

Analysis of Strategies to Overcome the Negative Stigma of Recycled MSME Products: A Case Study of Used Tire Waste Processing in Sidenreng Rappang Regency

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Abstract

The implementation of a circular economy holds significant potential to support environmental sustainability and economic growth. However, it still faces key challenges, particularly the negative public stigma toward recycled products and a sense of social prestige that discourages people from using them. Therefore, this study aims to conduct an in-depth analysis and identify solutions to address these issues. This research employs an exploratory qualitative method with a case study approach, focusing specifically on micro, small, and medium enterprises (MSMEs) that process tires in Sidenreng Rappang Regency. Data were collected through observation, semi-structured interviews, and documentation. Informants were selected using purposive sampling, snowball sampling, and convenience sampling. The data were analyzed using the Miles and Huberman model, which includes data reduction, data display, and conclusion drawing and verification. To ensure data validity, triangulation was carried out by comparing information. The findings reveal that the implementation of a circular economy through used tire recycling businesses in Sidenreng Rappang still faces several obstacles, particularly in production due to limited raw materials; in marketing, which remains suboptimal and highly dependent on intermediaries; and in financing, as business capital is constrained by the lack of accessible funding support. On the other hand, public stigma toward recycled products is driven more by psychological and cultural factors – especially feelings of social prestige – rather than by product quality, which is actually quite good and durable. According to, MSMEs require tangible support in the form of easier access to capital, broader promotional efforts, and affirmative policies from local governments. Meanwhile, strategies to reduce stigma can be implemented through improving product quality and providing warranties, public education, stronger branding, the use of digital marketing, and active government involvement in promotion and supportive regulations.

Keywords: *Recycling; Circular Economy; Used Tire Waste; Negative Public Stigma; Small and Medium Enterprises (SMEs)*

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INTRODUCTION

Environmental preservation is an urgent need to address, particularly the waste problem that threatens the environment and public health (Sumartan et al., 2023). An effective solution to address this is by implementing circular economy principles, namely recycling

waste into high-value products while simultaneously creating sustainable business opportunities (Feldman et al., 2024; Prush et al., 2024; Bocken et al., 2025).

Controlling the amount of unprocessed waste can be started from home-based businesses by using a circular economy approach, which is in principle based on the 3R concept (*Reduce, Reuse, Recycle*) (Kristianti et al., 2021; Donner et al., 2021; Evertsen et al., 2024).

One of the most abundant types of waste in Indonesia is used tires, estimated at 11 million tons. If not properly managed, they can cause various negative impacts on the environment. Undecomposed tire waste will certainly take up space. Furthermore, tire waste also has the potential to increase the carbon footprint and contribute to climate change (Dzulfikar et al., 2024). To overcome the accumulation of tire waste, a circular economy can be implemented by converting it into products with economic value. However, implementing a circular economy faces the challenge of changing people's habits regarding the resulting products (Djuniardi et al., 2024). Public perception of recycled waste products is still often underestimated (Hutomo et al., 2025).

One area that has MSMEs producing recycled products from used tires is Sidenreng Rappang Regency. Based on initial observations during interviews with MSMEs whose products are made from recycled tires (March 12, 2025), it was found that the main problem faced is the lack of interest in these products, due to negative perceptions and stigma in society, most people also feel embarrassed to use recycled products.

The Head of the MSME Division of Sidenreng Rappang Regency confirmed this during a separate interview (13/03/2025), "business actors find it difficult to penetrate the market due to negative public perception, the government has made various efforts and socialization so that the product can be better accepted by the community, but the results are still not optimal." The government's attention to supporting the development of MSMEs in Sidenreng Rappang Regency is also listed in the Key Performance Indicators (IKU) (Office of Cooperatives, Manpower, and Transmigration of Sidenreng Rappang Regency, 2023). On the other hand, limited education on the benefits of circular products and minimal marketing support make it increasingly difficult for these products to compete with general products on the market.



Figure 1 Initial Observation

If left unchecked, these businesses will struggle to survive and have a negative impact on the welfare of business actors, including employees who are at risk of losing their jobs, because MSMEs have a crucial role in the economic and industrial growth of a country. If the MSME sector is problematic, the wheels of the economy in a region will also slow down (Nugraha et al., 2024).

