the current conservation paradigm, from the maintenance of cultural heritage objects to a dynamic utilization action. Nominated in 2015 and confirmed in 2019 as a UNESCO World Heritage Site, Sawahlunto, locally known as Kota Arang, is facing several issues on urban regeneration for the sustainability of the city. After the peak of coalmining period, the historical sites finally closed in 2001. Sawahlunto was left with massive and significant historic old mining urban heritage assets, tangible, and intangible. This paper aims to analyze the adaptive reuse activities carried out in the historic coal mine city of Sawahlunto concerning the regeneration of the city's cultural heritage. The research approach used was descriptive qualitative using data collection methods from the field and case studies taken from the academic literature. This study shows that the success of adaptive reuse activities as an effort of urban regeneration is based on the involvement and satisfaction of the community as the living heritage in the historic city. Community involvement in creating spaces and turning them into cultural spaces to conserve the city's cultural heritage can foster a sense of belonging and a sense of identity, which will be an essential factor in its sustainability. It can furthermore generate and stimulate economic activities as well.

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ABSTRAK

Adaptive reuse merupakan kegiatan intervensi dinamis sesuai paradigma konservasi saat ini, yaitu pemeliharaan benda cagar budaya menjadi tindakan pemanfaatan yang dinamis. Setelah dinominasikan pada tahun 2015 dan dikukuhkan pada tahun 2019 sebagai Situs Warisan Dunia UNESCO, Sawahlunto, yang dikenal sebagai Kota Arang, menghadapi beberapa masalah terkait regenerasi kota untuk keberlanjutan kota. Setelah masa jaya penambangan batubara berakhir, dan situs sejarah ditutup pada tahun 2001, Sawahlunto memiliki aset warisan besar berupa perkotaan pertambangan tua bersejarah yang signifikan, yang berwujud, dan yang tidak berwujud. Kajian ini bertujuan untuk menganalisis kegiatan adaptive reuse yang dilakukan di tambang batubara bersejarah kota Sawahlunto terkait regenerasi cagar budaya kota. Pendekatan penelitian yang digunakan adalah deskriptif kualitatif dengan menggunakan metode pengumpulan data dari lapangan dan studi kasus yang diambil dari literatur akademik.

Studi ini menunjukkan bahwa keberhasilan kegiatan adaptive reuse sebagai upaya regenerasi kota didasarkan pada keterlibatan dan kepuasan masyarakat sebagai living heritage di kota bersejarah. Keterlibatan masyarakat dalam menciptakan ruang dan mengubahnya menjadi ruang budaya untuk melestarikan warisan budaya kota dapat menumbuhkan rasa memiliki dan identitas, yang akan menjadi faktor penting dalam keberlanjutannya sehingga dapat lebih menghasilkan dan merangsang kegiatan ekonomi.

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1 Introduction

Cultural heritage is significant for humans as their identity, self-esteem, and dignity. Given the importance of this cultural heritage, many problems will arise when the cultural heritage is damaged, destroyed, or lost from its context. Conserving cultural heritage is the formation of representations of meaning which will eventually form an identity. A historic city is a cultural heritage which is the identity of its people where traces of the past are represented in the form of a tangible physical, cultural heritage, and intangible meaning (Martokusumo & Wibowo, 2019); therefore, the identity of a historic city must follow cultural values of today's society. In addition, the urbanization process often results in the homogenization of elements of the city and its environment so that it can threaten the intangible cultural heritage; therefore, it is crucial to carry out a conservation in the urban context on cultural spaces and places as a place for intangible cultural heritage (Bandarin, 2016).

Urban regeneration of historic centers contributes significantly to improve their environmental, economic and socio-cultural quality to play the main driver of change. Project developments in historical areas can attract local and global visitors to discover major heritage attractions. In addition, improvements in the physical environment, social order, and urban spaces can increase their adoption as places of social interaction and gathering. Therefore, urban regeneration tends to reinforce residents' sense of identity and sense of place in an emerging global environment (Norberg-Schulz, 1980).

