UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

Form 6-K

Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16 under the Securities Exchange Act of 1934

For the month of February 2023

Commission file number: 001-41334

RAIL VISION LTD.

(Translation of registrant's name into English)

15 Ha'Tidhar St Ra'anana, 4366517 Israel

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F ⊠ Form 40-F □

CONTENTS

Attached hereto and incorporated herein is the Registrant's press release issued on February 6, 2023, titled "Israel Railways Purchases 10 AI-Driven Rail Vision Main Line Systems for \$1.4M."

The first and fourth paragraphs and the section titled "Forward-Looking Statements" in the press release attached as Exhibit 99.1 are hereby incorporated by reference into the Registrant's Registration Statement on Form S-8 (File No. 333-265968), to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

EXHIBIT INDEX

Exhibit No.

Press release issued by Rail Vision Ltd. on February 6, 2023, titled "Israel Railways Purchases 10 AI-Driven Rail Vision Main Line Systems for \$1.4M." 99.1

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Rail Vision Ltd.

Date: February 6, 2023 By: /s/ Ofer Naveh

Name: Ofer Naveh

Israel Railways Purchases 10 AI-Driven Rail Vision Main Line Systems for \$1.4M

Rail Vision's cutting-edge, A.I.-based obstacle detection technology is ushering in a new era of train safety

Ra'anana, Israel – February 6, 2023 – Rail Vision Ltd. (the "Company") (Nasdaq: RVSN), a technology company that is seeking to revolutionize railway safety and the data-related market, announced today that Israel Railways Ltd., Israel's state-owned principal railway company, signed an agreement to purchase 10 Rail Vision Main Line Systems and related services for \$1.4 million. Rail Vision's Main Line System is a cutting-edge, artificial intelligence (A.I.) based, industry-leading technology for detection and identification of objects and obstacles near, between, or on the railway.

"After more than a year of evaluating a variety of advanced driver assistance systems (ADAS), Israel Railways chose Rail Vision's Main Line System as the solution for its fleet, marking the first major commercial deployment of AI-based vision technology for main line rail industry operations," commented Rail Vision CEO Shahar Hania. "Our Main Line System outperformed in all aspects of testing during the proof-of-concept with Israel Railways. We believe this is a strong validation of our solution and bodes extremely well for other pilot programs underway, such as our long-term pilot in Australia with Rio Tinto, a leading global mining group, as well as other opportunities around the globe.

"Using advanced, long-range A.I. detection systems, our game-changing technology provides unparalleled obstacle identification on and near tracks, making it an ideal solution for major rail operators like Israel Railways, and a key driver behind strategic partnerships, such as our relationship with Knorr-Bremse, the global leader in braking systems for the rail industry that has invested \$24 million into Rail Vision since our inception," continued Hania.

Israel Railways operates approximately 700 trains daily, traveling along 1,138 kilometers of track, connecting major metropolitan areas in Israel, as well as cities, towns, and rural villages throughout the country.

"We currently have few main line and switch yard pilot programs underway globally," continued Hania. "The conversion of pilot programs into commercial contracts is expected to accelerate and drive sales growth momentum in the quarters ahead."

About Rail Vision's AI-based Main Line System

Rail Vision's Main Line System is an AI-driven obstacle detection technology designed to revolutionize train safety. With its extended visual range of up to 1.2mi / 2km, Rail Vision's Main Line System combines sensitive imaging sensors with A.I. and deep learning technologies to detect and classify obstacles on and near the tracks, such as humans, animals, vehicles, signals, and infrastructure components, quickly and accurately. The system then generates real-time visual and acoustic alerts for the train's command-and-control center, helping to prevent collisions, reduce downtime and delays, increase safety, and improve traffic volume. Rail Vision's advanced image processing capabilities also allow for image-based navigation, predictive maintenance, and GIS mapping.

About Rail Vision Ltd.

Rail Vision is a technology company that is seeking to revolutionize railway safety and the data-related market. The Company has developed cutting-edge, artificial intelligence based, industry-leading technology specifically designed for railways. The Company has developed its railway detection and systems to save lives, increase efficiency, and dramatically reduce expenses for the railway operators. Rail Vision believes that its technology will significantly increase railway safety around the world, while creating significant benefits and adding value to everyone who relies on the train ecosystem: from passengers using trains for transportation to companies that use railways to deliver goods and services. In addition, the company believes that its technology has the potential to advance the revolutionary concept of autonomous trains into a practical reality. For more information please visit https://www.railvision.io/

Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act and other securities laws. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements. For example, the Company is using forward-looking statements when it discusses conducting pilot programs, and that the conversion of pilot programs into commercial contracts is expected to accelerate and drive sales growth momentum in the quarters ahead. Forward-looking statements are not historical facts, and are based upon management's current expectations, beliefs and projections, many of which, by their nature, are inherently uncertain. Such expectations, beliefs and projections are expressed in good faith. However, there can be no assurance that management's expectations, beliefs and projections will be achieved, and actual results may differ materially from what is expressed in or indicated by the forward-looking statements. Forward-looking statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the forward-looking statements. For a more detailed description of the risks and uncertainties affecting the Company, reference is made to the Company's reports filed from time to time with the Securities and Exchange Commission ("SEC"), including, but not limited to, the risks detailed in the Company's annual report on Form 20-F filed with the SEC on May 16, 2022. Forward-looking statements speak only as of the date the statements are made. The Company assumes no obligation to update forward-looking statements to reflect actual results, subsequent events or circumstances, changes in assumptions or changes in other factors affecting forward-looking information except to the extent required by applicable securities laws. If the Company does update one or more forward-looking statements, no inference should be drawn that the Company will make additional updates with respect thereto or with respect to other forward-looking statements. References and links to websites have been provided as a convenience, and the information contained on such websites is not incorporated by reference into this press release. Rail Vision is not responsible for the contents of third-party websites.

Contacts

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SOURCE: Rail Vision Ltd.