Solution Landscape and Player Analysis: AI & ML in Mining Industry

Case Study

FutureBridge

Solution Landscape & Player Analysis

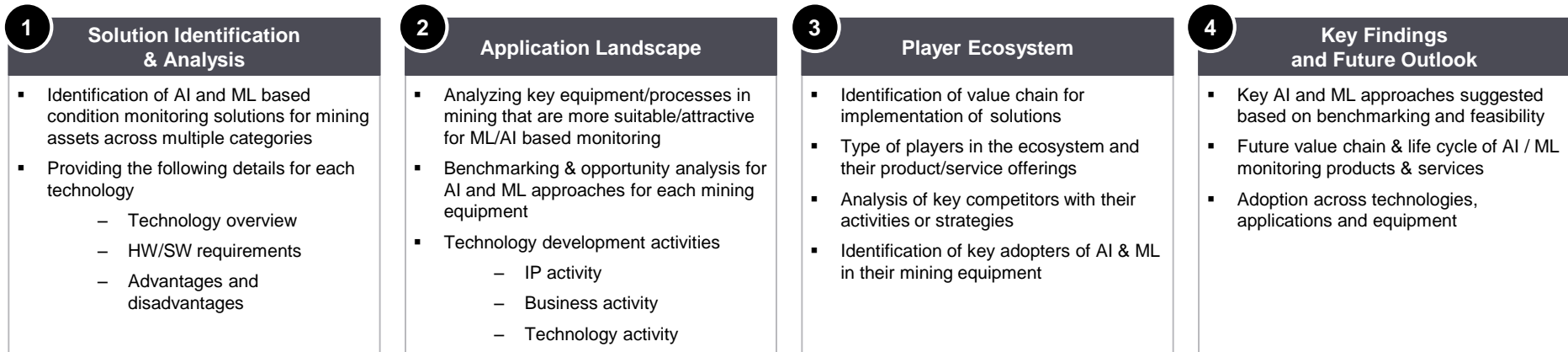|	
Client	A leading bearing and seal manufacturing company
Industry	Industrial and Mining
Products	Mining machineries, monitoring systems

Context

- Client wanted to know different artificial intelligence (AI) and machine learning (ML) technologies for asset monitoring and predictive maintenance in mining operations
- Further, client seeks insights about the competitors and their business activity in adopting AI and ML for a machine's condition monitoring

Key Business Questions

- What are AI and ML technologies/solutions for monitoring of mining machineries?
- How will traditional monitoring change in the direction of adopting AI and ML?
- Which players are developing AI and ML technologies for machine monitoring? Which players will lead the market (OEM or Integrator or software provider etc.) and which data are being collected?

Engagement Scope

1 **Solution Identification & Analysis**

- Identification of AI and ML based condition monitoring solutions for mining assets across multiple categories
- Providing the following details for each technology
    - Technology overview
    - HW/SW requirements
    - Advantages and disadvantages

2 **Application Landscape**

- Analyzing key equipment/processes in mining that are more suitable/attractive for ML/AI based monitoring
- Benchmarking & opportunity analysis for AI and ML approaches for each mining equipment
- Technology development activities
    - IP activity
    - Business activity
    - Technology activity

3 **Player Ecosystem**

- Identification of value chain for implementation of solutions
- Type of players in the ecosystem and their product/service offerings
- Analysis of key competitors with their activities or strategies
- Identification of key adopters of AI & ML in their mining equipment

4 **Key Findings and Future Outlook**

- Key AI and ML approaches suggested based on benchmarking and feasibility
- Future value chain & life cycle of AI / ML monitoring products & services
- Adoption across technologies, applications and equipment

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Research Methodology

Secondary Research

- Conducted desk research to understand various AI/ML approaches evolving for mining
- Analyzed scientific papers for identifying parameters and new approaches

Patent Research

- Gathering patent literature from various portals for gathering innovative approaches

Primary Research

- 20+ Telephonic interviews with manufacturers, distributors, industry experts, retailers, and consumers, etc.

Benefits to Client

- Client has a better understanding of upcoming AI and ML approaches being used in the mining industries
- Client was able to select AI and ML approaches for their mining equipment based on benchmarking and feasibility assessment
- Client got insights of their competitor's strategies and activities for adopting AI and ML in mining equipment

Sample Analysis

1 Solution Identification & Analysis

2 Application Landscape

3 Player Ecosystem

4 Key Findings and Future Outlook

Thank you

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