



## **Social Value Analysis of Niseko Town Initiatives**

Report on visualizing the value of safety measures at ski resorts  
and Landscape Ordinance

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## Report on visualizing the value of safety measures at ski resorts and Landscape Ordinance

The government of Niseko Town (Hokkaido, Japan), in the spirit of public involvement, has been closely working with local residents to operate ski resorts and to preserve the town's landscape. These initiatives contribute to adding the social value such as smooth resort operations, landscape preservation, and the creation of the unique attractiveness of Niseko. We analyzed and visualized the social value of safety measures at ski resorts and Landscape Ordinance in Niseko through quantification methods, aiming to have a guideline that will help to evaluate future initiatives.



Photo provided by the government of Niseko Town

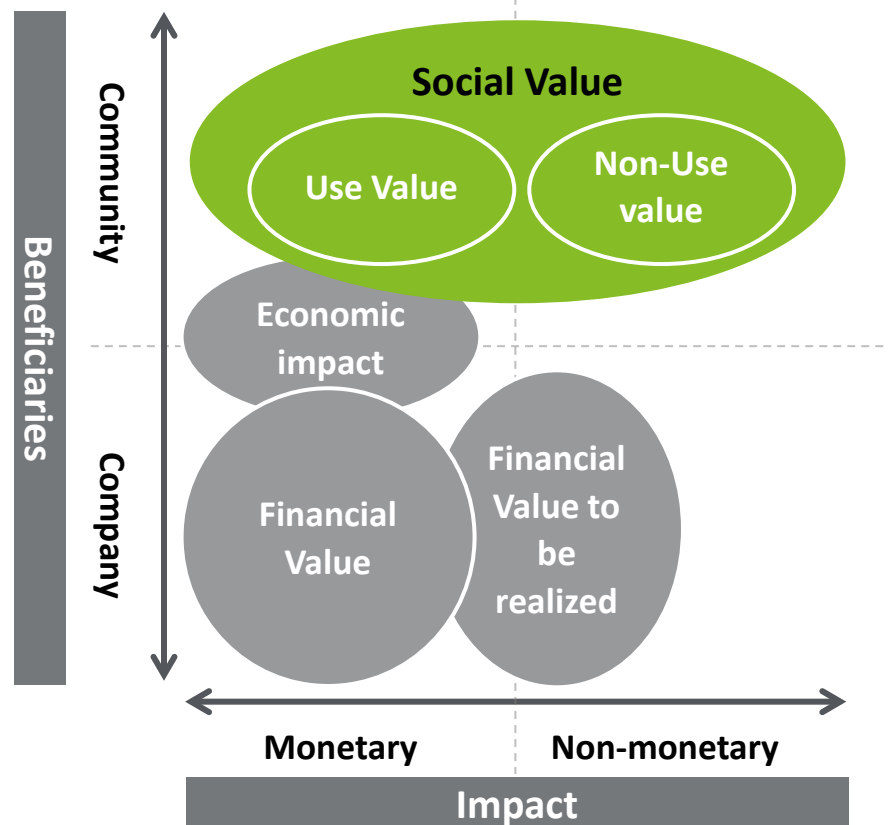
### Social value regarding policies and rules

Niseko Town is home to ski resorts and magnificent nature that attract many local and international tourists. For the smooth operation and utilization of these assets, the municipality implements its own policies such as the Niseko Rules, Landscape Ordinance that form its own value. In this research, we have quantified the value that its safety measures at ski resorts and Landscape Ordinance could create, through the social value analysis of the local rules.

### Social value

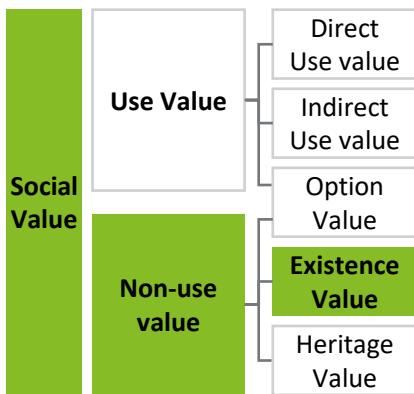
Social value is defined as the public benefit shared with stakeholders such as local communities and industries through the existence of the subject or economic activities utilizing the subject. Social value can be broadly classified into use value and non-use value depending on its nature (see Figure 1). Use value is derived from direct or indirect use of the good, for example, timber production or food production. Non-use value is the value derived from indirect use even though it cannot be directly consumed, for example, recreational use. Existence value, which is classified as non-use value, is the value derived from the information that it exists (see Figure 2). For example, if the existence of a subject strengthen the identify of residents as a symbol of the community, the subject can be defined as having existence value because it can be considered as bringing existence value to the community. In this research, we have focused on existence value in analyzing the social value of Niseko Town.

