



Lumafield

An example of a case that was brought to me for diligence where my recommendation was a No Deal. This is to walk you through my process for a quick diligence without having the luxury to talk to the team in any capacity. (Effort: 2 days)

- Presented by Bivek



EXECUTIVE SUMMARY

We're in due diligence and currently leaning toward a "No Deal." Before a final decision, we're looking for critical feedback and one more follow-up conversation with the founders.

COMPANY OVERVIEW

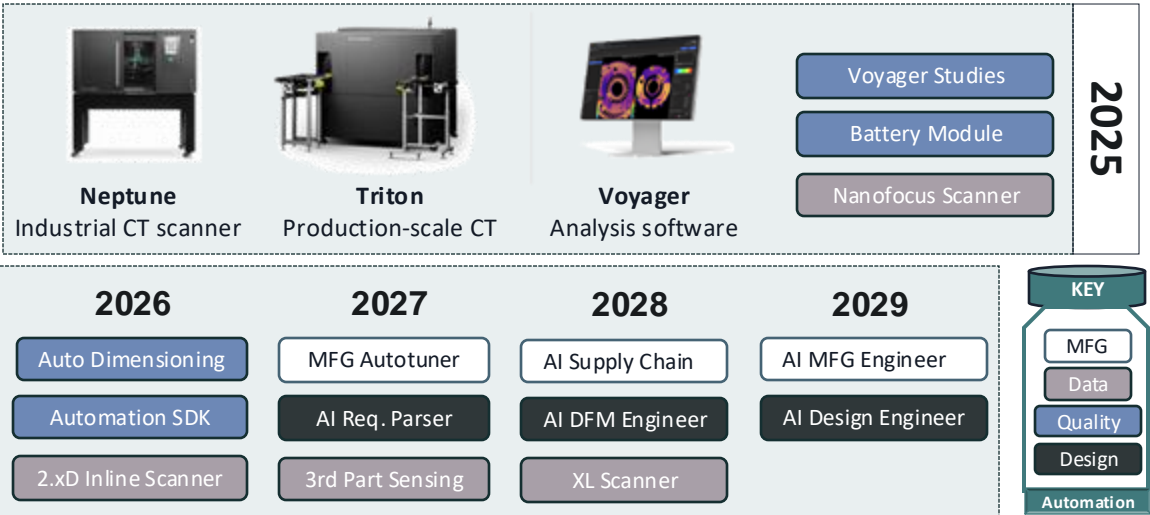
Founded in 2019, Lumafield is an industrial CT (Computed Tomography) technology provider offering a **subscription-based model**, bundling hardware, software, and maintenance. Its **Neptune and Triton scanners**, integrated with the **Voyager platform**, are deployed in automotive, CPG, electronics, aerospace, and other industries for nondestructive testing (NDT) and quality assurance.

- Lumafield revolutionizes manufacturing by making industrial CT accessible to product designers, engineers, and quality control personnel, not just failure analysts. With an annual fee starting at \$75K, the company has lowered cost barriers but faces a challenging path to drive adoption.
- The company expects to end 2025 with **\$13M in ARR (124% YoY growth)**, **74% gross margins**, and **significant operating losses (\$22.8M projected loss in 2025)**. Revenue is projected to reach **\$20.16M by 2026**.
- Lumafield is building a defensible position in mid-market industrial CT by focusing on **cost-effectiveness, ease of use, and AI-native software integration**. Product roadmap expansions—such as higher-resolution scanning (2025) and an XL Scanner (2028)—may drive future growth, but the company's ability to sustain momentum in a capital-intensive business is uncertain.

DEAL DETAILS – NO DEAL!

- Tough call:** After evaluating the deal from multiple angles and consulting with over 16 experts, scalability and demand remain major concerns. The addressable market for mid-tier industrial CT remains constrained. High R&D and marketing costs will continue to strain profitability. Even at the scale of Rivian or Google, adoption appears limited – capping out at 3-5 machines per company. Meanwhile, ultrasound technology is emerging as the preferred solution for battery modules. Given these factors, the projected growth and production targets seem aggressive.
- Repricing Necessity:** The capital required to reach meaningful scale is not justified by the likely return profile. A significant repricing is needed to align expectations with reality. I'm seeing better opportunities with a quarter of the risk and 3-4x return potential.
- High Capital Requirement:** The model demands substantial follow-on capital. Unlike Tesla/Figure, where such risks may be justified by scale, the parallels here are hard to make.
- Inadequate Return Potential:** Even in an optimistic case, reaching \$50 million in EBITDA in five years looks like a long shot (management projects \$96M EBITDA). Factor in dilution from future rounds, and the risk-reward equation simply doesn't hold up.

