Capstone Project Public Summary:

KPI Evaluation on Mock Data

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Place of Submission: Vienna, Austria

Year of Submission: 2024

In partial fulfillment of the requirements for the degree of Master of Business Analytics

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1. Chosen Key Performance Indicators

Four KPIs are chosen to represent various indicators and risks a company must face. For three of them, mock data has been made through various methods and for the last one, a critical thinking evaluation has been made.

<u>Energy- total consumption within the organization:</u> Measures how much energy has been consumed in a given amount of time. This KPI should be one of the most used indicators, that a company needs to track in order to effectively evaluate their operation cost and be able to improve their energy consumption quality in the future.

<u>Suppliers with risk of child labor:</u> "International standards define child labor as work that is hazardous to a child's health and development, demands too many hours and/or is performed by children who are too young. Usually, child labor interferes with a child's right to education and to play."[1]

<u>Employee satisfaction:</u> Employee satisfaction is one of the most important KPI for the current work culture. A satisfied employee not just works better, but also stays longer in the company, more loyal to it and saves the cost of constant hiring process. One part of the sustainability is to keep workers happy and to ensure that they are respected.

<u>Environmental fines:</u> Fines are never a good sign for companies. Environmental fines decrease the sustainability score of a firm, making it less respectable and less ready to be a sustainable workplace.

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[1] https://www.ilo.org/topics/child-labour [Last Accessed: 5/20/2024]

2. Data Gathering

Energy- total consumption within the organization: A self-made pre-destinated data has been made in python. With a loop, a calendar data has been made for the year of 2023 and filled, whether those days are weekdays or weekends. Next, for weekdays a random value has been chosen between 700 and 1000 to be that day's energy consumption value, and for weekends, 70% of these values.

Suppliers with risk of child labor: A website with Artifical Intelligence is used to generate data. This website is called Mockaroo (https://www.mockaroo.com), which is a free-to-use test data generator webpage, with an easy-to-use interface. Four columns are given to the webpage to be generated, these are supplier's ID, supplier's name, country of origin, product type. This data will be evaluated to see how a wholesale company may support child labor indirectly.

Employee satisfaction: At Kaggle (https://www.kaggle.com), where many good quality and interesting datasets can be found, I was able to find an HR analytics dataset[2]. As the overview says, "The dataset used in this capstone project is sourced from the **Google Advanced Data Analysis** course. It encompasses a comprehensive collection of attributes concerning employees, ranging from demographic details to job-related factors.

Environmental fines: Data has been not gathered for this, instead it will be written about, how they influence the company and what kind of costs there are when we speak about this KPI.

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[2] https://www.kaggle.com/datasets/raminhuseyn/hr-analytics-data-set [Last Accessed: 5/21/2024]

3. Evaluation

<u>Energy- total consumption within the organization:</u> On weekdays the average consumption was higher than on weekends. Based on the maximum energy consumed in a day, the electricity grid should be looked at to prevent future outages due the high consumption. The most energy consuming period was spring while at the end of the year, from September, this consumption declined, and the last 4 months had the least consumptions.

<u>Suppliers with risk of child labor:</u> From an A to F rating, about how much the company supports child labor indirectly, based on the mockup data, the company got a "B-"grade. The reason was that many products come from Brazil and South Africa, while the company could easily improve by diminishing the brazilian influence and instead redistributing the import among other „A" rated countries.

<u>Employee satisfaction:</u> Based on the analysis (for the sales department), there are no satisfaction level differences between payment grades, work accidents does not significantly decrease satisfaction, satisfaction decrease from each year spent in the company can be negated, if an employee gets some kind of promotion in every 2 years or so and instead of using the same people for projects over and over, the company should use other employees to decrease the amount of employees with low satisfaction.

<u>Environmental fines:</u> During a decision, how a matter should be dealt with, either with legally getting rid of trash, keeping the social image clean, but paying somewhat more to do it, or doing it somewhat illegally, reducing the spending it would've been costed, but lowering the social image and potentially losing future customer, which is the opportunity cost of this kind of decision. A company needs to think through the possibilities and act right.

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