Figure 1. Image of Social value classification



Ref : Development Bank of Japan Inc. "Visualization and quantitative research on the social value brought by stadiums, arenas, and sports teams"

Figure2. Mapping of Existence value



**Method for social value analysis**

Social value is an intangible value. We may not easily be able to observe the value of the consumer utility because the object is not necessarily traded in the market. In the analysis of social value, Cost-Benefit Analysis (CBA) is the longest-standing analytical method. It includes methods such as the Consumer Surplus Approach, which estimates the demand curve for consumption behavior affected by the good and calculates the resulting changes in consumer surplus, and the Contingent Valuation Method (CVM), which analyzes how much utility stakeholders think they are benefitted from the good (“willingness to pay” or WTP) through surveys or similar methods (see Figure 3). In this research, we have adopted the CVM in analyzing the social value of Niseko Town initiatives.

**Overview of safety measures at ski resorts and Landscape Ordinance**

**Safety measures at ski resorts**

The powder snow in Niseko attracts numerous skiers, and many of them venture off-piste to enjoy the powder snow even more. At ski resorts in Niseko, ski resort operators, local residents, skiers, local government, and volunteers are working together to implement various safety measures in order to prevent accidents resulting from off-piste skiing. These initiatives led to the introduction of the Niseko Rules. Under the rules, local ski resorts work together with offering avalanche information and gate control by ski resort patrols with the leadership of the Niseko Avalanche Research Institute. That help skiers to enjoy off-piste skiing safely.

Niseko used to have the highest number of avalanche fatalities in Japan, with skiers constantly venturing off-piste in search of powder snow despite dangerous conditions. However, since the introduction of the Niseko Rules, no fatal avalanche accidents have occurred due to the efforts of the parties concerned to implement the rules as well as the understanding and cooperation of skiers. If an avalanche accident occurs, it is not solely the responsibility of accident victims, but the search and rescue operations are carried out by many people, including ski resort personnel, police, firefighters, and other organizations, as well as local resident volunteers. In the unfortunate event of a fatality, the grief of the bereaved families and the emotional burden on the community members

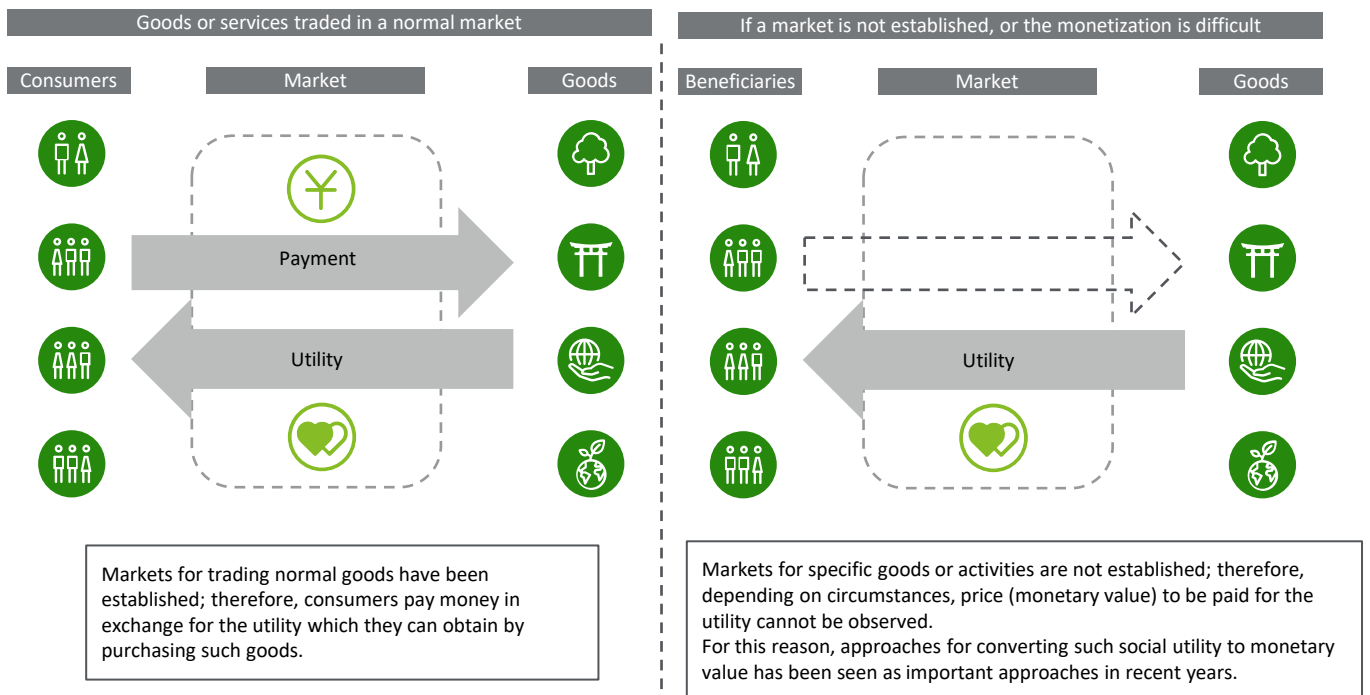
are immeasurable, and the burden and negative impact of the avalanche accident can be enormous. Even so, the introduction of the Niseko Rules has reduced the number of accidents, and the risks faced by ski resorts.