Urban regeneration aims to transform the nature of a city or an area by involving the local inhabitants and various stakeholders. Thus, the need to encourage community participation and bottom-up approaches can be seen as the basis to grow the sense of belonging and identity. Conservation of local cultural heritage can bring the uniqueness of a place, which can be achieved by providing a historic area that would dynamically preserve the city's identity in the present and future, one of which is by taking adaptive reuse.

Sawahlunto, also known as Kota Arang, is geographically located in the heart of Bukit Barisan Mountains, West Sumatera, in a basin, about 250-260m above sea level. The history of its urban development cannot be separated from the whole coal mining and industrial associated activities in West Sumatera. Nominated in 2015 and acknowledged in 2019 as UNESCO World Heritage Site, the Ombilin Coal Mining Heritage of Sawahlunto (OCMHS) represents a significant exchange of mining technology between Europe and its colonies in the mid-19th and early 20th centuries. Ombilin Coal Mining Heritage of Sawahlunto is an outstanding example of a technology ensemble specifically designed to achieve a maximum efficiency in natural resource management, namely strategic coal mining.

In 2000 coal mining activities ceased, the city of Sawahlunto became a 'dead city' because the population abandoned it, the majority of whom were mining workers. Started with Peraturan Daerah, number 2 in 2001 regarding the Vision of the City of Sawahlunto and designated as a UNESCO World Heritage in 2019, the economic base of the city of Sawahlunto shifted from a mining city to a cultural mining tourism city based on conservation. However, efforts to improve the city based on conservation by utilizing both tangible and intangible industrial heritage assets have not been carried out optimally. Considering the historical significance of the coal industry, which has a long history in Europe, and changes in the economic base strengthened by the establishment of UNESCO World Heritage should place the city of Sawahlunto in an international conversation that must be anticipated with the readiness

of the city of Sawahlunto to go international. the Sawahlunto city government has made efforts to improve and enhance the conservation-based urban environment, one of which is by the adaptive reuse of cultural heritage buildings. These activities are carried out without involving the community (through a top-down approach). Furthermore, adaptive reuse that has been done has not had a significant impact on the surrounding environment.

As stated by Moughtin (1992) and Trancik (1986), in a historic city center with many cultural relics or artifacts, it is appropriate to have a public open space as a representation and identity of the local community with its environment, and until now it has not existed in the city of Sawahlunto.

This paper aims to analyze the adaptive reuse activities carried out in the historic coal mine city of Sawahlunto concerning the regeneration of the city's cultural heritage. The research approach used was descriptive qualitative using data collection methods from the field and case studies taken from the academic literature.

2 Literature Review

Urban regeneration is a tool for upgrading a city's social-economic or environmental services that deal with existing structures and living communities (Alseragi et al., 2018). However, each city's case is unique and has its context, sharing for some standard drivers and goals. Roberts et al. (2000) stated that urban regeneration involves a comprehensive attempt to retrieve the decline in urban areas in physical, social, and economic functions in the urban fabric, including historic cities.

Urban regeneration must be carried out with the concept of sustainability to be successful and sustainable in the long term. Roberts et al. (2000) also defines *sustainable urban regeneration* as a comprehensive discourse and action in solving urban problems to be sustainable in an area's socio-economic and physical environment. However, in historic cities, protection of cultural heritage is critical, as it provides the feeling of having an identity and a sense of place, which is a significant part of the quality of life and sustainability. Heritage-led regeneration then is regarded as a credible notion utilizing urban heritage assets to be among the resources promoting sustainable development.

Heritage is not only about the past, nor is it only about objects from the past, thus heritage is a process of attachment, an act of communication, and an act of creating/recreating meaning and identity-making and emotion when transmitting and receiving memories and knowledge (Smith, 2006). Cultural heritage is significant for humans as identity, self-esteem, and dignity. Given the importance of this cultural heritage, many problems will arise when the cultural heritage is damaged, destroyed, or lost from its context. Tweed and Sutherland (2007) say that cultural heritage is a broad category and includes a variety of phenomena. This theory is followed by Elnokaly and Elseragy (2013) that cultural heritage is vital for many people in the sense of belonging and cultural identity.

Cultural heritage conservation is an effort to protect in response to the dynamics of the times. The term conservation started in the Venice Charter (1964), which has developed until now. In essence, there has been a paradigm shift in conservation discourse. Current conservation activities are management of change that maintains the values in a place and expands the concept of conservation from just maintenance to become a dynamic action that anticipates positive progress or change (Burra Charter, 2009).