PRODUCT ROADMAP & GROWTH TRAJECTORY



FINANCIAL OUTLOOK

	Actuals	Actuals	Outlook	Outlook	Outlook	Outlook	Outlook	Outlook
	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Income Statement								
Operating Metrics								
Revenues	\$ 528,800	\$ 2,259,668	\$ 6,950,327	\$ 20,163,655	\$ 52,038,382	\$ 105,792,030	\$ 200,131,728	\$ 355,900,091
Neptune Unit Subscriptions	16	75	127	316	577	993	1,585	2,360
Triton Unit Subscriptions			1	30	94	219	462	882
COGS			\$ 1,891,116	\$ 5,447,652	\$ 12,114,654	\$ 22,512,675	\$ 40,189,404	\$ 67,517,665
Gross Profit	\$ 253,673	\$ 1,652,912	\$ 5,059,211	\$ 14,716,004	\$ 39,923,729	\$ 83,279,356	\$ 159,942,324	\$ 288,382,427
% Gross Margin	48%	73%	73%	73%	77%	79%	80%	81%
S&M Expenses	\$ 3,831,866	\$ 8,106,854	\$ 11,927,129	\$ 23,136,566	\$ 38,683,536	\$ 55,658,623	\$ 79,375,583	\$ 109,520,621
G&A Expenses	\$ 2,593,195	\$ 3,559,389	\$ 4,807,917	\$ 7,016,790	\$ 11,427,536	\$ 18,145,156	\$ 27,788,305	\$ 38,101,685
R&D Expenses	\$ 11,627,804	\$ 12,382,639	\$ 11,089,892	\$ 14,033,580	\$ 19,045,893	\$ 30,241,926	\$ 50,018,949	\$ 71,440,659
Operating Expenses	\$ 18,052,865	\$ 24,048,882	\$ 27,824,938	\$ 44,186,936	\$ 69,156,964	\$ 104,045,705	\$ 157,182,837	\$ 219,062,966
EBITDA	\$ (17,444,207)	\$ (21,871,098)	\$ (21,729,261)	\$ (27,078,180)	\$ (24,238,053)	\$ (11,665,010)	\$ 18,856,615	\$ 96,492,656
% of Revenues	-3299%	-968%	-313%	-134%	-47%	-11%	9%	27%
Non-Operating Income/(Expense)	\$ 442,992	\$ 1,163,734	\$ (25,611)	\$ (1,051,489)	\$ (4,647,421)	\$ (9,962,258)	\$ (18,099,037)	\$ (29,332,283)
Net Income/(Loss)	\$ (17,356,200)	\$ (21,226,236)	\$ (22,778,338)	\$ (30,509,421)	\$ (33,880,657)	\$ (30,728,607)	\$ (15,339,551)	\$ 39,987,178


Valuation from the last round				
Valuation	Price/Share	Investment (\$M)	Ownership	Ownership %
\$175M	\$ 4.27	\$ 45,042,194.09	3,566,486	9.48%

TRANSACTION SUMMARY

We seek critical feedback and a compelling case for YES, as the deal team struggles to see Lumafield as a viable investment.

Lumafield set out to redefine the industrial CT market with a software-driven, subscription-based model. However, after further diligence, we see significant hurdles to scaling adoption, managing capital intensity, and achieving sustainable growth. While the company has strong backers and a differentiated technology, these factors do not outweigh the fundamental risks.