The circular economy is increasingly being promoted in various environmental and sustainable development policies. However, its implementation and acceptance at the MSME level are far from optimal due to negative public stigma, which is why this research is urgently needed. Therefore, this study aims to analyze this issue in depth and find solutions to address it. The results are expected to identify strategies that can help the public no longer underestimate the products produced by MSMEs, increase market acceptance of recycled products, and overcome the obstacles faced by these actors.

METHODOLOGY

Informants were selected using a *purposive method* by determining certain criteria, *snowballing*, which is determining informants who are difficult to reach, and asking other informants to refer those who also meet the research informant criteria, and *convenience sampling*, which determines informants who are easily accessible according to the researcher (Riso et al., 2024; Ahmed, 2024). The number of informants refers to the concept of data saturation, where the search is stopped when the data obtained is repetitive and there is no new information.

- a. *Purposive sampling* was used for informants from the government, namely the Head of the MSME Sector of Sidenreng Rappang Regency, because it was relevant to the problems of this research.
- b. *Snowballing* was applied to informants of used tire recycling MSMEs in Sidenreng Rappang Regency, given the difficulty of accessing this business. Initial informants were asked to recommend others.
- c. *Convenience* is used for communities that are easy to reach and have in-depth insight into research problems.

This research aims to explore the existing problems explicitly in order to develop strategies to address them. Therefore, an exploratory qualitative method is used. This method uses open-ended questions that encourage dialogue with respondents and facilitate the researcher's focus on specific themes (Shah et al., 2023). The approach used is a case study because we investigate the reasons and nature of events within a specific context (Shen et al., 2024), namely an MSME that recycles used tires into products.

Data collection was conducted through follow-up observations to explore aspects not yet revealed in the initial observations. Documentation was conducted to gather supporting evidence to strengthen the findings. Semi-structured interviews were conducted with selected informants who were allowed to freely provide their own perspectives and explanations (Gupta et al., 2024; Timilsina et al., 2024). The interview process was conducted according to the informants' wishes to provide comfort. During the interview process, we recorded it.

The collected data was evaluated, then analyzed using the Miles and Huberman model, which was carried out continuously and thoroughly, so that the data was saturated (*reduction, display, and conclusion drawing/verification*) (Safaruddin et al., 2023). *Reduction*, filtering, coding, and simplifying data from observations, interviews, and documentation, *displaying*, grouping data in narrative form, tables, images, or diagrams to facilitate understanding and *conclusion drawing/verification*, analyzing findings and identifying answers to research problems. To facilitate the analysis, the Nvivo application was used. To ensure that the data

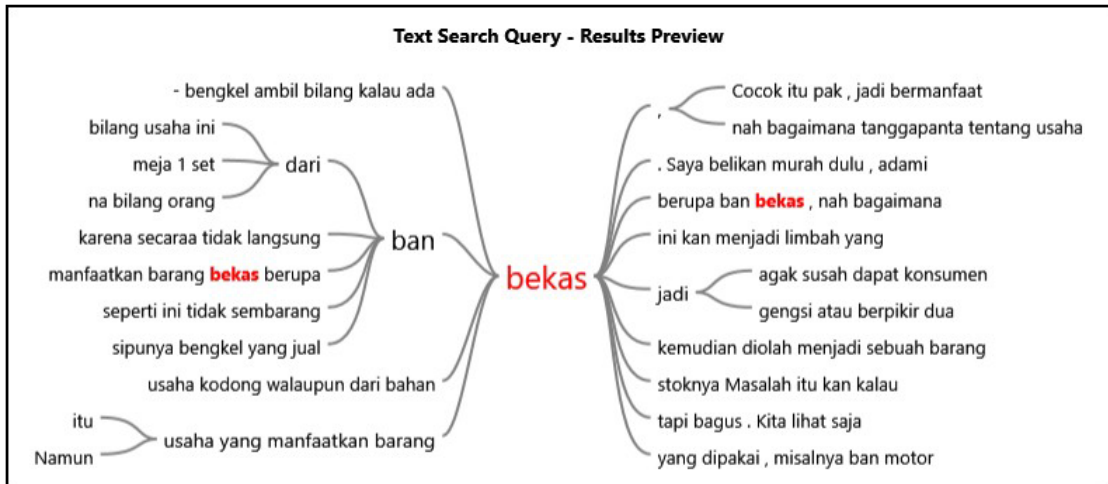


Figure 3 Word Tree "Bekas"

