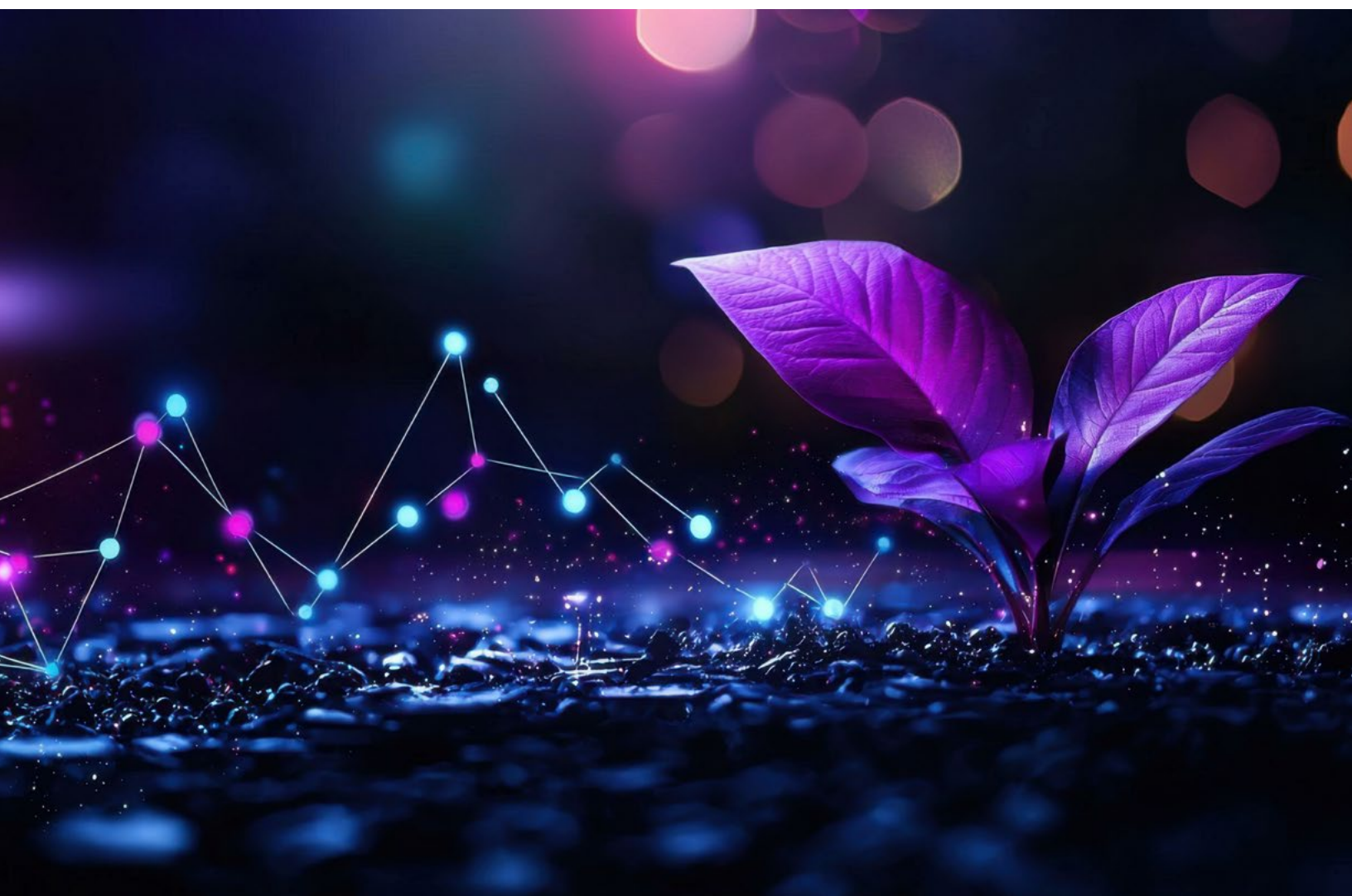


GUIDING GREEN LLC & ACS GREEN CHEMISTRY INSTITUTE

# SUSTAINABLE CHEMISTRY INVESTMENT REPORT

Q2 & Q3 2025



Guiding Green



ACS Green Chemistry Institute  
Chemistry for Life®

# Background & Summary



## BACKGROUND

The *Sustainable Chemistry Investment Report* was launched in June 2025 with a summary of Q1 2025 venture capital (VC) activity to offer real-time insights into the innovation ecosystem supporting the commercialization of products and services that deliver high performance without harm to people or the planet. Trends can be identified to monitor, evaluate, and help position startups and investors alike for optimum benefit.

Sustainable chemistry is the development and application of chemicals, chemical processes, and products that benefit current and future generations without harmful impacts on humans or ecosystems. This report intends to document funding activity associated with the manufacture of chemicals, chemical products, and processes intentionally designed to minimize hazards to human health and the environment. Funding activity focuses on grants, accelerator/incubator investments, angel and seed rounds, early-stage venture capital (VC), and later-stage VC funding. Further context on the definition of the vertical used in this report can be found in the *Sustainable Chemistry Investment Report Q1 2025*.