MARKET	Lumafield operates within the industrial CT sector, a subset of the broader industrial equipment and manufacturing technology space. Its software-enabled, subscription-based model is a departure from traditional high-cost CT systems, expanding accessibility and adoption. The company’s focus on high-margin verticals positions it well to drive market expansion.
LEADERSHIP	The founding team has strong design and engineering backgrounds, but we have concerns about their ability to navigate commercialization at scale in a crowded CT market and options field engineering landscape.
GOVERNANCE	Lumafield’s cap table includes a strong investor base—Spark, DCVC, Lux Capital, and Kleiner Perkins. The board structure and dynamics, however, have not yet been disclosed/explored.
EXIT & RETURNS	We are skeptical of the \$1B+ exit potential, given current adoption trends, limited market, public and private comps, burn rate, and future capital requirements. At a \$164M post-money valuation (Series B), Lumafield trades at a 4.7x forward revenue multiple based on an optimistic \$35M ARR target in 2026. Achieving \$500M ARR in the next decade appears highly speculative given industry adoption rates and customer demand. Valuation risks remain high, with more downside exposure than upside optionality.
FINANCIAL PROFILE & RISKS	While topline growth is promising, the financial profile presents multiple red flags: High Burn: Projected \$22.8M loss in 2025, requiring significant follow-on capital. Scalability Concerns: Adoption remains limited in high-volume manufacturing, and competitive pressure from established CT providers and ultrasound alternatives is growing. Capital Intensity: Hardware-focused models often require continuous funding cycles, creating long-term risk for investors.
INVESTMENT THESIS	The initial thesis was built around Lumafield’s ability to democratize industrial CT scanning and drive adoption through a cost-effective, AI-native platform. However, after deeper diligence, we find: The addressable market for mid-tier industrial CT remains constrained. High R&D and marketing costs will continue to strain profitability. The capital required to reach meaningful scale is not justified by the likely return profile.
VALUATION	After doing a deep dive of the tech and the market, reviewing public/private comps and triangulating financial statements, we do not see a compelling case for investment at this stage. The current valuation does not sufficiently compensate for the risks, and a significant repricing would be required to make this an attractive opportunity..
VALUE ADD	Lumafield’s technology directly improves manufacturing efficiency, quality control, and product development. <ul style="list-style-type: none">• Cost savings – Customers report significant reductions in operational costs (e.g., a defense contractor saved \$475K in year one)• Ease of use – Minimal setup and training make the platform accessible beyond specialists.• Improved quality control – Advanced imaging detects defects early, reducing waste and rework.• Cloud-based collaboration – Voyager software streamlines workflows, enhancing productivity.• Proprietary hardware/software stack – The world’s most cost-effective industrial CT hardware/software, offering unmatched value, remains its sustainable competitive advantage.
RIGHT TO WIN	With our proven track record of taking companies, especially hardware-software plays, to the masses, the results speak for themselves. Lumafield will gain from our deep network and sharp insight into engineering technologies. More than just a scaling partner, we have been a trusted confidant, forging strong partnerships and lasting relationships. We’ll be your loudest cheerleader and quietest guide.
SUSTAINABILITY IMPACT	While not traditionally positioned as a sustainability play, Lumafield’s technology supports waste reduction and efficiency improvements in manufacturing.
DECISION	We are preparing to pass on Lumafield due to scalability limitations, capital intensity, and uncertain long-term adoption. While the technology is compelling, the investment case does not meet our criteria for risk-adjusted returns.