In the Nvivo application, the keyword "used" shows that the term is central to the discussion in the interview transcripts. The word "used" appears in various contexts, from referring to primary raw materials like *used tires* to broader meanings related to benefits, economic value, and social challenges. On the one hand, *used* is seen as waste that is "indirectly utilized" and often creates a negative stigma in society, as indicated by the expressions "it's a bit hard to get consumers" and "prestige or second thoughts". However, on the other hand, *used* is also interpreted positively as something that can be reprocessed into useful products, "so it's useful", "then processed into an item", and is even starting to be accepted by some consumers due to price and quality considerations, such as in the statements "I bought it cheap first" or "but it's good, we'll see". Thus, this *Word Tree* shows that the word *used* is not just a technical term for raw materials, but a symbol of duality of meaning: waste that carries a negative stigma as well as an opportunity to create economic value within a circular economy framework.

The final step in data analysis is *coding*. To facilitate visualization of the *coding results*, we again utilized one of the Nvivo application's features, the *Hierarchy Chart*. The *coding* was tailored to the research problem formulation.

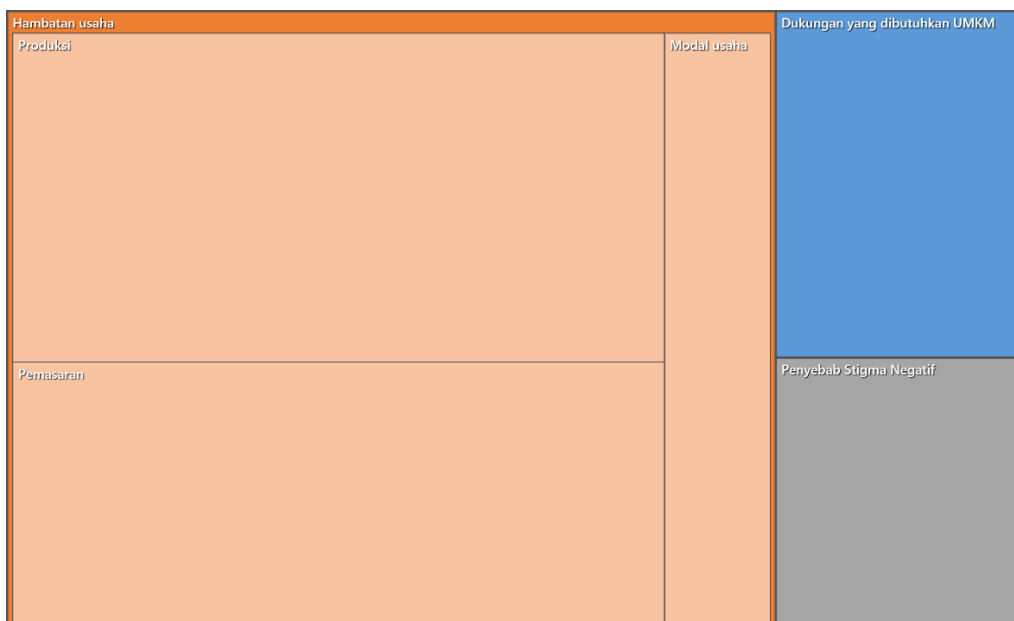


Figure 4 Hierarchy Chart

the Word Tree diagram, the main obstacles in the used tire recycling business can be broadly divided into three aspects: production barriers, marketing barriers, and business capital barriers. Production barriers arise from limited raw materials and the need for additional costs to maintain product quality, while marketing barriers relate to limited distribution networks and market acceptance. Business capital barriers are more likely caused by limited access to capital, which makes it difficult for business actors to expand production and innovate.

Furthermore, the main cause of the public stigma against recycled used tire products is influenced more by psychological and cultural factors than the quality of the product itself. Consumers still associate waste-based products with low value or prestige, even though they are functionally proven to be durable and useful. Finally, the support needed by used tire recycling MSMEs includes easy access to a wider market, financial support through inclusive capital, and an active role from local governments in promotion, administrative facilitation, and affirmative policies that encourage the development of circular businesses.