Tracking investment in sustainable chemistry presents unique challenges. The authors appreciate the complexity in accurately identifying sustainable chemistry and remain steadfast in their commitment to continue to evolve the analysis while remaining transparent in its limitations. The underlying data are based on publicly available information, which presents a risk of misrepresenting the environment and safety attributes of a product or process. Accordingly, the authors and sponsors of this report do not endorse or make claims regarding the safety or environmental performance of the companies, processes or products referenced herein.

## SUMMARY

The *Sustainable Chemistry Investment Report Q2 & Q3 2025 Report* addresses VC investments completed from 2021 through Q3 2025, allowing for a historical perspective that was unavailable in the initial report. By increasing the scope from a quarterly comparison to a five-year period, a more thorough analysis is achieved.

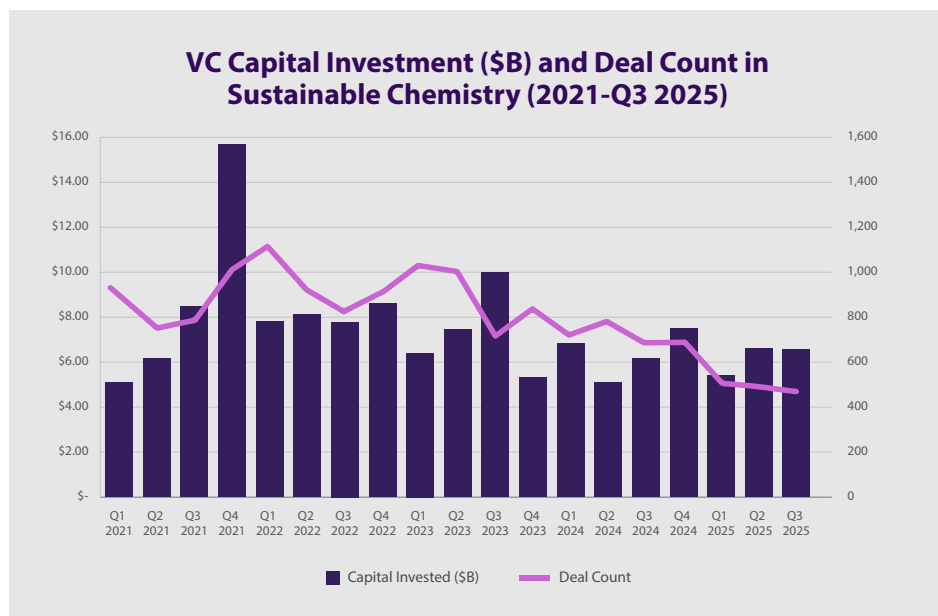
## SUMMARY OF FINDINGS

- Investment in sustainable chemistry has continuously represented approximately 30% of venture capital across the broader chemical sector.
- Capital investment fluctuations and decline in deal count in sustainable chemistry are on a consistent trajectory with the broader chemical sector.
- Large deals valued at least \$100 million equate to 2% of the total deal count and 46% of the total capital investment during Q1 – Q3 2025.
- Declining capital in grants and seed stage investment mirrors broader VC trends, although later stage capital investment is on pace to exceed 2024 totals.