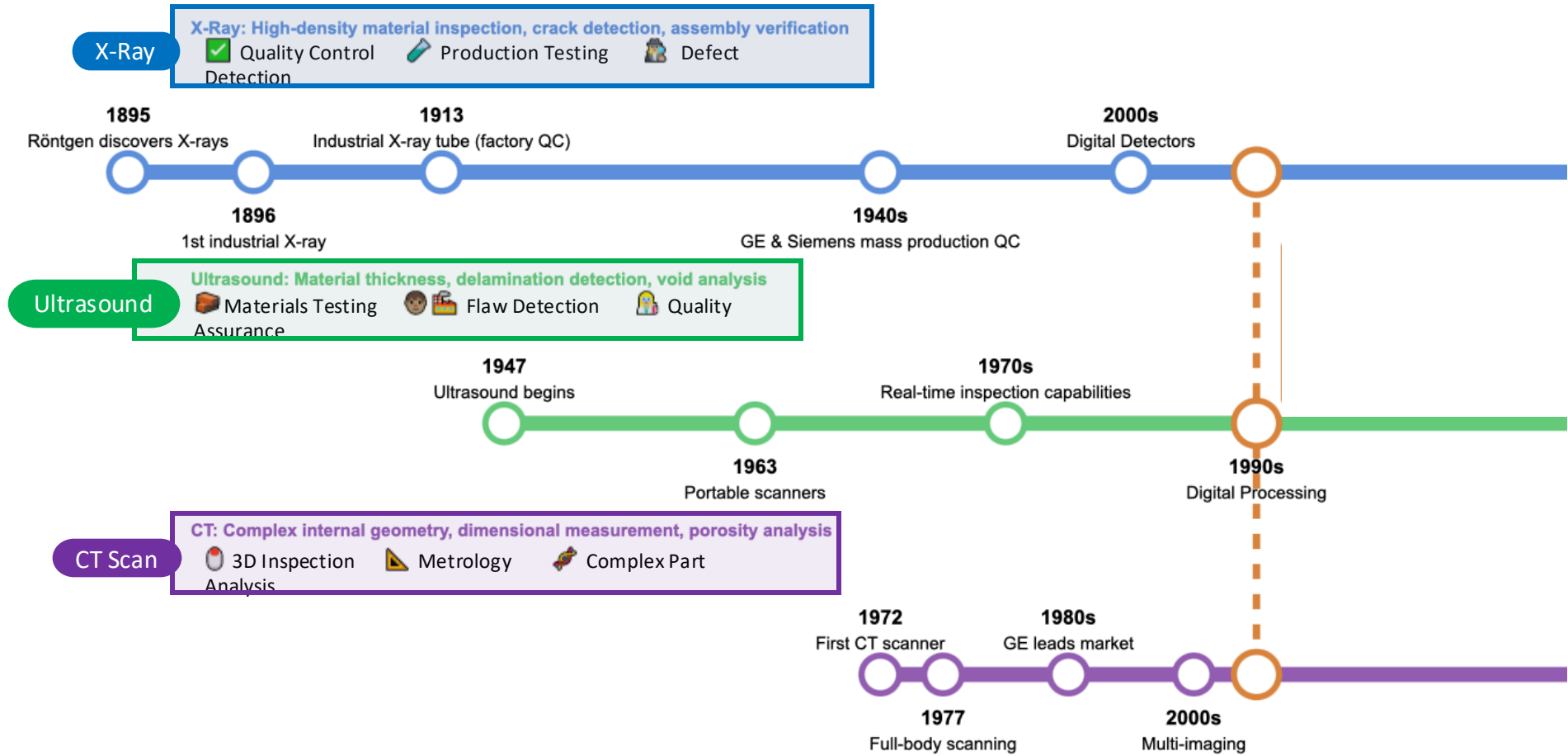
Chinmay Patil | Advanced Manufacturing Engineer at Skydio, Ex-Tesla

"I like to use CT but am yet to find one that is intuitive and doesn't take me hours to get stuff done."

"I'd rather send my CT to my Failure Analyst and be done than have to use on my own."

A BRIEF HISTORY

Rich history of innovation, yet none to democratize access and reduce costs



X-Ray Applications:

- Electronics PCB (YXLON, GE)
- Pipeline (Baker Hughes)
- Food Safety (Mekitec)

Digital/AI Integration:

- Automated defect detection
- Real-time process control
- Smart inspection workflows
- Predictive maintenance

Ultrasound Applications:

- Battery (Sonoscan)
- Tire (Matec, NDT)
- Metal (Olympus, GE)

CT Applications:

- Aerospace (Zeiss, Nikon)
- Additive (North Star)
- Auto (GE, RayScan)
- Electronics (YXLON)
- Research (Bruker)



Gabriel Demeneghi | Material Engineer Team Lead at NASA

"CT is the future"

"We don't do well with subscription models; we have a variable budget"

CT MARKET DYNAMICS

Innovating in a crowded space.

Market Map



Innovation Leaders

- 2005 | **Waygate Technologies** | Industrial CT system
- 2006 | **Zeiss** | High-resolution industrial CT
- 2007 | **Waygate Technologies** | High-resolution nano CT
- 2008 | **Nikon Metrology** | Precision metrology CT scanners
- 2009 | **North Star Imaging (NSI)** | High-energy CT for composites
- 2009 | **Volume Graphics** | CT image analysis software
- 2010 | **Nikon Metrology** | High-resolution CT systems
- 2010 | **Bruker Micro-CT** | High-resolution micro-CT
- 2011 | **North Star Imaging (NSI)** | Advanced industrial CT system
- 2011 | **Tescan** | High-resolution material imaging
- 2012 | **YXLON** | Precision CT for electronics
- 2013 | **Zeiss** | Advanced 3D X-ray microscopy
- 2013 | **Rigaku** | Precision nano-CT for materials
- 2014 | **YXLON** | High-speed CT for aerospace
- 2015 | **Thermo Fisher Scientific** | Industrial helical CT scanner