In Niseko, the Niseko Rules have been established out of respect for the freedom of skiing on fresh snow as well as serious concerns for the safety of skiers. This is the result of over 30 years of discussions on avalanche accident prevention and step-by-step implementation of pragmatic measures.

**Landscape Ordinance**

In Niseko Town, “Landscape Ordinance” is implemented based on two major principles: “information sharing” and “public involvement” to protect and cultivate the distinctive landscape of Niseko. Landscape Ordinance is a town-specific ordinance separate from other major building regulations and contributes to landscape development that protects natural environment and landscape, which are valuable local assets, from overdevelopment and permanently maintains and utilizes their value, based on mutual understanding and respect among related residents, businesses, and other parties involved. A distinctive feature of Niseko Town’s landscape development policy is that environmental preservation is not the primary objective, and the town takes a proactive stance in promoting new initiatives, including resort development. This is where landscape ordinance plays a crucial role to reflect residents’ opinions on landscape in

Figure 3. Abstract image of willingness to pay



Ref : Kuriyama, Tsuge, Shoji: “Introduction to environmental assessment for beginners” (1998)

determining the Niseko Town's landscape development policy. The fundamental principle in implementing landscape ordinance is that "residents are the most important stakeholders in town development." For example, when undertaking development activities exceeding a certain scale or development projects such as construction, developers are obliged to hold briefing sessions for residents. In addition, when development projects that may affect the landscape are undertaken, residents have opportunities to express their views through the system of written opinions. In this way, landscape ordinance provides a framework where Niseko Town can develop landscapes in agreement with residents while respecting the distinctive characteristics of Niseko Town as envisioned by residents.

### Analysis results

In this research, with the cooperation of Niseko Town, we have conducted a web-based survey on safety measures at ski resorts and landscape ordinance, receiving responses from 493 people (including 64 Niseko residents, 129 domestic tourists, and 300 overseas tourists) to analyze the social value.

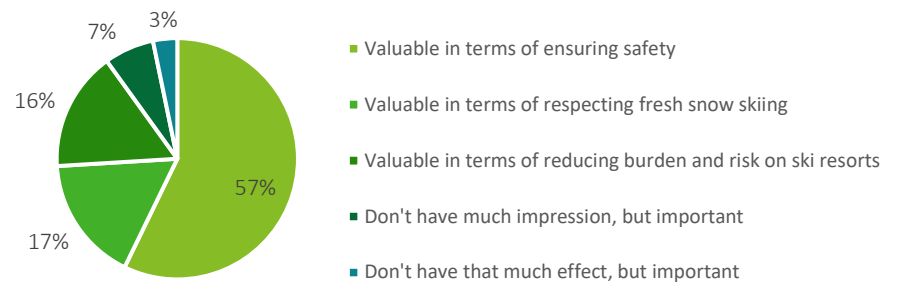
### Value of safety measures at ski resorts

The survey results show that the Niseko Rules are highly regarded by Niseko residents and tourists in terms of both safety and fresh snow skiing.