# VC Activity

**Figure 1.** VC Capital Investment and Deal Count in Sustainable Chemistry

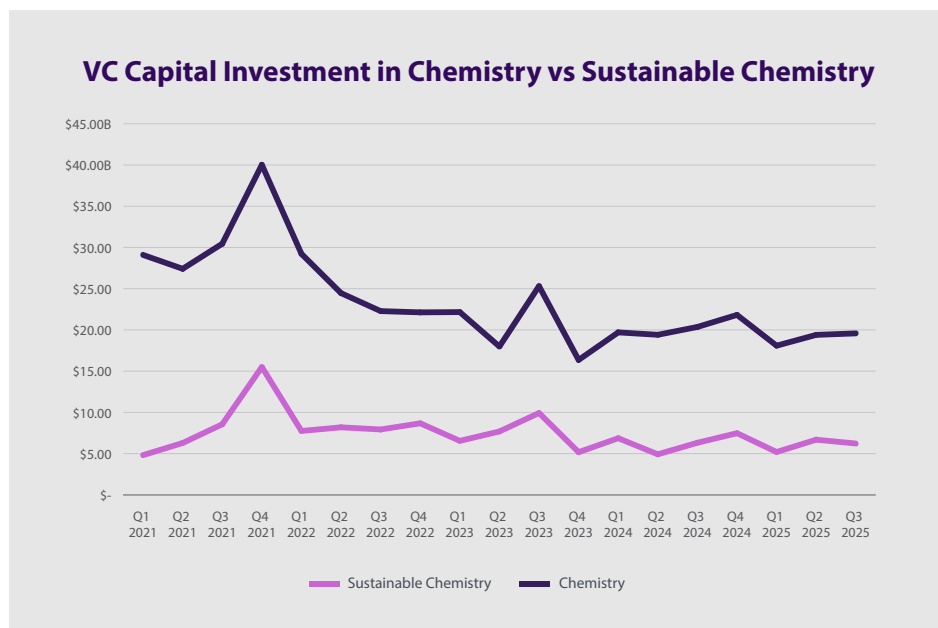


## VC ACTIVITY

Through Q3 2025, there have been 1,445 deals completed, totaling \$18.12 billion investment in sustainable chemistry venture capital in 2025.<sup>1</sup> Globally, investment in sustainable chemistry was higher in Q2 and Q3 2025, compared to Q1 2025, yet total deal count was down.

Q2 2025 and Q3 2025 attracted \$6.69 billion and \$6.23 billion, respectively, in venture capital (VC) funding, as compared to \$5.2 billion in Q1 2025.<sup>2</sup> Deal count has been on a downward slide with 512 deals (Q1), 506 deals (Q2), and 427 deals (Q3). As shown in Figure 1, the fluctuation in capital and decreasing deal flow are consistent with historical trends.

**Figure 2.** VC Capital Investment Chemistry vs Sustainable Chemistry



Sustainable chemistry deals continue to trend with the broader chemistry industry sector (Figure 2). Sustainable Chemistry deal count has been roughly 35% of all chemistry investments per quarter, accounting for roughly 31% of the capital.

<sup>1</sup> Data include deals completed during the time period with a documented deal size.

<sup>2</sup> The Sustainable Chemistry Investment Q1 2025 Report documented \$6.6 billion in deal value during Q1 2025, as compared to \$5.2 billion for the same period reported here. The discrepancy is a result of updated deal closure dates in PitchBook Data, Inc. It is common to see a reasonable variation; however, it is pronounced here primarily due to the size of the impacted deals with multiple tranches. Since publishing the Q1 Report, dates for several large deals over \$100 million, including a \$900 million deal for Pacific Fusion, were initially recorded in Q1 2025 but have since been recorded in an adjacent quarter. Data are included in the report, but appear in a different quarter than expected.

# VC Activity

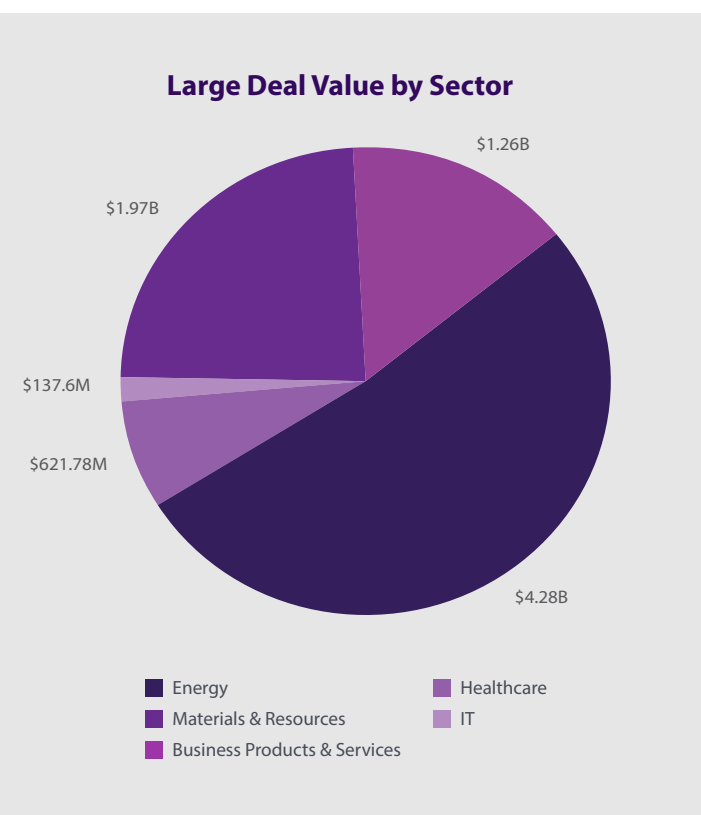
Large deals valued at least \$100 million equate to 2% of the total deal count during Q1 to Q3 2025 and 46% of the total capital investment during the time period. The energy sector continues to dominate the large deals (Figure 3).

During Q2, two large deals were notable in the materials sector: 1) [Electra](#), which produces low-carbon iron, secured \$186 million in a deal led by Temasek Holdings and Capricorn Investment Group to build a demonstration plant with estimated production capacity of 500 tons of iron annually. 2) [Vestaron](#), which manufactures peptide-based pesticides, secured \$102 million to expand commercial presence in targeted U.S. and European markets, and to advance development of new products.

