TAILWIND ACQUISITION CORP.

1545 Courtney Avenue Los Angeles, CA 90046

PROXY STATEMENT SUPPLEMENT

August 31, 2022

To the Stockholders of Tailwind Acquisition Corp.:

This is a supplement (this "Supplement") to the definitive proxy statement of Tailwind Acquisition Corp. (the "Company"), dated August 17, 2022 (the "Proxy Statement"), that was sent to you in connection with the Company's special meeting of stockholders scheduled for 10:00 a.m., Eastern Time, on September 7, 2022, virtually, at https://www.cstproxy.com/tailwindacquisition/2022 (the "Extension Meeting").

At the Extension Meeting, the Company's stockholders will be asked to consider and vote upon a proposal to amend the Company's amended and restated certificate of incorporation to extend the date (the "Termination Date") by which the Company has to consummate an initial business combination (the "Charter Extension") from September 9, 2022 (the "Original Termination Date") to January 9, 2023 (the "Charter Extension Date") and to allow the Company without another stockholder vote, to elect to extend the Termination Date to consummate a business combination on a monthly basis for up to two times by an additional one month each time after the Charter Extension Date, by resolution of the board if requested by Tailwind Sponsor LLC, and upon five days' advance notice prior to the applicable deadlines, until March 9, 2023 or a total of up to six months after the Original Termination Date, unless the closing of the Company's initial business combination shall have occurred (the "Extension Amendment Proposal").

The Company has filed this Supplement with the Securities and Exchange Commission to advise stockholders that Tailwind Sponsor LLC, our sponsor (or one or more of its affiliates, members or third-party designees) (the "Lender"), has agreed that if the Extension Amendment Proposal is approved and the Charter Extension becomes effective, it will increase its original commitment of the lesser of (a) an aggregate of \$500,000 or (b) \$0.25 for each share of Class A Stock that is not redeemed in connection with the Extension Meeting (as described in the Proxy Statement) to \$600,000 and will deposit \$600,000 into the trust account in exchange for one or more non-interest bearing, unsecured promissory notes issued by the Company to the Lender. This increased commitment removes the per share limit of \$0.25 for each share that is not redeemed in connection with the Extension Meeting. In addition, if the Extension Amendment Proposal is approved and the Charter Extension becomes effective, in the event that the Company has not consummated the Business Combination (as defined below) by January 9, 2022, without approval of the Company's public stockholders, the Company may, by resolution of the Board if requested by the Sponsor, and upon five days' advance notice prior to the applicable Termination Date extend the Termination Date up to two times, each by one additional month (for a total of up to two additional months to complete the Business Combination) (each an "Additional Charter Extension Date"), provided that the Lender will deposit \$75,000 (an increase from the Lender's original commitment of the lesser of (a) \$50,000 or (b) \$0.025 for each share of Class A Stock that is not redeemed in connection with the Extension Meeting, as described in the Proxy Statement) into the trust account for each such monthly extension, for an aggregate deposit of up to \$150,000, in exchange for one or more non-interest bearing, unsecured promissory notes issued by the Company to the Lender. This increased commitment removes the per share limit of \$0.025 for each share that is not redeemed in connection with the Extension Meeting. Accordingly, if 2,500,000 shares of Class A Stock remain outstanding following the Extension Meeting, the per-share contribution of the Lender for the extension until the Charter Extension Date would be \$0.24.

Only holders of record of the Company's common stock at the close of business on August 12, 2022, which is the record date for the Extension Meeting, are entitled to notice of the Extension Meeting and to vote and have their votes counted at the Extension Meeting and any adjournments or postponements of the Extension Meeting. As of the close of business on August 12, 2022, there were 41,776,963 shares of common stock issued and outstanding and entitled to vote. Each share is entitled to one vote per share at the Extension Meeting.

All holders of public shares, regardless of whether they vote for or against the Extension Amendment Proposal or do not vote at all, may elect to convert their public shares into their pro rata portion of the trust account if the Charter Extension is implemented. To exercise your redemption rights, you must demand in writing that your shares of Class A Stock are redeemed for a pro rata portion of the funds held in the trust account and tender your shares to Continental Stock Transfer & Trust Company, the Company's transfer agent, at least two business days prior to the vote at the Extension Meeting. In order to exercise your redemption right, you need to identify yourself as a beneficial holder and provide your legal name, phone number and address in your written demand. You may tender your shares by either delivering your share certificate to the transfer agent or by delivering your shares electronically using The Depository Trust Company's DWAC (Deposit/Withdrawal At Custodian) System. If you hold the shares in street name, you will need to instruct the account executive at your bank or broker to withdraw the shares from your account in order to exercise your redemption rights.

As previously disclosed, on August 5, 2022, the Company, Compass Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Tailwind, and Nuburu, Inc., a Delaware corporation ("Nuburu"), entered into a business combination agreement (the "Business Combination Agreement"), contemplating several transactions in connection with which the Company will become the parent company of Nuburu (the transactions contemplated by the Business Combination Agreement, the "Business Combination"). Pursuant to the Business Combination Agreement, at the close of business on the date of closing of the Business Combination, the Company will declare an issuance of shares of preferred stock of the post-combination company (the "Preferred Stock") to holders of its Class A Stock that do not redeem their shares of Class A Stock in connection with both the Extension Meeting and the stockholder meeting to be held in connection with the Business Combination. If you (i) redeem your shares now in connection with the Extension Meeting, (ii) redeem your shares in connection with a meeting held to approve the Business Combination or (iii) sell your shares prior to the close of business on the date of the closing of the Business Combination, you will not receive any Preferred Stock. For more information about the Business Combination, see the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on August 8, 2022.

Before you vote, you should read the Proxy Statement and other documents that the Company has filed with the Securities and Exchange Commission, together with this Supplement, for more complete information about the Company and the Charter Extension. If you have questions about the Charter Extension or if you need additional copies of the Proxy Statement or the proxy card you should contact:

Morrow Sodali LLC 333 Ludlow Street, 5th Floor, South Tower Stamford, CT 06902 Individuals call toll-free (800) 662-5200 Banks and brokers call (203) 658-9400 Email: TWND@investor.morrowsodali.com

By Order of the Board of Directors of Tailwind Acquisition Corp. /s/ Philip Krim

Philip Krim,

Chairman of the Board of Directors Officer

You are not being asked to vote any proposed business combination at this time. If the Charter Extension is implemented and you do not elect to redeem your public shares, provided that you are a stockholder on the record date for the stockholder meeting to consider the Business Combination, you will be entitled to vote on the Business Combination when it is submitted to stockholders and will retain the right to redeem your public shares for cash in the event the Business Combination is approved and completed or we have not consummated the Business Combination by the Charter Extension Date.

Neither the Securities and Exchange Commission nor any state securities commission has determined if the Proxy Statement, as supplemented by this Supplement, is accurate or complete. Any representation to the contrary is a criminal offense.

Your vote is important. Please sign, date and return your proxy card as soon as possible to make sure that your shares are represented at the Extension Meeting. If you are a stockholder of record, you may also cast your vote in person at the Extension Meeting. If your shares are held in an account at a brokerage firm or bank, you must instruct your broker or bank how to vote your shares, or you may cast your vote in person at the Extension Meeting by obtaining a proxy from your brokerage firm or bank. Your failure to vote or instruct your broker or bank how to vote will have the same effect as voting against the Extension Amendment Proposal.

This Supplement is dated August 31, 2022.