OBSTACLES TO THE IMPLEMENTATION OF A CIRCULAR ECONOMY

The obstacles faced by used tire recycling MSMEs in Sidenreng Rappang Regency can be seen from the production, marketing, and capital limitations.

1. Production Constraints

Business owners stated that not all tires can be used as raw materials. Only certain tires are suitable, particularly those for trucks and large vehicles. The informant explained:

"The track tire size must be the same as the 10-wheel tire. The 10-wheel tire is for support, while the track tire is for seating."

This leads to limited raw material availability because not all used tires can be processed. In fact, to meet production needs, raw materials sometimes have to be imported from outside the region:

"Sometimes we just manage it here. Sometimes, if we're overwhelmed with raw materials, we usually source them from Kalimantan. We also import from somewhere, usually from Balikpapan."

The production constraints faced by used tire recycling MSMEs are not simply a matter of raw material quantity, but also the quality and consistency of supply. Only truck tires and certain large vehicles are suitable for processing into finished products, so MSMEs often have to import raw materials from outside the region when supplies are scarce in Sidenreng Rappang Regency. This undoubtedly increases costs and prolongs the production process. This situation reflects the real challenges in maintaining the operational sustainability of circular MSMEs.

Other research also shows that similar obstacles are often experienced by small and medium-sized enterprises, revealing that many small businesses in Europe face significant barriers to implementing a circular economy, including limited resources (both human and financial) and complex administrative regulations (García - Quevedo et al., 2020). Other research also states that in the rubber recycling industry, building an efficient circular supply chain allows for drastic reductions in production costs (Hsieh et al., 2024).

2. Marketing Barriers

The next obstacle is marketing, which is one of the biggest obstacles for businesses that use used materials as raw materials to produce goods.

"Oh, the marketing challenge, sir? Yes. Because there's only one person marketing it."

This statement indicates that product distribution remains very limited. Businesses even collaborate with other parties to market their products (Canvas). This collaboration facilitates marketing, allowing them to focus solely on production activities. However, this collaboration, of course, reduces business profits.

"He markets the brake lining as far as Southeast Sulawesi because sales are already difficult here. Yes... So it eventually made its way to Southeast Sulawesi."

Marketing constraints demonstrate that used tire recycling MSMEs still face serious limitations in expanding their market reach. While reliance on a single salesperson and intermediary (Kanvas) helps maintain distribution continuity, this situation leads to income instability and reduced profit margins for businesses. This situation demonstrates that strong production capabilities do not automatically guarantee business success without a strong, innovative, and sustainable marketing strategy.

Previous research also shows a similar pattern in businesses transitioning to circular practices: market barriers, limited marketing resources, and the need for more effective distribution mechanisms often emerge as the main limiting factors for implementing a circular economy in small businesses (Takacs et al., 2020; Semlali et al., 2024).

Medium- and long-term solutions need to emphasize strengthening internal marketing capabilities, such as digital marketing capabilities, diversifying distribution channels (reducing dependence on a single intermediary), and supporting policies that expand market access, either through facilitating exhibitions and bulk purchases by the government or the public, or through partnership programs that connect MSMEs directly to consumers or retailers that offer fairer margins. Other research on *green marketing* also confirms that strengthening marketing functions (including digitalization) and managing relationships with intermediaries can change the bargaining position of MSMEs in increasing market acceptance of circular products (Efrat et al., 2021).

3. Capital Limitations

Business capital is also a barrier. The informant admitted to never having received any capital assistance from the government:

"Not yet, because I didn't come from here, right? If it's like this, with a little capital, the point is it can turn around, just 5 million in capital can turn around."

Business capital constraints are a crucial factor limiting the development of used tire recycling MSMEs. This limited capital is often used up for basic operational and production needs, such as purchasing auxiliary materials like paint, nails, and paying labor, leaving little room for innovation or increasing production capacity. This situation aligns with previous research findings that limited capital is a major barrier to implementing a circular economy in MSMEs, as without adequate financial support, businesses focus solely on survival rather than growth (Mishra et al., 2022).

CAUSES OF NEGATIVE STIGMA IN SOCIETY

One of the main issues in this research is the negative public stigma toward recycled products. From the perspective of business actors, consumers are generally satisfied with the product quality. Informants stated:

"Thank God, there haven't been any problems so far. Most people are satisfied because the durability is guaranteed."