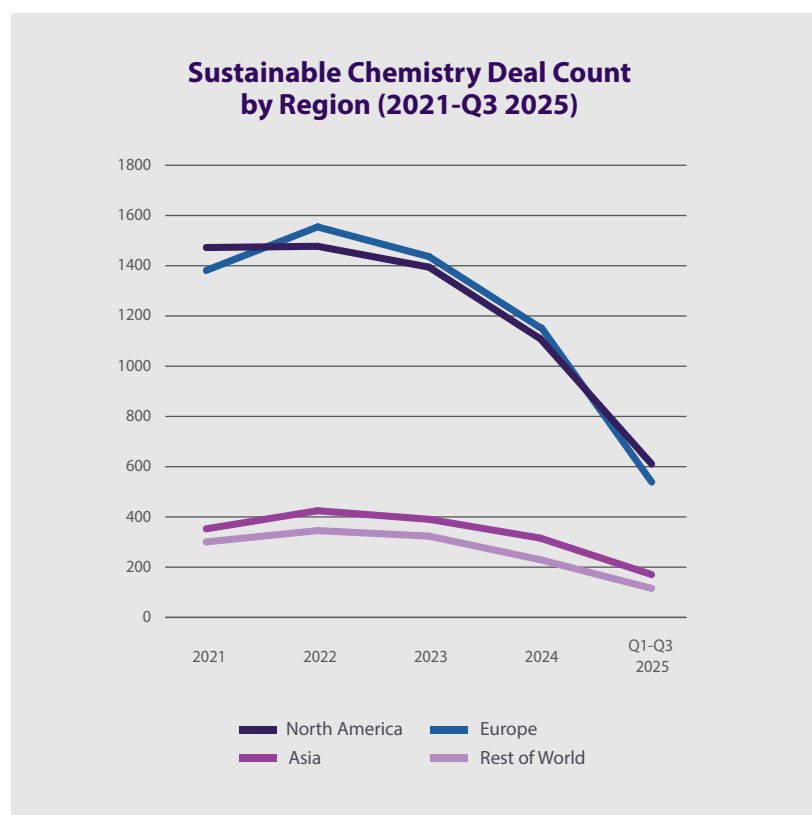
During Q3 2025, notable materials deals included: 1) [Climeworks](#), a company providing carbon dioxide removal services, including direct air capture, raised \$162 million. 2) [Terra CO2](#), developer of low-carbon cement alternatives, raised \$124.5 million to accelerate commercial deployment of its technology, including plans for multiple full-scale production facilities across North America and initial development in Europe.

Since 2022, deal count has been steadily declining in all geographic regions (Figure 4) consistent with global investment trends. In recent years, Europe had the highest number of deals, yet North America is beginning to outpace Europe in Q3 2025.