The concept of cultural heritage originates from Europe (Jokilehto, 1999; Smith, 2006), emphasizing the conservation of monuments or the authenticity of materiality and aesthetics. The term conservation has been declared since the 1964 Venice Charter and it has evolved. In essence, there has been a shift in meaning that current conservation activities are management of change that maintains the values that already exist in a place and expands the concept of conservation from just maintenance to become a dynamic action that anticipates positive progress or change.

The Hoi-An Protocol (2009) asserts that the difference between conservation in Asia and general conservation originating from Europe is the assessment of intangible, non-material qualities, namely: values, impressions, emotional impacts, religious contexts, multisensorial processes, and creative manifestations, which are spiritual messages embodied within beyond existing materiality. The intangible,

non-material qualities that exist in the community are the historic city's living heritage, which is very important for the sustainability of the historic cities. Therefore, it is crucial to protect and preserve the living heritage in historical cities (Chung, 2005; Kwanda, 2009).

Burra Charter (2013) states that actions or interventions in the conservation of cultural heritage can be one or combinations of a) Prevention of damage or maintenance as a form of minimum intervention; b) Preservation of the initial condition; c) Consolidation; d) Restoration; e) Rehabilitation; f) Reproduction; g) Reconstruction and h) Adaptation.). From eight heritage interventions, adaptation is a dynamic intervention fit for the objectives of being relevant to current needs. Adaptation by providing new functions is referred to as adaptive reuse. Bromley et al. (2005) stated that adaptive reuse is a form of cultural heritage conservation. Adaptive reuse can turn cultural heritage assets into places that can be accessed and used and ensure new spaces for sustainable use. Rather than destroying and building new ones, reuse is generally the most effective resource strategy, especially if conservation strategies are incorporated into the design (Ball, 1999).

3 Sawahlunto a Former Old Mining Town

Nominated in 2015 and inaugurated in 2019 as a UNESCO World Heritage Site, the Ombilin Coal Mining Heritage of Sawahlunto represents a significant exchange of mining technology between Europe and its colonies in the mid-19th and early 20th centuries. The World Heritage Sites is a meaning of creation process that identifies globally significant heritage sites that, in determining them, create or recreate the universal importance and meaning of these sites (Smith, 2006).

The city of Sawahlunto is about 2.5 hours' driving from the city of Padang, the capital and largest city of the Indonesian province of West Sumatra. As a UNESCO World Heritage Site, the former old mining town committed to improve the quality of the historic city by bringing back historical values that must be preserved to benefit the community. It is interesting to visit this place and conserve the heritage values. Located in a basin about 250-260 meters above sea level, Sawahlunto has beautiful views of the valley where the Lunto and Sumpahan rivers meet.

