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Summary

**Business Overview**

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.

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