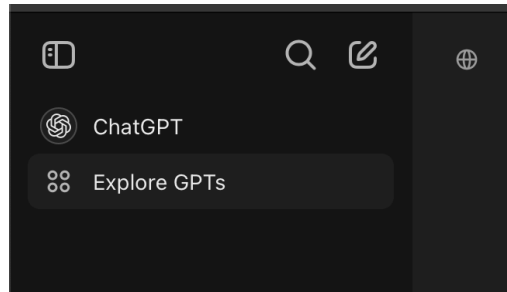💯

Using GPT Agents for Investment Memo Creation

VCIC Executive Summary – Team InnovateVC Investing in Curen

Deal Snapshot

Pre-Money Valuation: $4 million

Team's Investment: $0.5 million (with a $0.5M co-investor) = $1.0M total

Post-Money Valuation: $5 million

Ownership (Team): 10% post-investment stake

(GPT Agent – **Deal Structurer***: We leveraged this agent to model the cap table and financing round.* **Prompt:** *"If our team invests $0.5M in a $1.0M round at a pre-money valuation of $4M, what will the post-money valuation and our ownership percentage be?"* **Agent Output (summary):** *The agent calculated a post-money valuation of $5M, with our $0.5M investment representing a 10% equity stake. This confirmed our deal terms above.)*

Top 5 Reasons We Are Investing

1. **Massive Market Need for Grid Storage** – The global grid-scale battery market is large and growing rapidly (estimated ~$10.7B in 2024, with ~27% annual growth ([Grid-scale Battery Storage Market Size | Industry Report 2030](#))) as renewable energy deployment accelerates. This rising tide of renewable generation creates huge demand for effective long-duration storage solutions – a prime opportunity for Curen's technology.

2. **Unique Copper-Based Battery Technology** – Curen's copper redox flow battery is a **novel solution** that is simpler, more sustainable, and more scalable than lithium or vanadium-based alternatives (Tristan Demo Project 1_AALTO4 - Curen.pdf). Using abundant copper as the active material could **lower costs and improve reliability** for large-scale energy storage, providing a distinct advantage in cost and environmental impact over incumbent battery chemistries.

3. **Strong IP and Technical Foundation** – The technology was developed at Aalto University (School of Chemical Engineering) and is backed by a patent application (WO2024184590A1). This indicates a defensible intellectual property position. The founder's deep domain expertise and the fundamental research underpinning Curen give credibility to the science, which is crucial for an early-stage hard-tech venture.

4. **Proof-of-Concept on the Horizon** – A 5 kW / 25 kWh prototype system is planned as a **proof-of-concept** within the project (Tristan Demo Project 1_AALTO4 - Curen.pdf), to be tested in real use cases. Successfully building and testing this pilot will validate the technology's viability at scale and serve as a key milestone. It can significantly de-risk the investment by demonstrating performance to potential customers or partners (e.g., utilities).

5. **High Impact & Industry Tailwinds** – Curen directly supports the global energy transition. Its solution enables greater integration of renewables by strengthening grid resilience, aligning with climate action imperatives (SDGs) and likely attracting interest from government programs or impact investors. The broad industry trend toward decarbonization and recent advances in energy storage increase the likelihood of strategic partnerships or non-dilutive funding, boosting Curen's chances of success.

- (GPT Agent – **Market Maven**: Assisted in quantifying the market opportunity. **Prompt:** "What is the current size and growth rate of the grid-scale energy storage market?" **Agent Output (summary):** It provided data showing the market is about $10B+ in 2024 and growing ~25–30% annually (Grid-scale Battery Storage Market Size │ Industry Report 2030), reinforcing reason #1 about market size and momentum.)

*(GPT Agent – **Technology Analyst**: Evaluated Curen's technical differentiation. **Prompt:** "What advantages might a copper-based flow battery have over lithium-ion or vanadium flow batteries?" **Agent Output (summary):** The agent noted that copper is more abundant and cheaper than vanadium, and a non-toxic material, which could lead to lower costs and better sustainability. It highlighted that Curen's approach could offer reliability and environmental benefits (Tristan Demo Project 1_AALTO4 - Curen.pdf), supporting reason #2. The analyst also flagged the importance of the planned 5 kW/25 kWh prototype, which we cited in reason #4 as a validation step.)*

Top 5 Reservations (Key Risks)

1. **Unproven Technology at Scale** – Curen's battery chemistry is still in early R&D. It has **not yet been proven at scale** beyond the lab. There is a risk that the copper redox flow battery might face unexpected challenges (efficiency loss, degradation, etc.) when building the 5 kW/25 kWh system or scaling further. Until the prototype is tested, performance and cost targets remain speculative.