He also added a strategy to maintain consumer trust through guarantees:

"Six-month warranty. If there's a problem, just exchange it. Just exchange it for a new one."

However, a different perspective came from the local government, which emphasized that a sense of prestige is still the main reason why people are reluctant to buy products made from used tires:

"That's right, aseng je' idi ogie matanre siri ta toh (we Bugis people have a high sense of shame or sense of prestige). That's why, as I said earlier, the government always prioritizes efforts like this..."

This statement shows that even though the product quality is good, cultural factors and social perceptions are still obstacles to public acceptance.

It can be seen that the negative public stigma towards recycled products is influenced more by psychological and cultural factors than by the quality of the product itself. Although business operators assert that consumers are satisfied and even provide guarantees as a form of quality assurance, in reality, some people are still reluctant to purchase due to a sense of prestige or embarrassment about using products made from waste. This confirms that market acceptance is not solely dependent on functional aspects, but also on social constructs regarding the product's image and user status. This aligns with previous research, which also showed that cultural barriers, particularly a lack of consumer interest and awareness, and a hesitant corporate culture, are considered major obstacles to implementing circular economy principles for businesses (Kirchherr et al., 2018) (Szilagyi et al., 2022).

Efforts to overcome this stigma must emphasize public education and changing people's mindsets, emphasizing that recycled products are not only environmentally friendly but also high-quality and durable. Government support, providing a platform for promotion and demonstrating the use of these products, is a strategic step in eroding lingering feelings of prestige. By shifting public perception, recycled products can become more widely accepted, thereby opening opportunities for circular MSMEs to grow and contribute significantly to sustainable development.

SUPPORT NEEDED BY MSMEs

The research results show that the support needed by MSMEs extends beyond promotion to administrative aspects, credit access, and affirmative policies. The local government, through the Head of the MSME Sector, stated:

"We'll provide administrative assistance, and we'll also recommend banks to provide credit if they need capital. If there's any assistance from government programs, we'll prioritize businesses that need it most, including businesses like this one."

In addition, government support is also seen in providing a stage for circular products in various exhibitions:

"Even when there are exhibitions about MSMEs, we prioritize this type of business to be present at the exhibition. This is also a government step to educate the public that those who want to start a business shouldn't just focus on food and beverages and clothing. There are many other types of businesses with potential."

This confirms that government support for circular-based MSMEs is not limited to promotion alone, but must also be expanded to include administrative aspects, facilitating

access to credit, and affirmative policies that prioritize innovative businesses. The local government's statement providing credit recommendations and prioritizing recycling MSMEs at the exhibition aligns with previous research that revealed that the success of the transition to a circular economy for MSMEs is highly dependent on institutional support (Mai et al., 2017). such as local governments. This is also considering that Indonesia is one of the largest waste producers in the world (Syarif et al., 2022). so that businesses that manage or utilize used waste must be fully supported, especially by the government.

STRATEGIES TO OVERCOME NEGATIVE STIGMA IN SOCIETY

Based on research results, the negative public stigma toward recycled tire products is influenced more by psychological and cultural factors (such as prestige) than by the product's quality. However, in terms of quality, these products have proven to be durable, useful, and more affordable. Therefore, a comprehensive strategy is needed to change public perception and expand product acceptance. This strategy can be outlined as follows:

1. Product Quality Improvement and Assurance

- 1) **Maintaining product quality consistently** with certain quality standards, for example the use of large truck tires that are more durable and long-lasting.
- 2) **Provide a product warranty** , as businesses have done by offering a six-month replacement warranty in the event of damage. This warranty needs to be further promoted to foster consumer trust.
- 3) **Diversification of design and function** , for example developing more aesthetic products, not just products like chairs and tables, thus reducing the impression of "second-hand goods" and emphasizing artistic value.

2. Public Communication and Education

- 1) **Environmentally based public campaigns** , for example by emphasizing the benefits of recycled products in reducing waste and preserving the environment.
- 2) **Consumer education** , through outreach in schools, communities, and exhibitions so that people understand that recycled products have added value, not just waste.
- 3) **Changing the product narrative** , from "used product" to "environmentally friendly product" or "innovative product", so that public perception shifts from negative stigma to pride.