Lumafield Founded (2019)

Chinmay Patil | Advanced Manufacturing Engineer at Skydio, Ex-Tesla



"CT performs better when welding needs to be tested for fatigue cracks and structural deformity"

"At times, cost of commodity scrap is lower than CT scan"

Benjamin Jackson | Director, Failure Analysis & Materials Engineering at Rivian, Ex-Apple



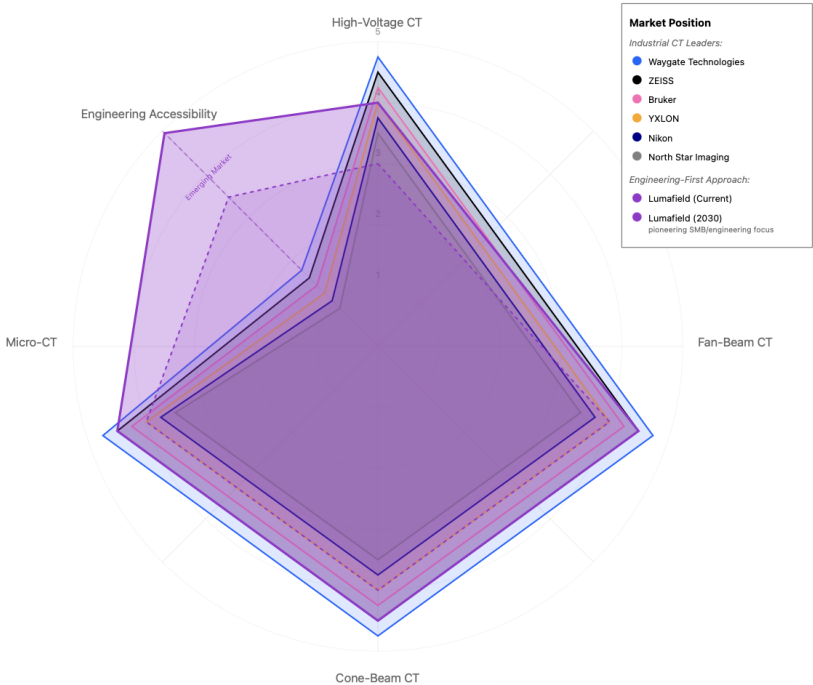
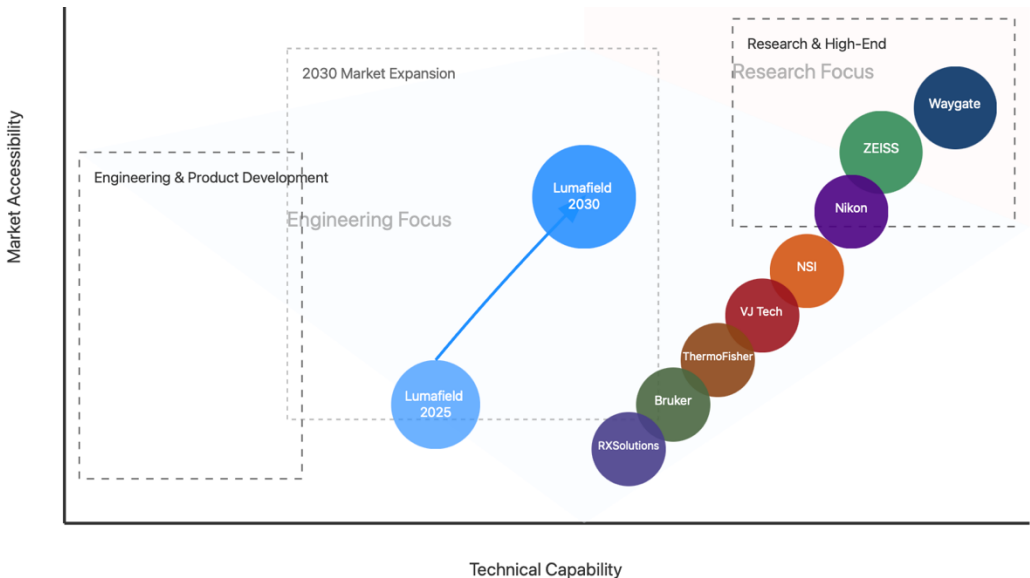
"I opted for North Star. They are more industrial and robust for manufacturing operations."