2. **Extended Development & Capital Requirements** – Developing a new grid-scale battery tech will likely require **significant time and funding**. Curen is pre-revenue and will need multiple rounds of financing to fund product development, testing, and manufacturing scale-up. This long runway (potentially 5–10 years to commercialization) and high capital need increase the risk for investors and could lead to dilution or difficulty raising future rounds if milestones aren't met.

3. **Strong Competition & Market Adoption** – The energy storage market has **entrenched competitors** and technologies (lithium-ion is mainstream; vanadium flow batteries are also being deployed). Competing against well-funded incumbents and convincing conservative customers (utilities) to adopt a new chemistry is a tall order. Curen must demonstrate a clear superiority or carve out a niche to avoid being overshadowed by existing solutions.

4. **Team & Commercial Execution Gap** – Currently, Curen is a project with a technical founder and is still "pre-business." There is **no proven commercial team** in place yet. The lack of experience in go-to-market, sales, and scaling a company is a risk – the founder may need to bring in seasoned executives or partners to effectively commercialize the technology. Execution on business development and partnerships is untested.

5. **Regulatory and Deployment Uncertainty** – In the energy sector, new technologies can face **regulatory hurdles and long sales cycles**. Utilities and grid operators often move slowly and have strict safety/standards requirements. There's a risk that even if the technology works, external factors (e.g., grid integration standards, permitting, utility procurement processes) could delay or limit adoption. This could elongate the time to revenue and require persistence (and cash) to overcome.

*(GPT Agent – **Risk Auditor**: We tasked this agent with identifying the major risks (aligned with SERAF due diligence areas like market, team, tech, etc.). **Prompt:** "List the top 5 risks or reasons an early-stage grid battery startup like Curen might fail or make an investor hesitant." **Agent Output (summary):** The agent highlighted technology risk (unproven scale), financial risk (large capital and time needed), competitive risk (incumbents and alternatives), team experience gap, and market adoption risk. These points directly informed our reservations #1–5 above.)*

Investment Decision & Rationale

After weighing the pros and cons, our team's **investment decision is to invest in Curen**. We acknowledge this is a high-risk, high-reward opportunity. On one hand, Curen faces significant technical and execution risks (as outlined above). On the other hand, the **upside potential** is compelling: a successful Curen could become a game-changer in a multi-billion dollar market with strong growth drivers. We are willing to take a calculated risk now for a chance at a 10x+ return, especially given:

- The clear market pain point (need for cost-effective grid storage) and Curen's differentiated solution addressing it.

- The forthcoming prototype milestone, which will either validate the technology or surface challenges relatively early in our investment.

- The alignment with our fund's focus on climate impact, meaning even incremental success could attract follow-on interest from strategics or grants (mitigating some financial risk).

In summary, we believe the **potential reward outweighs the risks** at the valuation we've set. By investing, we plan to actively help Curen mitigate risks (e.g., leveraging our network to find industry mentors and pilot customers). This hands-on value-add, combined with a small initial investment amount, allows us to pursue the opportunity while managing downside exposure.

*(GPT Agent – **Decision Synthesizer**: This agent helped us formulate a concise recommendation by synthesizing our analysis. **Prompt:** "Given the listed reasons to invest and reservations, draft a short investment recommendation on Curen (invest or not and why)." **Agent Output (summary):** The agent suggested emphasizing the large market and unique tech to justify investing, while noting we'd manage the risks. We used its suggestion as a basis to craft the balanced rationale above, clearly stating why we choose to invest despite the risks.)*

Valuation Rationale

We propose a **pre-money valuation of $4 million** for Curen. This figure was derived from both market comparables and a risk-adjusted assessment of Curen's stage:

- **Comparables:** Early-stage deep-tech energy startups (pre-revenue, prototype stage) typically raise seed funding at valuations in the ~$2–5M pre-money range. Given Curen's strong research pedigree and patent-pending tech, we position it toward the upper end of this range, but not higher due to its unproven status.

