

Prospectus Supplement No. 4
(To Prospectus dated April 23, 2025)

INNVENTURE, INC.

This prospectus supplement updates, amends and supplements the prospectus dated April 23, 2025 (the “Prospectus”), which forms a part of our Registration Statement on Form S-1 (Registration No. 333-286558) and is being filed to update, amend and supplement the information included in the Prospectus with information contained in our Current Report on Form 8-K which was filed with the Securities and Exchange Commission (the “SEC”) on July 1, 2025 (the “Current Report”). Accordingly, we have attached the Current Report to this prospectus supplement. Capitalized terms used in this prospectus supplement and not otherwise defined herein have the meanings specified in the Prospectus.

This prospectus supplement is not complete without the Prospectus. This prospectus supplement should be read in conjunction with the Prospectus, which is to be delivered with this prospectus supplement, and is qualified by reference thereto, except to the extent that the information in this prospectus supplement updates or supersedes the information contained in the Prospectus. Please keep this prospectus supplement with your Prospectus for future reference.

Shares of our common stock, par value \$0.0001 per share (our “Common Stock”), are listed on The Nasdaq Stock Market, LLC under the symbol “INV.” On July 1, 2025, the closing price of our Common Stock was \$4.76 per share.

Investing in our securities involves risks that are described in the “Risk Factors” section of the Prospectus.

Neither the SEC nor any state securities commission has approved or disapproved of the securities to be issued under the Prospectus or this prospectus supplement or determined if the Prospectus or this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is July 2, 2025.

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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): June 25, 2025

Innventure, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-42303
(Commission File Number)

93-4440048
(I.R.S. Employer
Identification No)

6900 Tavistock Lakes Blvd, Suite 400
Orlando, Florida 32827
(Address of principal executive offices and Zip Code)
(321) 209-6787
(Registrant's telephone number, including area code)

N/A
(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	INV	The Nasdaq Stock Market, LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 1.01 Entry into a Material Definitive Agreement.

From June 27, 2025 through July 1, 2025, Accelsius Holdings LLC (“Accelsius”), a controlled subsidiary of Innventure, Inc., a Delaware corporation (the “Company”), issued convertible unsecured promissory notes in an aggregate principal amount of \$13,000,000 with an option to issue additional convertible unsecured promissory notes in an aggregate principal amount of \$2,000,000, subject to certain conditions.

Accelsius issued convertible unsecured promissory notes (collectively, the “Term Convertible Notes”) in an aggregate principal amount of \$12,000,000 to certain investors, including WE-Inn LLC and Ascent Accelsius, A Series of Ascent X Innventure, LP, each of which is considered to be a Related Party (as defined in the Company’s Related Party Transactions Policy) (collectively, the “Investors”). The Term Convertible Notes will be convertible, at the discretion of the Investors, into Series A Units of Accelsius on or after January 2, 2026 and at a price per unit equal to \$12.175, bear interest at the applicable federal rate and mature on December 31, 2026. Accelsius will apply the proceeds from the issuance of the Term Convertible Notes to repay (the “Repayment”) borrowings under that certain Loan and Security Agreement between Innventure LLC and Accelsius, dated as of March 30, 2023 (as amended to date, the “Innventure Convertible Line of Credit”). As a result of the Repayment, the Company’s indirect beneficial holdings, through Innventure LLC, of Accelsius may be reduced in the event that the Term Convertible Notes are converted into Series A Units of Accelsius.

Accelsius also sold a convertible unsecured promissory note (the “Bridge Convertible Note”) in an aggregate principal amount of \$1,000,000 to Joshua Claman, Chief Executive Officer of Accelsius. An additional \$2,000,000 in aggregate principal amount of Bridge Convertible Notes is issuable in \$1,000,000 increments, upon the request of Accelsius and subject to Mr. Claman’s sole discretion. The Bridge Convertible Notes are convertible into equity of Accelsius (including preferred equity at a discount if certain conditions are met), bear interest at a rate of 15% per annum, and mature on December 31, 2025.

Additionally, the Company, Innventure LLC, and Accelsius entered into a letter agreement (the “Letter Agreement”) with Mr. Claman pursuant to which Innventure LLC will not seek repayment of any portion of that Innventure Convertible Line of Credit other than the repayment of up to \$12,000,000 that is anticipated to be made immediately following the issuance by Accelsius of the Term Convertible Notes, while any Bridge Convertible Notes remain outstanding.

The Bridge Convertible Notes and the Term Convertible Notes contain customary representations, warranties, and other agreements by Accelsius and, in the case of the Term Convertible Notes, the Investors. Each of WTI Fund X, Inc. and WTI Fund XI, Inc. (the “WTI Lenders”) and YA II PN, Ltd (“Yorkville”) have been granted certain rights under the Bridge Convertible Notes and the Term Convertible Notes, including with respect to restrictions on payment of the Bridge Convertible Notes and the Term Convertible Notes prior to the repayment of certain of the WTI Lenders’ and Yorkville’s existing indebtedness.

The foregoing summary of the Term Convertible Notes, the Letter Agreement and the Bridge Convertible Notes are qualified in their entirety by reference to the text of the Term Convertible Notes, the Letter Agreement and the Bridge Convertible Notes, forms of which are included as Exhibit 10.1, Exhibit 10.2 and Exhibit 10.3, respectively, and are incorporated herein by reference.

