

Develop Wieliczka as a Sustainable City

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Abstract. *The city of Wieliczka, located in Poland, took the decision of implementing a long-term project to develop their sustainability.*

is using the Analytic Hierarchy Process (AHP) method. The main reason is because AHP's objective is measuring the significant priorities associated with a specific set of choices, highlighting the significance of the decision-maker's evaluation and ensuring consistency when comparing alternatives. Due to the presence of many aspects to consider in making a decision to choose a project to implement, this method will be used. The factors that will be used in this study are ecological, economic and social, each with their own deciding criteria. Five alternatives have been taken into account regarding the environment and people of Wieliczka: creating a bike lane, building an ecological main square, constructing a big park, developing a recycling machine, and building smart bus stops. The software SuperDecisions will be used to implement the AHP method. With the result, the alternative will be proposed to the Wiliczka Government for its future implementation.

Keywords. Wieliczka city, sustainability, AHP-Decision making

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References

- Awad & Jung. (2022). Extracting the Planning Elements for Sustainable Urban Regeneration in Dubai with AHP (Analytic Hierarchy Process). Retrieved from <https://www.sciencedirect.com/science/article/pii/S2210670721007629>
- Fountzoula, C., & Aravossis, K. (2021). Analytic hierarchy process and its applications in the public sector: a review. *Academy of Accounting and Financial Studies Journal*, 25(6), 1-15. Retrieved from <https://www.abacademies.org/articles/Analytic-hierarchy-process-and-its-applications-in-the-public-sector-a-review-1528-2635-25-6-981.pdf>
- Milani & Duarte. (2013). Policy to promote bicycle use or bicycle to promote politicians? Bicycles in the imagery of urban mobility in Brazil. Retrieved December 10, 2022, from <https://doi.org/10.1080/21650020.2013.866875>
- Town and Commune Office, Wieliczka. Retrieved from https://visitmalopolska.pl/en_GB/obiekt/-/poi/urzed-m%20iasta-i-gminy-wieliczka
- The "Wieliczka" Salt Mine. Retrieved from <https://www.wieliczka-saltmine.com/individual-tourist/about-the-mine/geology-of-the-mine>
- Wieliczka City. Retrieved from <https://www.wieliczka-city.pl/dzialy/atracje-turystyczne/puszcza-niepolomicka/>
- Web Content Accessibility Guidelines (WCAG) 2.0. (2008). Retrieved from <https://www.w3.org/TR/WCAG20/>