3. The Role of Local Government

- 1) **Active promotion through exhibitions and official events** . The government can continue to prioritize tire recycling MSMEs at every exhibition, festival, or bazaar.
- 2) **Affirmative policies** , for example by requiring local government agencies to use recycled MSME products for office supplies or public facilities.

4. Collaboration with Communities and Institutions

- 1) Partnerships with educational institutions (schools, universities) to make recycled products a learning medium about the circular economy.
- 2) **Collaboration with creative and environmental communities** , which can help expand promotions while strengthening the positive image of the product.
- 3) **Partnering with local media and influencers** to promote products as an eco-friendly lifestyle, thereby reducing stigma and increasing public purchasing interest.

5. Branding and Digital Marketing

- 1) **Brand strengthening** by emphasizing aspects of sustainability, quality and product uniqueness.
- 2) **Utilizing social media** (Instagram, Facebook, TikTok) to showcase product advantages in the form of creative content (photos, videos, consumer testimonials).
- 3) **E-commerce** : Expanding marketing through digital platforms such as Tokopedia, Shopee, or local marketplaces to reduce dependence on intermediaries and expand consumer reach.

The strategy to overcome the public stigma towards recycled used tire products must be multi-level:

- a. From the business actor's perspective: maintaining quality, providing guarantees, and improving design.
- b. From the community side: educating, changing the narrative, and raising environmental awareness.
- c. From the government side: providing promotions, affirmative policies, and marketing facilitation.
- d. From the collaboration side: involving communities, education, media, and digital marketing.

With this comprehensive strategy, the negative stigma can gradually disappear and be replaced by a positive perception, so that recycled products are not only accepted but also valued as innovative solutions that support the circular economy and sustainable development.

CONCLUSION

Based on the results of research on the implementation of a circular economy through used tire recycling businesses in Sidenreng Rappang Regency, it can be concluded that used tire recycling businesses face three main obstacles, namely (a) production obstacles in the form of limited raw materials; (b) marketing obstacles due to limited product distribution, heavy reliance on intermediaries (canvas), and low local market acceptance; and (c) business capital obstacles because MSMEs have not received capital assistance from the government and only rely on relatively small personal capital. The main cause of the emergence of a negative stigma against recycled products is not due to product quality, but rather psychological and cultural factors. The public still considers products made from used tires as something that is less prestigious or lowers prestige. In fact, consumers who have used the products are generally satisfied because the quality is durable and comes with a guarantee. The support most needed by used tire recycling MSMEs includes easy access to capital, expansion of marketing networks, and government support through affirmative policies. The local government has played a role in facilitating administration, credit recommendations, and promotions at exhibitions, but capital assistance and special policies are still very limited. Strategic efforts to overcome stigma include maintaining product quality, providing warranties, strengthening public education about the benefits of recycled products, and encouraging government involvement in promotions and affirmative policies. Furthermore, branding and the use of digital marketing are crucial steps to expand public and market acceptance.

Based on the findings of this study, recommendations can be made for used tire recycling MSMEs to consistently maintain product quality and continually innovate designs to enhance product functionality and aesthetic value. Businesses should also utilize branding and digital marketing strategies through social media and e-commerce to expand their market, reduce reliance on intermediaries, and increase profit margins. Furthermore, product warranties should be emphasized as a strategy to foster consumer trust.

On the other hand, local governments are expected to provide more concrete support in the form of access to capital through soft loans, raw material subsidies, or special revolving fund programs for circular-based MSMEs. Affirmative policies are also needed, for example, by requiring the use of recycled products in government agencies and public facilities to set an example and strengthen product legitimacy. The government also needs to increase public promotion and education, both through exhibitions, environmental campaigns, and collaboration with communities, to reduce the negative public stigma against waste-based products.

Meanwhile, the public is expected to begin changing their perspective on recycled products, from previously considered low-value waste to innovative, durable, and economically viable eco-friendly products. Real support from the community through the use

and promotion of local products will significantly contribute to the sustainability of recycled MSMEs. For further research, it is recommended to expand the object to other circular MSME sectors, such as plastic, textiles, or agricultural waste, and use a quantitative or *mixed methods approach* to make the research results more comprehensive and able to provide a statistical picture of the level of consumer acceptance of recycled products.

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