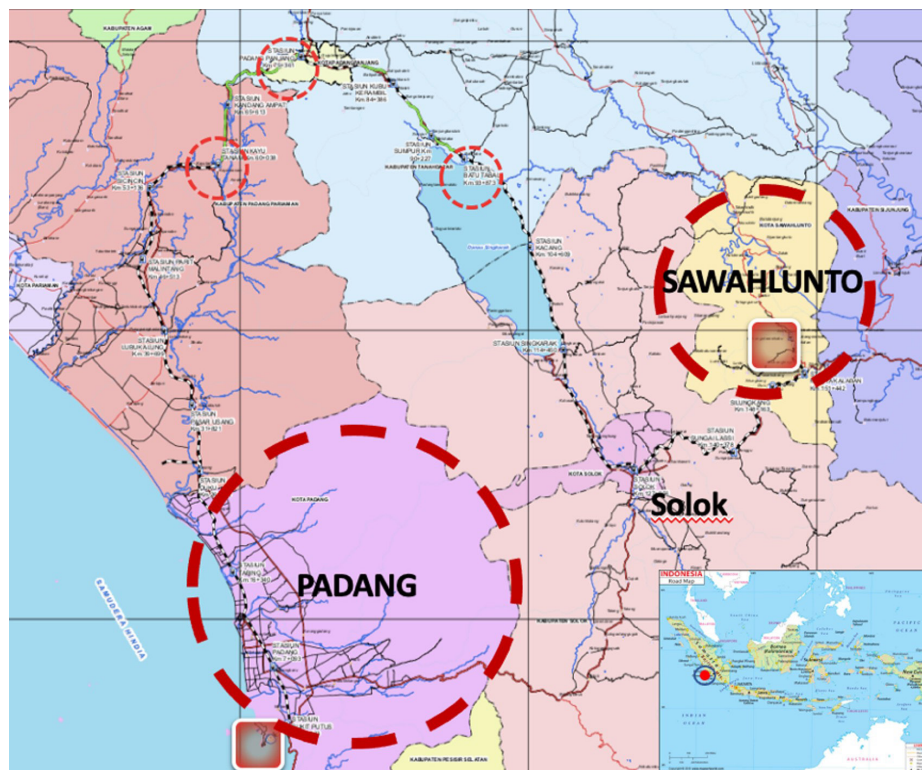


Figure 1 Location Map of Sawahlunto

The city of Sawahlunto is a cultural heritage site for the old colony of coal mining industry. City-scale heritage site has massive cultural heritage assets, both tangible and intangible, spread out throughout the city. The former old mining town is inhabited by several ethnic groups, including the Minangkabau, Javanese, Sundanese, Bugis, Batak, and Chinese, who live in harmony while they still carry out their respective traditions and beliefs. Accordingly, with these unique geographical, social, and cultural conditions, the city of Sawahlunto establishes an industrial heritage site that is essential to visit in Indonesia.

The history of the city of Sawahlunto begins with the discovery of high-quality coal in 1867 by a Dutch geologist named W.H. De Greeve, who died not long after the discovery. Exploration was continued by R.D.M. Verbeek, who confirmed the existence of substantial content of high-quality coal in Sawahlunto. Because of this discovery, the Dutch East Indies Colonial Government immediately built facilities and infrastructure to facilitate coal exploitation in Sawahlunto. As a mining city, facilities and infrastructure development are always related to mining activities. Along with its development, other city facilities have been built, such as housing for mining workers, power plants, administrative offices, hospitals, schools, and markets. The city of Sawahlunto is the oldest and largest coal mining city in Indonesia, with traces of the Industrial Revolution to Europe. It can be recognized through its cultural heritage artifacts.

