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Summary

**Business Background**

MISO (Mid-continent Independent System Operator) is an independent, not-for-profit, member-based organization that delivers safe, cost-effective electric power across 15 U.S. states and the Canadian province of Manitoba. Operating one of the world’s largest energy markets (with annual energy transactions worth more than $29 billion), MISO is committed to collaborating with all stakeholders to create cost-effective and innovative solutions for our changing industry. 42 million people depend on MISO to generate and transmit the right amount of electricity every minute of every day - reliably, dependably, and cost-effectively.

The organization is focused on three critical tasks:

- Managing the generation and transmission of high-voltage electricity across 15 U.S. states and the Canadian province of Manitoba

- Managing the energy markets in the MISO region

- Planning the grid of tomorrow

**Business Problem**

The U.S. electric grid undergoes a rapid evolution in the ways it loads, generates, transmits, and distributes power. Having conducted an in-depth analysis of these changes, MISO has identified three over-arching trends, referred to as the “3Ds”:

**De-Marginalization** – refers to the modified set of resources that can provide the next needed, or “marginal,” increment of energy at zero additional costs (e.g., renewables), or very low additional costs (e.g., highly efficient gas-fired generation).

**Decentralization** – the shift from large, centralized power plants to smaller, often distributed resources that are located on local networks, or “behind the meter” at homes and businesses.

**Digitalization** – the continued disruption of the energy industry due to the recent advancements in information and communication technologies.

To face this new business environment, MISO has defined three key innovation areas:

**Availability** – the ability to meet customer energy needs at all hours of operation.

**Flexibility** – the ability to anticipate and adapt to frequent, significant changes in energy output and demand.

**Visibility** – the ability to correctly predict the need for relevant resources for current operations and the foreseeable future.

Furthermore, the post-COVID work environment has seen unprecedented shifts in employee preferences. They require more flexibility in the ways they do their work as hybrid work arrangements become common. Employees also demand their work to be more intellectually and emotionally stimulating. All this happens against the background of a higher-than-usual number of employees who leave or retire earlier than usual. This poses additional challenges for MISO’s succession planning and staffing needs.

**Objective**

The goal is to identify methods and tools of predictive analytics to improve MISO’s employee retention and talent recruitment. MISO is interested in a comprehensive review of the field and in specific recommendations on how identified tools could be put into practice in our day-to-day operations.

**Literature Review**

In today’s competitive job landscape, strategic talent management is the key to unlocking the war on talent. It helps to position companies so that they can create strong candidate experiences and attract and retain the best people. Talent management can be defined as the process of onboarding the right people for organizational roles and helping them grow to their optimal capabilities keeping business objectives in mind. MISO is focused on two key areas: talent recruitment and employee retention.

Talent recruitment is the process of identifying, attracting, selecting, and retaining highly qualified individuals. Employee retention is the process where an organization ensures that its employees choose to stay with the company and don’t active look for other job options.

Predictive analytics is the use of data, statistical algorithms and machine learning techniques to identify the possibility of a future outcome based on current and historical data. Improved technological capabilities in collecting, tracking and measuring HR related data has presented a great opportunity for predictive analytics in the HR space. It could be used to tackle different issues such as:

* workforce planning
* Finding skill gaps
* Driving retention levels and worker engagement
* Improving the hiring process journey

According to Nocker, Manuela, and Vania Sena big data may offer a number of opportunities to HR practitioners. One of our their key insights is that if used in a proper way talent analytics may help the senior management team of an organization to align HR strategies to value creation.

Assumptions

Solution Design

Benefits

Recommendations

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Conclusion

**References**