"Zeiss is close to a 0 out of 10. Absolutely would not recommend. Service and support has been terrible, and the scanning itself does not allow for as much flexibility as the NSI."

TECHNOLOGY & MARKET POSITIONING

Creating new markets by democratizing CT access.

- **Resolution ceiling** – 2.5µm microfocus limits applications requiring sub-micron precision
- Extended detector life – **10× longer lifespan** reduces downtime
- Software-driven calibration – **No granite, vacuum pumps, or chillers required**
- **Fast scanning**: 3-second scan times enable rapid analysis
- Compact form factor & turnkey System – **office-friendly footprint/setup**
- **AI-enhanced processing optimizes QC workflows**
- **Low radiation leakage**, no filament replacements necessary,
- Limited penetration depth, single-part workflow, fixed scan volume, thermal stability constraints, etc.



Competitive Strengths:

ZEISS: Leading in resolution (24/25), materials (23/25)
Waygate: Best in speed (24/25), integration (22/25)
YXLON: Excels in materials (23/25), resolution (22/25)
Nikon: Top in accuracy (24/25), software (23/25)
North Star: Leading in ease of use (23/25)
Lumafield: Best in cost effectiveness (22/25)

Waygate: ★★★★★☆ (23/25)

ZEISS: ★★★★★☆ (22/25)

Bruker: ★★★★★☆ (21/25)

YXLON: ★★★★★☆ (21/25)

Nikon: ★★★★★☆ (21/25)

Thermo Fisher: ★★★★★☆ (20/25)

Lumafield: ★★★★★☆ (20/25)



Katherine Gray | Hardware Reliability & Test Engineer at Skydio, Ex-Apple | **Current Lumafield User**

"I use our CT scanner a lot, it has been instrumental in accelerating our failure analysis process and learning more about our products in a non-destructive manner."

"I don't see us needing more than three machines at the company level and subscription model with no option to buy out seems like a trap."

FINANCIAL OVERVIEW: MANAGEMENT CASE

Management seems overly ambitious in their estimates.