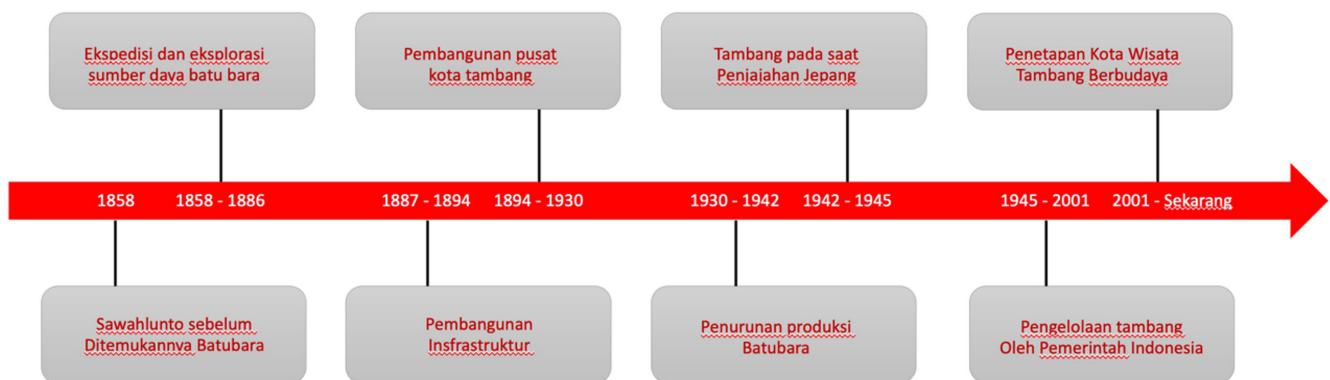


Figure 2 The timeline of the Sawahlunto's history as a coal mining town

After mining activities ceased in 2000, the city of Sawahlunto became a 'ghost city' because the significant population who were mining workers abandoned it.. Started with Peraturan Daerah, number 6 in 2003 regarding the Vision of the City of Sawahlunto and the designation as a UNESCO World Heritage Site in 2019, the economic base of Sawahlunto shifted from a mining-based city to a cultural mining tourism-based city. However, efforts to improve the city based on heritage conservations, both tangible and intangible, have not been carried out optimally. Considering the historical significance of the coal mining industry, changes in the economic base and strengthened by the establishment of UNESCO World Heritage should place the city of Sawahlunto in an international conversation. Therefore, in addition to conserve the cultural heritage sites, Sawahlunto must be able to adapt to the current needs of local, national, and international communities.



Figure 3 The Old Town of Sawahlunto. Source: <https://jejakkolonial.blogspot.com>

The City Government of Sawahlunto has made efforts to improve and enhance the conservation-based urban environment. One of which is by the adaptive reuse of cultural heritage buildings however these activities are carried out without involving the community or through a top-down approach. As a result, adaptive reuse that has been done in Sawahlunto has not had a significant impact on the surrounding environment.



Figure 4 Cultural heritage buildings that have been adaptively reused in the Kantoor Ombilin Mijnen environment. Source: Author (2021)



Figure 5 Ambience of the Outdoor Environment of the Ombilin Mijnen Office Building. Source: Author (2021)

4 Case Studies on the Adaptive Reuse

4.1 Adaptive Reuse of a Villa in Lakhnu Village, India

Lakhnu is a village consisting about 4000 people. It is located in North India, about 150 km southeast of Delhi and 40 km northeast of Agra. In this village, there are minimal infrastructure, transportation, and medical care which can only be obtained from the nearby town of Hathras. The people of Lakhnu village also have a low literacy level. Since 2010, Curtin University has been working with Australian non-governmental organizations to find ways to improve the quality of life in the village of Lakhnu, including the restoration of a building from the late nineteenth century that was initially built as a guesthouse and later it is used as a village school. In 1990 the building was abandoned. From the study results, it is pretty clear that the place has deep meaning and significance for the local community. The approach taken by the researchers is not only by a straightforward protection from old buildings but also it uses adaptive reuse to suit the needs identified by the community to facilitate sustainable use. Surveys and workshops were conducted to assess community needs. The survey results found that the community's need for education aligns with the community's desire to use the building as an educational facility. Restoration of old buildings will not only add a symbolic value and an identity to the community, but the adaptive reuse of these buildings as educational facilities will provide a means to meet the urgent needs of the community. Community involvement in the construction process is vital in this activity. Another essential thing in cultural heritage preservation activities is funding. Accordingly, The Villa Lakhnu project focuses on developing and providing educational infrastructure for rural communities so that it has the opportunity to apply for funding from Sarva Shiksha Abhiyan, which is a state government fund in India allocated for primary school education needs.



Figure 6 and 7
(Source: Stephens & Tiwari (2014))

4.2 Coal Drop Yard, London United Kingdom

After a lengthy renovation period, Coal Drops Yard finally was opened in November 2018. It is London's newest shopping and dining precinct at King's Cross, which is one of the most ambitious regeneration projects in the city of London. This area was designed in Victorian times when all of London still used coal as fuel.

Once a coal warehouse, the Coal Drops Yard, had been cleaned up and ready for a completely different purpose, it was renamed as a 'luxury' and unique shopping area. The Coal Drops Yard consists of two main buildings and the Eastern Coal Drops built-in 1851 and the Western Coal Drops in 1860. This project was the latest stage in King's Cross development and had been in progress for 18 years. What was once a no-man's-land railroad, with a negative reputation, had become a place with new functions for creativity, technology, and a place to shop. This area includes the Coal Drops Yard and integrates the beautiful Regent's Canal on the Southside, and new pedestrian access has been created to connect the new area with King's Cross and St Pancras International Stations.



Figure 8 and 9 Coal Drop Yard, London.