**Figure 3.** Large Deal Value by Sector

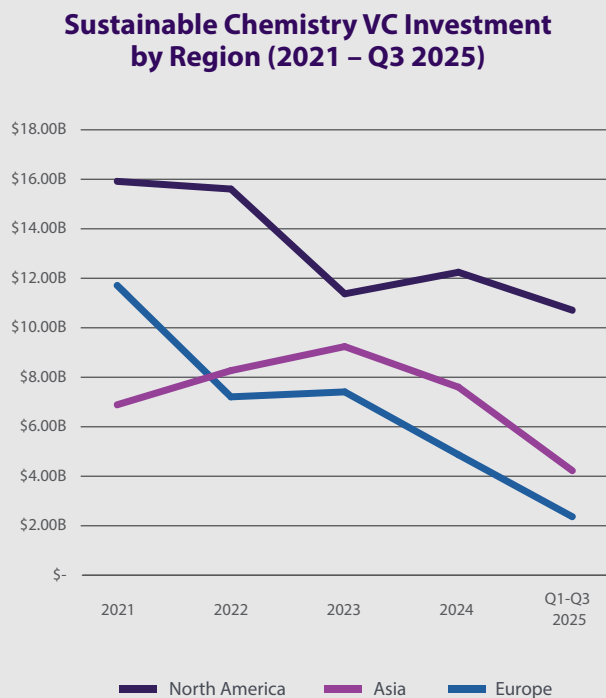


**Figure 4.** Sustainable Chemistry Deal Count by Region

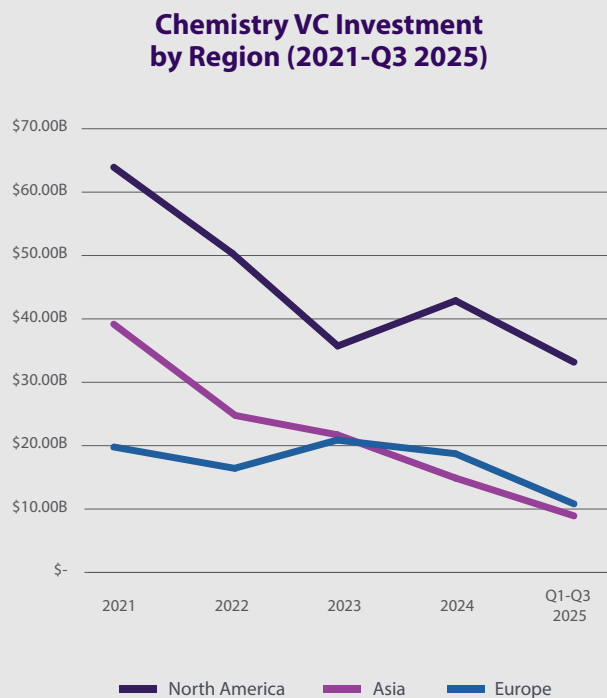


# VC Activity

**Figure 5.** Sustainable Chemistry VC Investment by Region



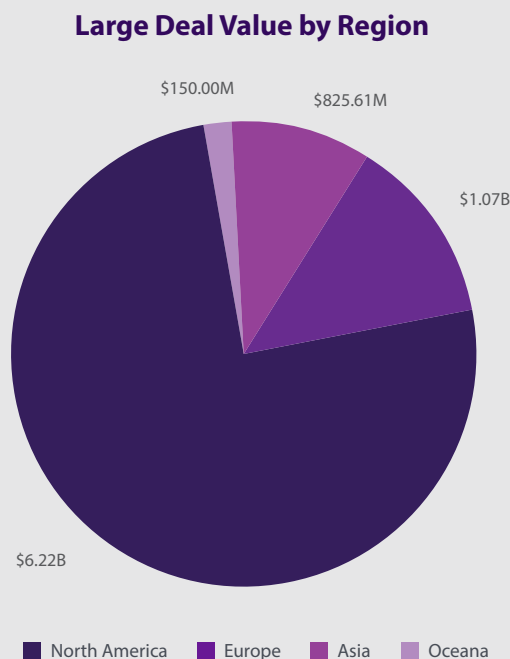
**Figure 6.** Chemistry VC Investment by Region



Capital investment in sustainable chemistry has fluctuated, yet a downward trend in recent years is evident (Figure 5), consistent with trends visible with investments across all chemistry (Figure 6). Since 2023, capital investment in both Europe and Asia has declined and 2025 appears to be on the same path. Investment in North America increased in 2024 over 2023, and may continue to increase in 2025, with capital invested through three quarters achieving 87% of the prior year total. Data suggests a geographic concentration in western regions is consistent with Pitchbook Inc. reporting on carbon and emissions tech trends.<sup>3</sup>

Large deals may be contributing to the stronger capital position for North America from a regional perspective. North America saw 19 of the 28 large deals (≥ \$100 million) in 2025, accounting for \$6.22 billion (Figure 7). The dominance of the Americas in later stage funding is consistent with global VC trends.<sup>4</sup>

**Figure 7.** Large Deal Value by Region

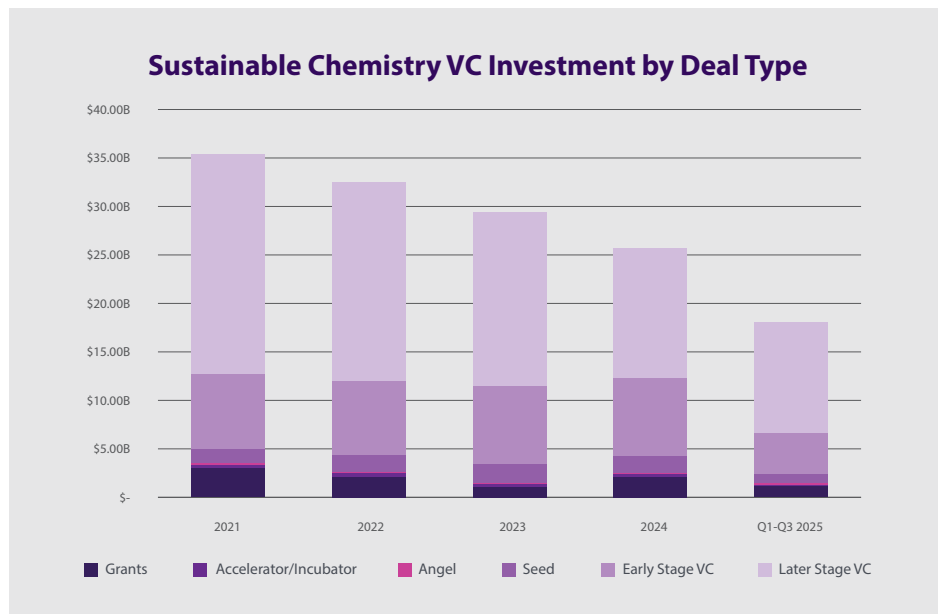


<sup>3</sup> Q3 2025 Carbon & Emissions Tech VC Trends - PitchBook

<sup>4</sup> What's new in venture capital? Update on Q3 2025 Venture Capital Trends | Foley & Lardner LLP

# VC Activity

**Figure 8.** Sustainable Chemistry VC Investment by Deal Type



Later stage venture capital deals account for most of the investment per year, despite the amount steadily decreasing over this 5-year perspective (Figure 8). However, 2025 shows a potential rebound for later stage investment.