Regarding the effectiveness of the Niseko Rules, the largest percentage of respondents valued that the rules "ensure safety," followed by "respect the freedom of skiing on fresh snow" and "reduce the burden and risks faced by ski resorts." In particular, among Niseko residents and overseas tourists, the percentage of respondents who are aware of the decrease in accidents at ski resorts and

Figure 4. Result of survey about Niseko-rule

Q. How do you evaluate the effect derived from the safety measures in ski resorts (such as Niseko-rule)?



improvements in the risks faced by ski resorts since the introduction of the Niseko Rules exceeded 80% again in this survey. There was also a high level of awareness among these respondents that no avalanche fatalities have occurred since the Niseko Rules were introduced. The percentage of those who are aware that off-piste skiing is allowed in Niseko ski resorts due to the implementation of the Niseko Rules was found to be as high as 94% among Niseko residents and 86% among overseas tourists. On the other hand, the level of awareness of the Niseko Rules among domestic tourists remained low at 18% (including non-winter visitors).

Based on the above survey, we have examined individuals' willingness to pay (WTP) and found that regarding safety, the WTP for each group analyzed in this survey exceeded the insurance premiums of approximately 300 yen typically paid in the market for skiing- and snowboarding-related injuries. Specifically, our analysis shows that the amount of WTP is 567 yen for Niseko residents, 397 yen for domestic tourists, and 836 yen for overseas tourists.

In addition, the WTP for the freedom of skiing on fresh snow exceeded the differences with other ski resorts, with Niseko residents willing to pay 543 yen, domestic tourists 364 yen, and overseas tourists 830 yen, also representing positive values compared to the market. It should be noted that the results show a significant difference in the WTP between domestic and overseas tourists, which is attributable to a higher level of interest in social issues and awareness of the associated cost burden overseas than in Japan.

Moreover, the lower level of WTP among domestic tourists compared to Niseko residents can be attributed to the difference in the level of awareness. Especially, residents involved in the Niseko Rules and other safety measures at ski resorts have expressed the opinion that the Niseko Rules should be made more widely known in order to enhance their effectiveness, as shown in Figure 5. The value of the Niseko Rules will be further enhanced in the future as Niseko Town continues to promote activities for raising awareness of the Niseko Rules not only as a safety measure but also as a way to enjoy skiing.

Figure 5. Voice about Niseko-rule from residents

**It will be good to further educate people on when avalanches are likely to occur.** Mt. Yotei is also one of the Niseko areas for visitors. It will be necessary to promote safety measures for backcountry skiing on Mt. Yotei in cooperation with related towns and villages.

I think **it is important to promote more** about how and by whom the Niseko rule is maintained on a daily basis.

**It's a great initiative.** It is dangerous to ski on a course without knowledge, but I think **many people feel the attraction of skiing in Niseko is powder snow off the course.** I think it is an initiative to let tourists who cannot judge the condition of snow know the safety and danger and enjoy powder.

I think it's important that **people who want to go through the gate always know the rules. I hope there are many opportunities to spread the word.** Also, I think it would be better if there is a system to get what you need, such as lending beacons.