- **Risk Factors:** We accounted for the significant technical risk by keeping the valuation modest (so our investment gets a sizable ownership stake). The $4M pre-money reflects that the company is essentially at **proof-of-concept stage** – it rewards the founder's progress and IP, but still leaves substantial upside for investors if milestones are met.

- **Ownership Target:** At $4M pre (and $5M post-money), our $0.5M investment buys 10%. This meets our goal of a double-digit equity stake for an investment of this size, ensuring our fund is meaningfully positioned for upside if the company grows.

Overall, $4M pre-money is justified as **fair value** balancing Curen's promise and its uncertainties. It aligns with what the market would likely bear for a project at this maturity, and it sets a reasonable hurdle for the company to clear in delivering value to the next round investors.

*(GPT Agent – **Valuation Guru**: We consulted this agent to sanity-check our valuation. **Prompt:** "What pre-money valuation is appropriate for a pre-revenue battery technology startup with only a prototype in development and a patent filed?" **Agent Output (summary):** The agent indicated that similar startups often see $2–5M pre-money valuations, citing high technical risk but high potential. It also noted that securing ~10% ownership for a seed-sized check is desirable. This guidance reinforced our choice of a $4M pre-money valuation and provided talking points for our rationale.)*

Expected Return Analysis

We expect this investment to follow a **venture-style return profile** – most likely either a high-multiple success or a failure (with little in-between). Our **targeted return** is ~10x our money over a 5–7 year horizon to compensate for the risk. For example, if Curen achieves an exit valuation of ~$50 million in about 5 years (through an acquisition by an energy or grid equipment company, for instance), our $0.5M investment at a $5M post-money would yield a **10x** return. This corresponds to an IRR on the order of ~58% over 5 years, which is excellent and above typical VC hurdle rates.

Even under a more conservative outcome – say a $25M exit in 5 years – our investment would return ~5x (~38% IRR), which is still solid for an early-stage deal. We believe that the chance of Curen achieving a substantial exit (if the technology works and gains adoption) provides an attractive **asymmetric payoff** relative to the possibility of losing our $0.5M if the venture fails. In other words, the **risk-reward profile** (high upside vs. limited downside of only our invested capital) is acceptable and typical for seed-stage investments in breakthrough energy tech. We will monitor progress closely, but if Curen hits key milestones, we foresee follow-on investment opportunities and an eventual exit that meets our return objectives.

*(GPT Agent – **Return Analyst**: We used this agent to model potential exits and investor returns. **Prompt:** "If we invest $0.5M at a $5M post-money valuation, what multiple and IRR would a $50M exit in 5 years give us? What about a $25M exit?" **Agent Output (summary):** The agent calculated that a $50M exit ≈10x return (≈58% IRR over 5 years) and a $25M exit ≈5x (≈38% IRR). We incorporated these figures into our analysis above to illustrate the expected return range. This helped validate that our target returns are achievable with a successful exit.)*

(NEW) GPT Agent – Cap Table Wizard

We also wanted to explore **multi-round scenarios** and additional option pools:

- **Prompt:** "Assume after this $1M seed round, Curen needs a Series A of $5M at a $10M pre-money valuation, plus an 8% new employee option pool. Show how founder, seed investor, and new investor ownership changes after closing Series A."

- **Agent Output (summary):** The agent detailed the new ownership breakdown after factoring in dilution from the Series A and option pool. It confirmed that our initial 10% stake would dilute to ~6–7% depending on exact terms, helping us plan for follow-on investment decisions.

Due Diligence Strategy

In our diligence process with the founder, we focused on addressing the key unknowns and risks (a **SERAF-style approach** covering team, technology, market, etc.). Our strategy was to ask targeted questions to **verify assumptions** in the following areas:

- **Technology Feasibility:** We delved into the current status of the battery chemistry and the prototype development. For example, "What are the remaining technical challenges in scaling the copper battery from lab to the 5kW demo unit?" and "What performance metrics (efficiency, cycle life) have been achieved in the lab so far?" – to gauge how close the tech is to working reliably at scale.