Earlier stages of innovation have seen declining investment through Q3 2025 (Figure 8). Accelerator/incubator deals through Q3 2025 are just 61% of the 2024 total. Grant funding is \$1.12 billion through Q3 2025, projecting a year-end total down from \$2.12 billion in 2024. Similarly, investment in seed and early stage venture capital are on a downward trajectory compared to 2024 totals. These trends are not unique to sustainable chemistry and may be indicative of macroeconomic influences. The moderate global GDP growth of ~3.2% in 2025, may be reflecting a cautious investment climate amid slower economic expansion.<sup>5</sup> Additionally, investors may be more selective, favoring more developed technologies in later stage investments and artificial intelligence (AI).

**Figure 9.** Chemistry VC Investment by Deal Type

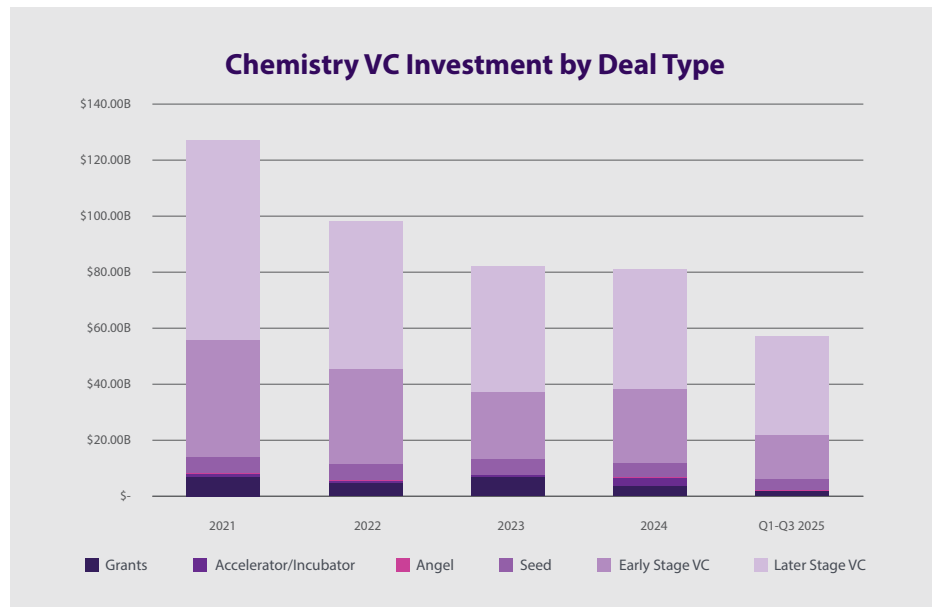


Figure 9 illustrates the investment distribution across all chemistry investments.

<sup>5</sup>World Economic Outlook (October 2025) - Real GDP growth

# VC Activity

Regional differences in deal type are shown in Figures 10 – 14. Investment in Asian companies notably increases with technology readiness. European companies have dominated the accelerator/incubator funding, while North America tends to capitalize on later stage funding. The predominance of mega deals in North America positively impacts later stage

investment in North America compared to other regions. It is worthwhile noting the region is based on company headquarters, not the investor location. Trends indicate sustainable chemistry investment tend to follow all chemistry investment in the respective region.

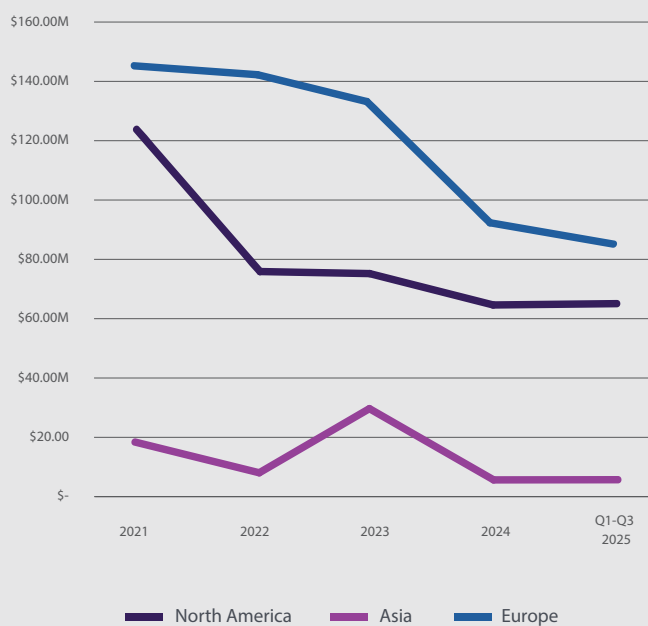
**Figure 10.** Grant Investment by Region