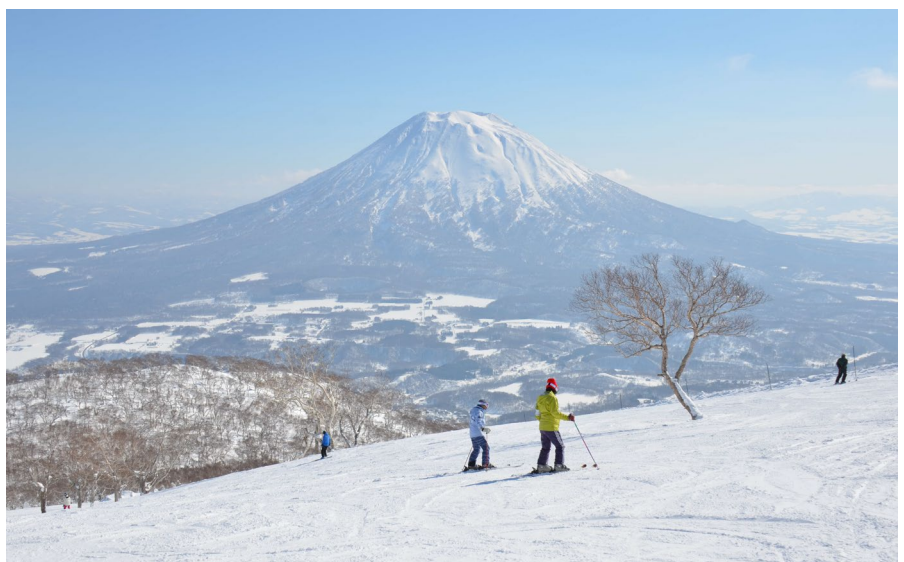


Photo provided by the government of Niseko Town

**Value of Landscape Ordinance**

The survey results capture differentials in the value that tourists and residents perceive in landscape ordinance. The individuals' WTP analyzed through this survey is 4,070 yen for Niseko residents, 379 yen for domestic tourists, and 822 yen for overseas tourists. It can be inferred that the high value of the Landscape Ordinance for tourists indicates that the beautiful scenery of Niseko is serving as one of the resources that attract tourists. Especially among tourists from overseas, the WTP exceeded the median (500 yen) of the amounts presented in the survey. The difference in WTP between domestic and overseas tourists is attributable to a higher level of interest in social issues and awareness of the associated cost burden overseas than in Japan, as mentioned earlier.

Residents' WTP is higher than that of tourists. This is due to the fact that the Landscape Ordinance is an initiative related to the landscapes where they spend a lot of time in their daily lives, and that the amounts presented was higher than those for tourists as it can be inferred that residents are aware of the value of participating in landscape development to a certain extent.

In general, there is a trade-off for residents between landscape protection and the development of commercial facilities for tourism and other businesses, and prioritizing one over the other may lead to undermining the livability. The survey results in Figure 6 show that over 80% of tourists appreciate landscape protection measures, while 60% of residents do, but in this study, there is a difference in opinion between residents who benefit from the development and

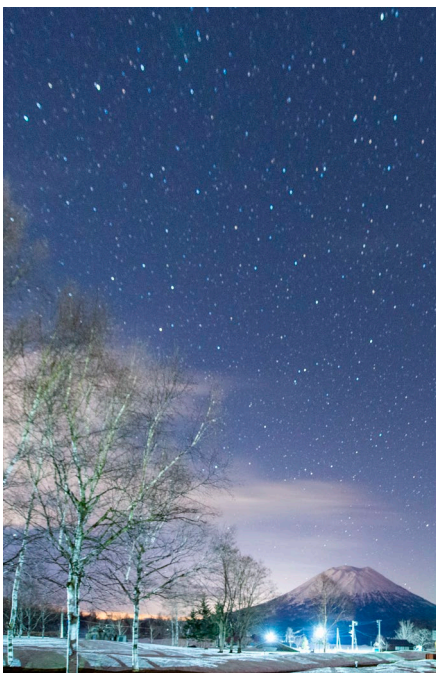
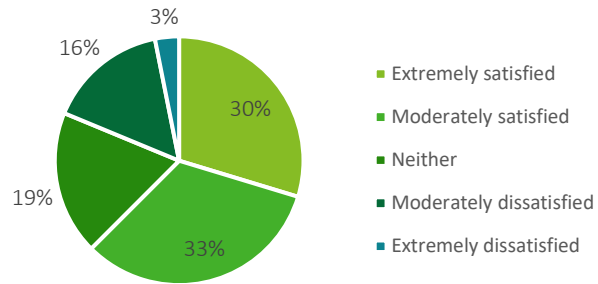


Photo provided by the government of Niseko Town

Figure 6. Result of survey about Landscape Ordinance

Q. How do you evaluate the measures to secure landscape of Niseko-town, such as Landscape Ordinance? **Answers from residents**



Q.Landscape Ordinance is operated to secure and nurture the landscape of Niseko-town by prohibiting the development which destroy the landscape. Based on this policy, the Niseko-town secure and create the current landscape. Do you positively evaluate this policy?

