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 16, 2023, titled "Rail Vision Launches Proof-of-Concept Pilot Program with Leading US-Based Rail & Leasing Services Company."

The first and second 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Form S-8 (File No. 333-265968), to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.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. 99.1 Press release issued by Rail Vision Ltd. on February 16, 2023, titled "Rail Vision Launches Proof-of-Concept Pilot Program with Leading US-Based Rail & Leasing Services Company."

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.

Date: February 16, 2023

Rail Vision Ltd.

By: /s/ Ofer Naveh

Name: Ofer Naveh

Title: Chief Financial Officer

Rail Vision Launches Proof-of-Concept Pilot Program with Leading US-Based Rail & Leasing Services Company

Ra'anana, Israel, Feb. 16, 2023 (GLOBE NEWSWIRE) -- 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 a leading US-based rail and leasing services company purchased a Rail Vision Switch Yard System to evaluate its performance during a six-month trial. Rail Vision's new customer offers a suite of rail-centric services including in-plant rail switching and material handling services.

Rail Vision's unique Switch Yard System enables railway operators to streamline and enhance the safety of their shunting operations. Combining advanced vision sensors with artificial intelligence and deep learning technologies, the system automatically detects and classifies objects within a range of up to 200 meters, regardless of weather and light conditions. In addition, it enables the monitoring of operational dead zones to facilitate secure wagon coupling and sends real-time visual and acoustic alerts to remote operators and drivers, ensuring a safe and secure environment. With its one-of-a-kind Pathfinder technology, the Switch Yard System can detect switch states to support the execution of coupling from a remote position.

"Our Switch Yard System outperformed during initial technical testing conducted by this customer, prompting their team to travel to Israel to witness a live demo of the system in use with Israel Railways," commented Rail Vision CEO Shahar Hania. "Impressed by the demo and initial testing, this new customer purchased a Switch Yard System for \$140,000 with support and plans to conduct additional testing over a six-month trial period to further evaluate the benefits of implementing our technology across their fleet."

"In addition to implementing our Switch Yard System trial, we have also begun discussions with this customer about the potential implementation of Automatic Train Operation (ATO) management software," added Hania. "We are excited to see our technology gain traction with major customers globally. In addition to this latest purchase, our Switch Yard System is already in use with SBB Cargo, a subsidiary of Swiss Federal Railways, where it is actively improving safety and efficiency for the rail freight operator, and we anticipate additional new customer announcements in the weeks and months ahead."

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 the pilot program. 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.