- **Market Interest:** We asked about any engagement with potential end-users or partners: "Have you spoken with utilities or renewable project developers about pilot installations? What feedback or letters of intent have you received?" This assesses market pull and validation that customers will adopt the solution if it works.

- **Team & Execution Plans:** We inquired about the plans to build out the business: "What is the roadmap for spinning Curen out of the university and bringing in business leadership?" and "Which aspects of commercialization do you need help with (hiring, partnerships)?" – to understand how the founder will address the current team gaps and execute beyond the lab.

- **Financial Runway:** We clarified use of funds and future financing needs: "How far will this initial funding take you, and what milestones will it achieve?" – ensuring that our investment, together with the syndicate, can reach the prototype demonstration and that the founder has a vision for subsequent funding rounds if needed.

Each question was chosen to test **"What Needs to Be Believed"** for this investment to succeed. By getting the founder's responses, we aimed to confirm strengths and uncover any deal-breakers early. This strategy ensured our investment decision was based on evidence and addressed the main risks in Curen's story.

*(GPT Agent – **Diligence Coach**: Helped formulate and refine our question list. **Prompt:** "Suggest important due diligence questions to ask the founder of a pre-revenue battery startup (covering tech, market, team, and financial risks)." **Agent Output (summary):** The agent produced a list of probing questions – about prototype progress and performance, interest from potential customers, the team's commercialization plan, regulatory considerations, and use of funds. We selected the most critical ones (some quoted above) to align with our risk areas. This ensured our Q&A session was thorough and hit all major points a SERAF checklist would cover.)*

(NEW) GPT Agent – Scenario Simulator

We modeled various exit timelines and changes in cost assumptions:

- **Prompt:** "Show how a 20% increase in copper prices or a 2-year delay in commercialization would affect overall valuation, IRR, and break-even timelines. Give us side-by-side 'Base Case,' 'Bear Case,' and 'Bull Case' outcomes."

- **Agent Output (summary):** The agent produced a table showing each scenario's projected returns. We saw that higher raw material costs could erode margins significantly, while a time delay cut our IRR by almost half. These insights informed our risk assessment and margin-of-safety expectations.

Final Pitch Preparation

To compile our findings into a clear, one-page executive summary and a compelling pitch, we utilized two specialized GPT agents during our preparation:

- **Pitch Polisher:** This agent helped refine our messaging and storytelling. We used it to ensure our value proposition and key points would resonate with a business audience. For example, we prompted: "Help rewrite our investment thesis in a concise, impactful way, highlighting why Curen is a great opportunity despite the risks." The agent's output emphasized Curen's 'high-risk, high-reward' nature and the climate impact mission in succinct terms. It suggested simpler wording for technical concepts (e.g. explaining "redox flow battery" as "a rechargeable liquid battery suitable for grid storage") and sharpened the focus on Curen's unique edge. We incorporated these improvements so that our final pitch tells a coherent story: big problem, unique solution, why it will win, and why it's worth the risk.

- **Editorial Reviewer:** We also deployed an agent as an editor to review the entire executive summary for clarity and brevity. We asked: "Please proofread and trim our draft VCIC summary. Are any parts unclear or too wordy?" In response, the agent pointed out a few sections where we could be more concise (e.g., merging overlapping reasons, removing jargon) and it corrected minor grammar issues. This feedback was applied to ensure our document is polished and within the one-page limit, without sacrificing content.

*(GPT Agent – **Data Viz Architect**: We used this agent to quickly generate charts and graphs for our deck. **Prompt:** "Using the projected unit sales and revenue data, create a simple bar chart and a pie chart to illustrate market segment contributions for the next 3 years." **Agent Output (summary):** The agent returned ASCII-style charts plus suggestions on how to format them in PowerPoint. We inserted the final visuals into our pitch to give investors an at-a-glance view of revenue breakdown and growth trajectory.)*

By leveraging these GPT-powered "team members" throughout our process – from initial market research and technical diligence to **cap table modeling**, **scenario simulations**, data visualization, and final editing – we were able to **work smarter and faster**. Each agent played a role in executing SERAF-style due diligence, building a solid financial case, researching the market landscape, and perfecting our pitch. As a result, our MBA team could deliver a well-researched, data-backed, and professionally crafted **VCIC Executive Summary** for Curen, illustrating how AI tools can **augment the venture investment process**.