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

As previously disclosed, in December 2024, the Compensation Committee of the Board of Directors of Innventure, Inc. (the “Company”) approved a grant of 150,000 appreciation rights (“SARs”) to each of Mike Otworth (the Company’s Executive Chairman) and Dr. John Scott (the Company’s Chief Strategy Officer). The SARs represent the right of the officer to receive a number of shares of the common stock of the Company (“Common Stock”) with a value equal to the appreciation in the value of a Class A Common Unit of Accelsius Holdings LLC over a base price of \$12.175 (the “Spread”). In general, the SARs will be automatically exercised

upon the earliest to occur of: (a) the 24-month anniversary of the grant date, (b) the officer's death, or (c) the officer's "disability" (as defined in the applicable award agreement).

On June 25, 2025, each of Mr. Otworth and Dr. Scott entered into an amendment to his SAR award (each, a "SAR Amendment") to (1) clarify that any payment by the Company to the applicable officer with respect to the SARs will be made in the form of shares of Common Stock and (2) to provide that the maximum number of shares of Common Stock that may be issued pursuant to each officer's SAR award is 1,875,000 (the "Share Cap"). Under the SAR Amendment, the Company will not be required to pay either officer any amount in excess of the Share Cap (in the form of either equity or cash), even if the value of the number of shares of Common Stock issued in settlement of the SARs is less than the aggregate Spread as a result of the Share Cap.

The foregoing summary of the SAR Amendment is qualified in its entirety by reference to the text of the SAR Amendment, a form of which is included as Exhibit 10.4 and is incorporated herein by reference.

Item 5.07 Submission of Matters to a Vote of Security Holders.

On June 25, 2025, the Company held its Annual Meeting of Stockholders (the "2025 Annual Meeting"). At the close of business on April 28, 2025, the record date for the 2025 Annual Meeting, there were (i) 53,487,294 shares of Common Stock issued and outstanding, each share entitled to one vote, (ii) 239,159 shares of Series B Preferred Stock, par value of \$0.0001 per share (the "Series B Preferred Stock"), issued and outstanding, each share of Series B Preferred Stock entitled to 0.97 votes, and (iii) 575,000 shares of Series C Preferred Stock, par value \$0.0001 per share (the "Series C Preferred Stock"), issued and outstanding, each share of Series C Preferred Stock entitled to 1.3 votes, constituting all outstanding voting securities of the Company entitled to vote at the 2025 Annual Meeting.

At the 2025 Annual Meeting, the holders of shares of the Company's Common Stock, Series B Preferred Stock, and Series C Preferred Stock, representing 35,999,645 votes in aggregate, were present in person or by proxy, constituting a quorum. A description of each matter voted upon at the 2025 Annual Meeting is described in detail in the Company's Definitive Proxy Statement on Schedule 14A, as filed with the U.S. Securities and Exchange Commission on May 9, 2025. The final votes on the proposals presented at the 2025 Annual Meeting are set forth below.

Proposal 1: To elect three nominees to serve as Class I directors for a three-year term expiring at the 2028 annual meeting of stockholders. Each of the nominees listed below has been elected to serve as a Class I director on the Company's board of directors for a three-year term expiring at the 2028 annual meeting of stockholders or until their respective successors are elected and qualify. The voting results were as follows:

Director Nominee	Votes For	Votes Withheld	Broker Non-Votes
Gregory W. Haskell	31,153,355	3,222,706	1,623,584
Daniel J. Hennessy	31,147,269	3,228,792	1,623,584
Michael Amalfitano	31,838,348	2,537,713	1,623,584

Proposal 2: To ratify the appointment of BDO USA, P.C. as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2025. The ratification was approved by vote of stockholders as follows:

Votes For	Votes Against	Abstentions	Broker Non-Votes
35,636,797	223,622	139,226	--

Proposal 3: To approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of 20% or more of the Company's issued and outstanding Common Stock as of October 2, 2024, pursuant to the Standby

Equity Purchase Agreement with YA II PN, Ltd. (“Yorkville”). Proposal 3 was approved by vote of stockholders as follows:

Votes For	Votes Against	Abstentions	Broker Non-Votes
32,930,848	1,236,199	209,014	1,623,584

Proposal 4: To approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of 20% or more of the Company’s issued and outstanding Common Stock as of March 25, 2025, pursuant to the convertible debentures, convertible into shares of Common Stock subject to certain conditions and limitations, in the aggregate principal amount of up to \$30.0 million, with Yorkville. Proposal 4 was approved by vote of stockholders as follows:

Votes For	Votes Against	Abstentions	Broker Non-Votes
33,231,820	1,144,220	21	1,623,584

Item 9.01 Financial Statements and Exhibits.

(d) *Exhibits.*

Exhibit Number	Description of Exhibit
10.1	Form of Term Convertible Note
10.2	The Letter Agreement
10.3	Form of Bridge Convertible Note
10.4	Form of Amendment to Stock Appreciation Right Award Agreement
104	Cover Page Interactive Data File (formatted as Inline XBRL)

SIGNATURES

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

INNVENTURE, INC.

Date: July 1, 2025

By: /s/ David Yablunosky

Name: David Yablunosky

Title: Chief Financial Officer