

# COMPETITIVE ADVANTAGE SCORECARD DOCUMENT MANAGEMENT SYSTEM (DMS)

## ANALYSIS RESULTS

The DMS overall rating score indicates some headwind in developing seamlessly integrated data sources like IoT information, simulation data, and digital twins into an immersive 3D environment.

DMS improves business processes and communications using 3D visualization tools and a sophisticated back-end to pull key data into a unified User Interface (UI).

## SUMMARY OF FINDINGS

DMS allows any number of data sources to be displayed in an interactive 3D environment. Examples of the combination of a DMS and a 3D environment can be found in aerospace for predictive maintenance, manufacturing, and monitoring. Similar applications and safety training have been adopted in oil & gas, and related applications are expected in the mining industry.

Delivering data quickly to stakeholders in a medium they are used to interacting with is expected to improve decision making processes, performance in the field, enhance safety, improve efficiencies, and potentially drive new business models in a number of industries. This concept is often referred to as creating a digital twin.

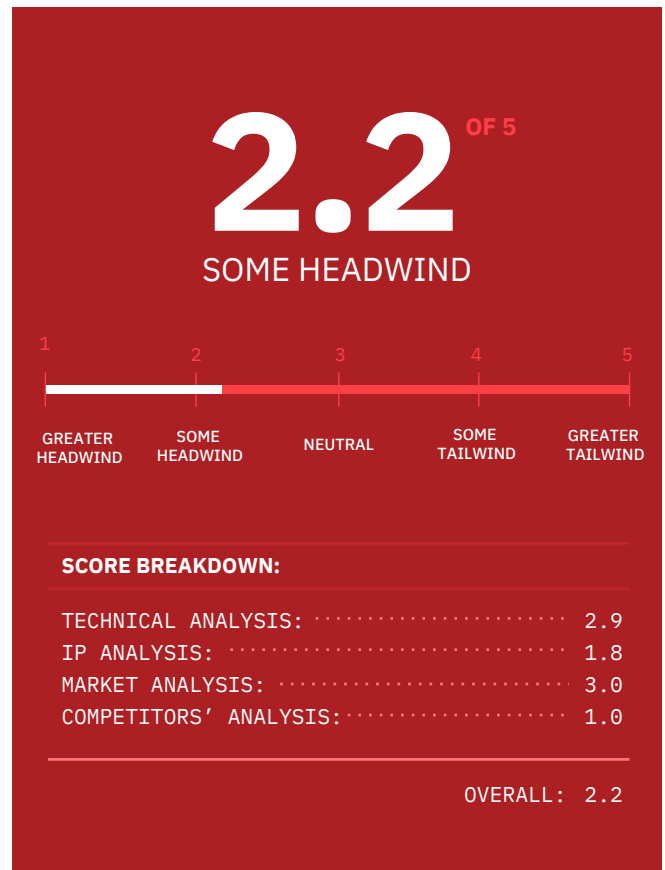
## OPPORTUNITIES

The Technical Analysis revealed competing technologies for the visualization aspects of the technology and opportunities to partner outside of Mining to access maturing DMS solutions. The DMS's technical documents and market evidence indicate certain aspects of DMS, like integration in of a digital twin into exploration, construction and blasting may be unique to the mining industry, creating a neutral opportunity for DMS. Overall the availability of mature 3D platforms negatively influence the Competitive Advantage Score.

Adoption of alternative technical solutions was revealed through the Market Analysis. While published information by direct competitors did not reveal adoption of several aspects of DMS, the research indicates competing technical solutions are in use outside the mining industry (e.g., oil & gas, space exploration, etc.) with targeted adoption by companies specific competitors. The Competitor Analysis highlights the appetite within the mining industry for adopting vendor technology and a capability to use internal development to create solutions.

## RISKS

- DMS faces potential Freedom To Operate (FTO) Intellectual Property issues. A number of partnerships have been identified which may reduce IP risks and accelerate technology development.
- DMS's tech is currently at a TRL 7. The evidence suggests an 18 – 24 month competitive advantage may be attained, but a number of press releases by competitors indicate the gap may be halved through strategic partnerships.



### TECHNICAL ANALYSIS ..... 2.9

3D VIEWERS ARE WELL KNOWN IN SEVERAL INDUSTRIES, BUT EVIDENCE SUGGESTS COMPETITIVE ADVANTAGE CAN BE ATTAINED THROUGH THE MANAGEMENT OF UNDERLYING DATA FROM DIFFERENT SOURCES ON A SINGLE USER INTERFACE (UI).

### IP ANALYSIS ..... 1.8

PUBLICLY AVAILABLE LITERATURE LIMITS IP PROTECTION OPPORTUNITIES FOR THE VIEWER ASPECTS OF THE TECHNOLOGY. FREEDOM TO OPERATE CHALLENGES MAY ARISE FROM OUT-OF-INDUSTRY COMPETITORS.

### MARKET ANALYSIS ..... 3.0

THE GLOBAL MARKET SIZE OF 3D MODELING, 3D VISUALIZATION, AND 3D DATA CAPTURE IS EXPECTED TO REACH USD 1.08 BILLION BY 2026 AND GROWING AT AN ANNUAL CAGR OF 3.9%.

### COMPETITORS' ANALYSIS ..... 1.0

EVIDENCE OF ADOPTION OF VISUALIZATION TOOLS TECHNOLOGY BY DIRECT COMPETITORS GOVERNS THE SCORE. SOME EVIDENCE WAS FOUND FOR DATA INTEGRATION INTO IMMERSIVE VISUAL ENVIRONMENTS.