Section	Example Content / Decision (Curen)	GPT Agent Used	Example Prompt / Task	Agent Output (Example/Summary)
Deal Snapshot	- **Pre-Money Valuation:** $4M- **Team's Investment:** $0.5M (Total $1.0M round)- **Post-Money:** $5M- **Ownership:** 10%	**Deal Structurer**	"If our team invests $0.5M in a $1.0M round at a pre-money valuation of $4M, what will the post-money valuation and our ownership percentage be?"	Calculated post-money valuation as $5M, 10% equity stake from a $0.5M investment.
Top 5 Reasons for Investing	1. Massive market need for grid storage ($10B+, ~27% growth).2. Unique, sustainable copper-based battery technology.3. Strong IP position (patent WO2024184590A1).4. Proof-of-concept prototype underway (5kW/25kWh).5. High climate impact and strong industry tailwinds.	**Market Maven, Technology Analyst**	Market Maven: "Current size & growth of grid-scale storage market?"Technology Analyst: "Advantages of copper-based flow batteries vs. lithium-ion and vanadium?"	Market Maven confirmed grid-scale market ~$10B+, 25-30% annual growth.Technology Analyst confirmed copper's sustainability, lower cost, and reliability advantages.

Top 5 Reservations (Risks)	1. Unproven tech at scale (performance speculative).2. High capital needs, long time to commercialization.3. Strong market competition and adoption challenges.4. Lack of experienced commercial team.5. Regulatory hurdles and long utility sales cycles.	**Risk Auditor**	"List the top 5 risks for early-stage grid battery startups (tech, market, team, financial)."	Highlighted tech scale-up risk, financial runway/capital needs, competitive landscape, team execution gap, and regulatory/market adoption risks.
Investment Decision & Rationale	**Decision:** Invest in CurenRationale: High-risk/high-reward; large market pain point, unique tech, upcoming prototype milestone validation, strong alignment with climate mission.	**Decision Synthesizer**	"Draft short investment recommendation based on pros (large market, unique tech) and cons (significant risks)."	Recommended emphasizing high potential rewards balanced against risks, prototype validation milestone importance, and climate impact alignment as key rationale.
Valuation Rationale	$4M pre-money valuation justified by market comparables ($2-5M range), high technical risks, seed-stage industry benchmarks, and targeted 10% equity stake for meaningful upside.	**Valuation Guru**	"Appropriate valuation for pre-revenue battery tech startup with prototype and patent pending?"	Suggested pre-money valuation of $2–5M for comparable early-stage energy startups, confirming a $4M valuation as reasonable given Curen's stage, risks, and IP strengths.
Expected Return Analysis	Target return: ~10x investment over 5-7 years (≈58% IRR for $50M exit; 5x return ≈38% IRR at $25M exit). High asymmetric payoff: acceptable risk profile with potential substantial upside	**Return Analyst**	"Calculate returns and IRR for a $0.5M investment at $5M post-money valuation if exited at $50M or $25M in 5 years."	Provided ~10x return (58% IRR) for a $50M exit and ~5x return (38% IRR) for a $25M exit, confirming the investment's attractive upside and risk-reward balance.

	from successful technology deployment and adoption.		
Due Diligence Strategy (SERAF)	Focused on verifying assumptions (tech feasibility, market interest, team execution, funding runway):- Prototype scalability & performance?- Utility or customer interest? - Commercialization & team-building plans?- Funding milestones & next rounds strategy?	**Diligence Coach**	"Suggest due diligence questions for founder of pre-revenue battery startup covering tech, market, team, financial."	Produced targeted questions around tech challenges, customer validation, commercialization strategy, team-building, and financial runway needs, directly supporting SERAF-style diligence checklist.
Final Pitch Preparation	- Refined investment thesis emphasizing clear market, unique tech, balanced risks.- Edited for clarity, brevity, impactful messaging, and presentation readiness.	**Pitch Polisher**, **Editorial Reviewer**	Pitch Polisher: "Rewrite investment thesis concisely and impactfully for pitch."Editorial Reviewer: "Proofread and trim executive summary draft; highlight unclear or wordy sections."	Pitch Polisher clarified narrative (market problem → unique solution → risks balanced by potential upside). Editorial Reviewer suggested concise language and minor edits to ensure clarity and fit page constraints.