(Sources: <https://www.kingscross.co.uk/back-to-the-future>;

<https://www.bam.co.uk/how-we-do-it/case-study/coal-drops-yard-king-s-cross>)

4.3 Zollverein Mine Industrial Complex in Essen Germany

The Zollverein XII Coal Mining Industrial Complex is an important example of primary industry in Europe of great economic significance in the 19th and 20th centuries. The industrial complex includes a complete installation of a historic coal mining site: mine pit, coking plant, railway line, miners housing, and supporting facilities. This mine is very concerned about the architectural quality of its buildings from the Modern Movement. Zollverein is also a monument to industrial history reflecting an era in which, for the first time, globalization, and the interdependence of economic factors around the world played an important role. Zollverein was named one of the UNESCO World Heritage Lists in 2001. A development team formed in 1988 for the Ruhr Basin, an area in Germany once was known as the industrial center of Europe, which in 1950 experienced the effects of the end of the industrial era. However, many buildings adapted as museums, the construction of the Emscher Park International Building Exhibition made a breakthrough. The Emscher Park International Building Exhibition's success has enabled the public to accept witness to an industrial culture and its significance in social history. In 1999 a Ruhr Industrial Heritage Routes network was formed with the most important industrial monuments (Figure 10) as anchor points followed by theme routes combining a long thematic adventure journey.



Figure 10 and 11 Zollverein Mine Industrial Complex.
(Sources: <https://www.zollverein.de/zollverein-unesco-world-heritage-site>)

5 Adaptive Reuse in Sawahlunto

Urban regeneration aims to transform the nature of a city or an area by involving the local inhabitants and various stakeholders. Thus, the need to encourage community participation and bottom-up approaches can be seen as the basis to grow the sense of belonging and identity. Conservation of local cultural heritage can bring the uniqueness of a place, which can be achieved by providing a historic area that would dynamically preserve the city's identity in the present and future, one of which is by taking adaptive reuse.

The old mining town of Sawahlunto needs to utilize its massive tangible and intangible heritage that spread out throughout the city as a conservation effort. The city government of Sawahlunto has made efforts to conserve cultural heritage very well. However, community involvement is still very lack; this is because the understanding of cultural heritage preservation is still focus about tangible cultural heritage and it is more of a top-down system. The current understanding of cultural heritage, especially in Asia including Indonesia, still emphasizes on the intangible cultural heritage that resides in the community as living heritage. The adaptive reuse intervention that has been carried out on the buildings surrounding the iconic Kantor Ombilin Mijnen building is based on the city government's desire to make a cultured mining tourism city with many museums. The new museums adapted for reuse have not been able to attract community involvement, interaction, and cohesion between citizens; thus, it has not created a sense of place for the community, so the Kantor Ombilin Mijnen Building and the open space area next to it cannot yet be said to be the identity and face of the city Sawahlunto.

As Logan (2002) and van Oers (2000) pointed out that in most countries of Asia, the Western influence on built form came about directly through colonialization. Cultural layering is a significant attribute for most Asian cities since they reveal stories about stages and phases in spatial production and societies. In Sawahlunto, the rich history of the coal mining industrial past can still be recognized through its tangible heritage, including the coal mining sites.

Thus, the urban history of Sawahlunto with its local-indigenous Minangkabau cultures and colonial industry influences will not only make Sawahlunto a cultural tourism destination but also bring forward the existence of industrial heritage in Indonesia.

6 Conclusion

This study shows that the success of adaptive reuse activities as an effort of urban regeneration is based on the involvement and satisfaction of the community as the living heritage in the historic city. Community involvement in creating spaces and turning them into cultural spaces to conserve the city's cultural heritage can foster a sense of belonging and a sense of identity, which will be an essential factor in its sustainability. It can furthermore generate and stimulate economic activities as well.

This study also emphasizes the utilization of tangible heritage for regenerating effort with adaptive reuse as the intervention; however, further study is needed to emphasize the living heritage as the bearer of the intangible heritage in Sawahlunto. Awarded in 2019 as a UNESCO World Heritage Site, the latest development has designated Sawahlunto as a coal mining-based Tourism City in West Sumatra. The utilization of historic fabrics leads to several problems and challenges, especially in integrating the remnants of industrial assets for the current needs. Undoubtedly, the distinct character of Sawahlunto, shaped by colonial mining industry tangible heritage and all the intangible socio-cultural associated traditions and events, will be expected to contribute to the improvement of the urban living quality, socially and culturally.

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