## Grant Investment by Region



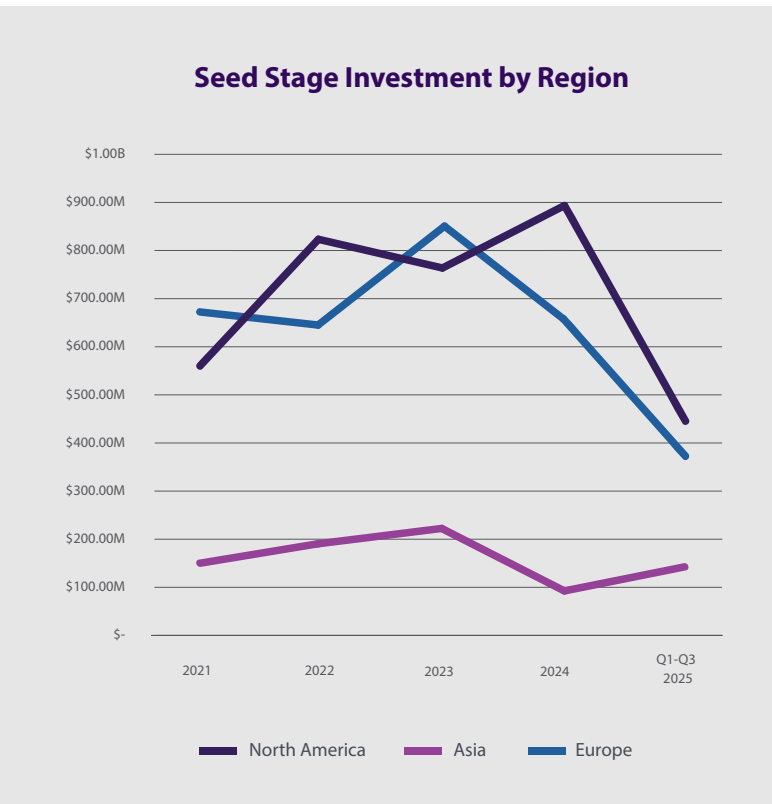
**Figure 11.** Accelerator/Incubator Investment by Region