**Answers from tourists**

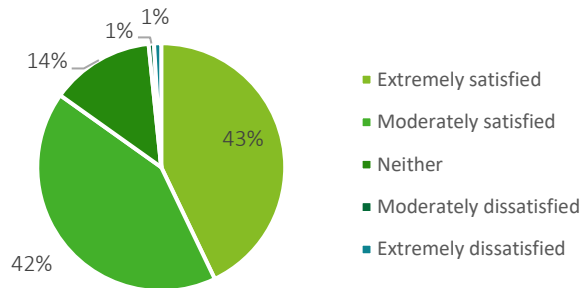


Figure 7. Result of willingness to pay analysis about safety measures of ski resort and Landscape Ordinance

	Niseko residents	Domestic tourists	Overseas tourists (yen)
Safety measures of ski resort			
Safety	567	397	836
Fresh snow skiing	543	364	830
Landscape Ordinance	4,070	379	822

those who do not, and this difference in evaluation is presumed to be linked to the WTP. In this regard, Niseko Town is working to present a medium- to long-term vision for landscape development in order to resolve the trade-off between development and landscape maintenance, and by sharing the vision between residents and developers, appreciation for landscape development is expected to increase in the future.

**Business Development on Social Value Analysis**

Social value analysis for non-traded goods in the marketplace through economic methods visualize what elements of the target goods, services, or initiatives the beneficiaries value. When evaluating the value of policies, as in this study, identifying the parts of the policy that are particularly valued can be useful in determining future policy directions.

In addition, by conducting social value analysis on an ongoing basis, it is also possible to evaluate the effectiveness of policies by focusing on changes in evaluations over time. In this case, it is anticipated that future social value can be enhanced through initiatives such as increasing awareness of the Niseko Rules among Japanese tourists, improving and ensuring the effectiveness and results of the Landscape Ordinance, and presenting guidelines for landscape development. Hence, by first leveraging the findings of this analysis to improve policies and then observing how much increase in social value has been achieved several years later, it will be possible to quantitatively evaluate the effectiveness of the policies. The increase in social value can also be used as a benchmark for setting improvement goals.

## Contact information

### Deloitte Tohatsu Financial Advisory LLC (DTFA)

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Executive Officer & Deputy CSIO  
Innovation Director  
Partner

**Masafumi Ito**

Tel: +81 80 4435 1648  
[masafumi.ito@tohatsu.co.jp](mailto:masafumi.ito@tohatsu.co.jp)



Asia Pacific Valuation & Modeling Leader  
Partner

**Simon J. Mather**

Tel: +81 80 4435 1487  
[simon.mather@tohatsu.co.jp](mailto:simon.mather@tohatsu.co.jp)



Innovation  
Principal Economist  
Managing Director

**Yuki Masujima**

Tel: +81 80 4687 4463  
[yuki.masujima@tohatsu.co.jp](mailto:yuki.masujima@tohatsu.co.jp)



Innovation / Branding Advisory  
Senior Vice President

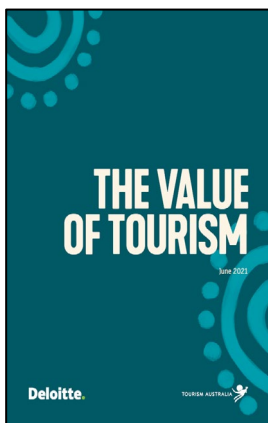
**Hayato Takenouchi**

Tel: +81 80 4058 0845  
[hayato.takenochi@tohatsu.co.jp](mailto:hayato.takenochi@tohatsu.co.jp)

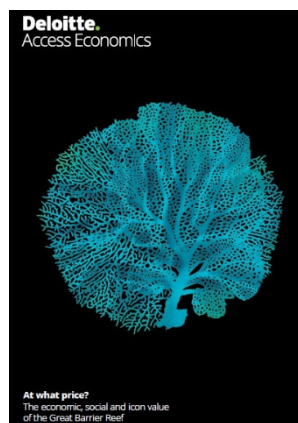
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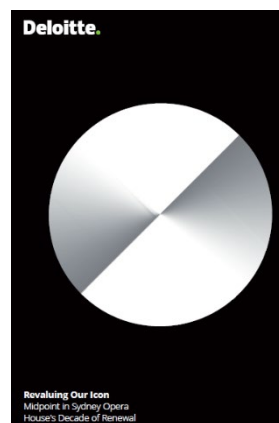
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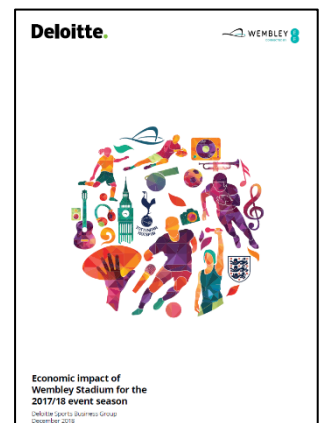
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