## Accelerator/Incubator Investment by Region

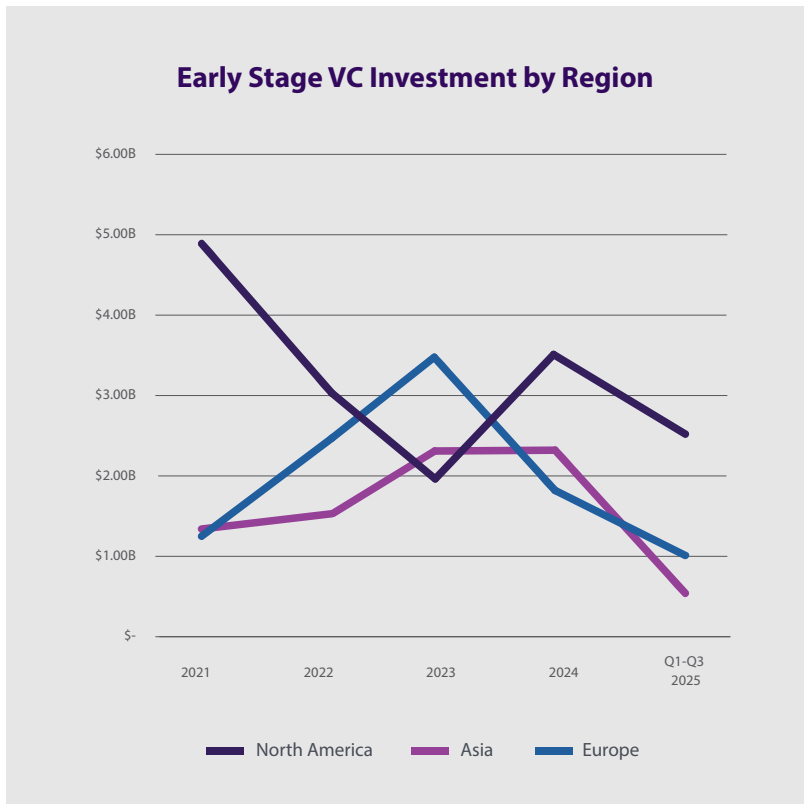


# VC Activity

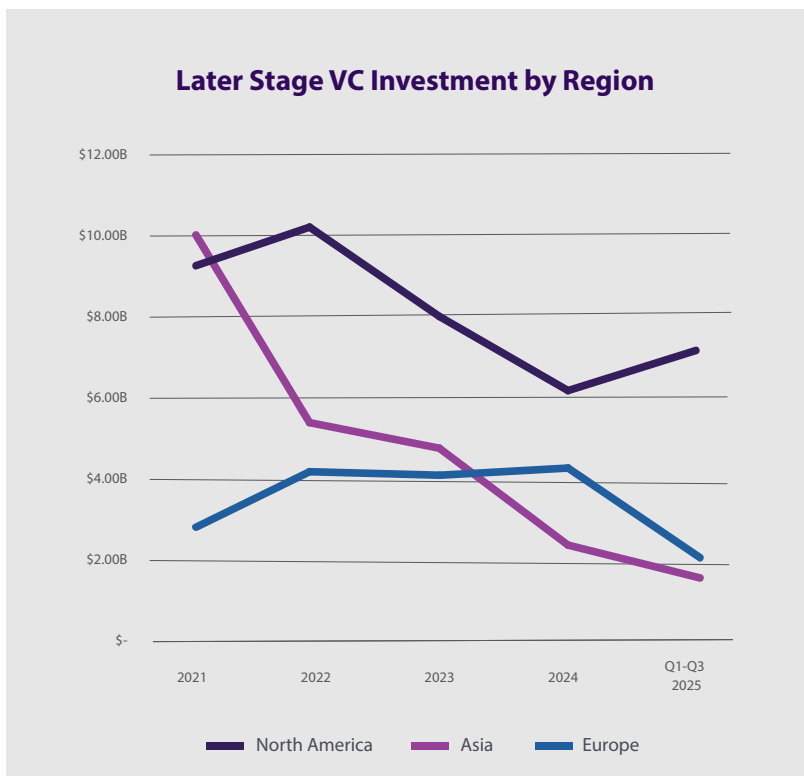
**Figure 12.** Seed Stage Investment by Region



**Figure 13.** Early Stage VC Investment by Region



**Figure 14.** Later Stage VC Investment by Region



# Recent Acquisitions

The following deals (Table 1) represent a sampling of acquisitions made during Q1-Q3 2025 of young companies (less than 10 years since being founded). These companies are consistent with sustainable chemistry but have not been vetted; therefore, inclusion on the list does not constitute an endorsement in any way.

**Table 1.** Recent Acquisitions

Company	Founded	Description	Acquired by
AeoniQ	2022	Manufacturer of continuous cellulose filament yarn intended to improve the sustainability and circularity of textiles	Altri SGPS
Ambient Fuels	2021	Provider of green hydrogen intended for decarbonization purposes	Electric Hydrogen
Arbios Biotech	2020	Developer of carbon-based products, including advanced biofuels, from post-consumer biomass and residues using Cat-HTR technology	Licella
Brauzz	2019	Manufacturer of home care products that eliminate single-use plastic packaging and transportation of water	Planet B
DisSolves	2017	Manufacturer of edible and dissolvable packaging intended to offer products created from natural and vegan ingredients	TerraSafe Materials
Intrinsyx Bio	2018	Developer of plant probiotics designed to increase crop yield, reduce excess fertilizer, and improve soil and water conditions	Syngenta
Kokomodo	2024	Producer of cellular cacao intended to produce authentic and climate-resilient chocolate	Pluri
Lavie Bio	2019	Developer of bio-stimulants and bio-pesticides designed to improve agricultural productivity	Israel Chemicals
P1 Energy	2021	Provider of a modular, containerized system to convert captured carbon dioxide and renewable electricity into synthetic gasoline, diesel, and jet fuel	Nemesis Ltd.
VitroLabs	2016	Developer of biomaterials using tissue engineering to create leather for fashion and interior products	FairCraft



# Conclusion

The *Sustainable Chemistry Investment Report Q2 & Q3 2025*, for the first time, provides a historical perspective on venture capital investment in the development of products and services that deliver high performance without compromising human or environmental health. The visible trends in capital and deal count are consistent with the broader chemical sector.

While the reduction in funding across all early stage funding mechanisms is consistent across the investment landscape, it could be indicative of a challenge in the innovation ecosystem especially in the sustainable chemistry space. Decreasing investment during early phases of technology readiness may limit the number of safer and more sustainable products and processes eventually introduced into the market. In future reports, authors will consider analyses that may help inform investors and startups alike to help manage this early stage funding gap.

Improving metrics, alternative assessments, and transparency can help minimize investment risk, and perception of such risk:

- **Metrics:** Identify metrics and calculation tools that are manageable to implement, readily adaptable to process modifications, and informative to both the innovator and investor. Resource intensive metrics that require skilled practitioners, extensive time, or funding would limit the broad utility of such tools. Some tools exist and require greater outreach, while others may need to be developed.

- **Alternative Assessments:** Improve the ability to compare an innovative process to incumbent technology. Performance, economics, and environmental/safety profile all need to be considered for an informative comparison, yet accurate data for comparison can be challenging to acquire.
- **Transparency:** Encourage transparency to minimize greenwashing. The process and the product are equally important to assess risk and long-term impact. All innovations, even more so those in earlier stages, could improve provided the risk is identified and understood.

The authors continue their commitment to improve the quality and applicability of this report, with particular emphasis on the ability to evaluate companies against the characteristics of sustainable chemistry. The authors invite readers to propose questions and for consideration in future reports.

## How can the *Sustainable Chemistry Investment Report* provide valuable insight for your work?

Email Julie Manley at [juliemanley@guidinggreen.com](mailto:juliemanley@guidinggreen.com).

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