	Actuals FY 2023	Actuals FY 2024	Outlook FY 2025	Outlook FY 2026	Outlook FY 2027	Outlook FY 2028	Outlook FY 2029	Outlook FY 2030
Income Statement								
Operating Metrics								
Total Contracted ARR	\$ 2,249,000	\$5,846,497	\$13,006,270	\$35,083,951	\$76,183,571	\$151,209,630	\$277,883,052	\$476,271,063
Deployed ARR	\$615,672	\$4,455,648	\$9,835,545	\$32,579,870	\$71,503,797	\$141,316,029	\$260,245,151	\$449,003,105
Revenues	\$ 528,800	\$ 2,259,668	\$ 6,950,327	\$ 20,163,655	\$ 52,038,382	\$ 105,792,030	\$ 200,131,728	\$ 355,900,091
Neptune Unit Subscriptions	16	75	127	316	577	993	1,585	2,360
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COGS			\$ 1,891,116	\$ 5,447,652	\$ 12,114,654	\$ 22,512,675	\$ 40,189,404	\$ 67,517,665
Gross Profit	\$ 253,673	\$ 1,652,912	\$ 5,059,211	\$ 14,716,004	\$ 39,923,729	\$ 83,279,356	\$ 159,942,324	\$ 288,382,427
% Gross Margin	48%	73%	73%	73%	77%	79%	80%	81%
S&M Expenses	\$ 3,831,866	\$ 8,106,854	\$ 11,927,129	\$ 23,136,566	\$ 38,683,536	\$ 55,658,623	\$ 79,375,583	\$ 109,520,621
Sales	\$ 1,605,124	\$ 3,079,982	\$ 3,500,277	\$6,508,841	\$10,132,671	\$14,044,346	\$18,970,124	\$22,710,916
Solutions Engineering	\$ 491,420	\$ 1,613,752	\$ 2,297,553	\$2,793,960	\$6,023,320	\$9,170,640	\$15,504,080	\$24,551,480
Marketing	\$ 1,735,322	\$ 3,413,120	\$6,129,299	\$13,833,764	\$22,527,544	\$32,443,637	\$44,901,379	\$62,258,225
G&A Expenses	\$ 2,593,195	\$ 3,559,389	\$ 4,807,917	\$ 7,016,790	\$ 11,427,536	\$ 18,145,156	\$ 27,788,305	\$ 38,101,685
R&D Expenses	\$ 11,627,804	\$ 12,382,639	\$ 11,089,892	\$ 14,033,580	\$ 19,045,893	\$ 30,241,926	\$ 50,018,949	\$ 71,440,659
Operating Expenses	\$ 18,052,865	\$ 24,048,882	\$ 27,824,938	\$ 44,186,936	\$ 69,156,964	\$ 104,045,705	\$ 157,182,837	\$ 219,062,966
Total Headcount	78	91	99	167	259	392	597	845
Operating Income / (Loss)	\$ (17,799,192)	\$ (22,395,970)	\$ (22,765,727)	\$ (29,470,933)	\$ (29,233,236)	\$ (20,766,349)	\$ 2,759,486	\$ 69,319,461
% of Revenues	-3366%	-991%	-328%	-146%	-56%	-20%	1%	19%
% of Contracted ARR	-791%	-383%	-175%	-84%	-38%	-14%	1%	15%
Add: Depreciation & Amortization	\$ 354,985	\$ 524,872	\$ 1,036,466	\$ 2,392,752	\$ 4,995,182	\$ 9,101,339	\$ 16,097,128	\$ 27,173,195
EBITDA	\$ (17,444,207)	\$ (21,871,098)	\$ (21,729,261)	\$ (27,078,180)	\$ (24,238,053)	\$ (11,665,010)	\$ 18,856,615	\$ 96,492,656
% of Revenues	-3299%	-968%	-313%	-134%	-47%	-11%	9%	27%
% of Contracted ARR	-776%	-374%	-167%	-77%	-32%	-8%	7%	20%
Non-Operating Income/(Expense)	\$ 442,992	\$ 1,163,734	\$ (25,611)	\$ (1,051,489)	\$ (4,647,421)	\$ (9,962,258)	\$ (18,099,037)	\$ (29,332,283)
Net Income/(Loss)	\$ (17,356,200)	\$ (21,226,236)	\$ (22,778,338)	\$ (30,509,421)	\$ (33,880,657)	\$ (30,728,607)	\$ (15,339,551)	\$ 39,987,178
% of Revenues	-3282%	-939%	-328%	-151%	-65%	-29%	-8%	11%
% of Contracted ARR	-772%	-363%	-175%	-87%	-44%	-20%	-6%	8%
Cash Flow Statement								
Net Income / (Loss)	\$ (17,356,200)	\$ (21,226,236)	\$ (22,778,338)	\$ (30,509,421)	\$ (33,880,657)	\$ (30,728,607)	\$ (15,339,551)	\$ 39,987,178
Total Cash from Operations	\$ (16,265,362)	\$ (18,813,736)	\$ (20,120,974)	\$ (19,715,732)	\$ (15,154,678)	\$ 2,345,129	\$ 41,745,426	\$ 132,406,559
Total Cash from Investing	\$ (1,982,806)	\$ (5,878,828)	\$ (5,942,173)	\$ (18,837,855)	\$ (30,575,211)	\$ (49,968,945)	\$ (85,874,720)	\$ (131,513,064)
Total Cash from Financing	\$ 35,355,278	\$ 2,827,081	\$ 22,607,589	\$ 72,744,325	\$ 38,923,927	\$ 69,812,232	\$ 118,929,122	\$ 188,757,954
Total Change in Cash	\$ 17,107,110	\$ (21,865,483)	\$ (3,455,559)	\$ 34,190,739	\$ (6,805,962)	\$ 22,188,417	\$ 74,799,828	\$ 189,651,449
Free Cash Flow	\$ (15,120,954)	\$ (13,968,942)	\$ (15,697,871)	\$ (2,664,162)	\$ 12,347,870	\$ 49,649,668	\$ 120,412,803	\$ 254,144,038
Balance Sheet								
Total Assets	\$ 37,712,406	\$ 25,711,162	\$ 28,273,909	\$ 85,687,985	\$ 116,131,914	\$ 199,989,727	\$ 379,154,709	\$ 726,637,970
Total Liabilities	\$ 1,991,540	\$ 10,630,127	\$ 20,493,253	\$ 57,975,345	\$ 121,609,084	\$ 235,156,137	\$ 428,090,488	\$ 733,398,235
Total Equity	\$ 35,720,866	\$ 15,081,035	\$ 7,780,655	\$ 27,712,641	\$ (5,477,171)	\$ (35,166,410)	\$ (48,935,778)	\$ (6,760,265)
Total Liabilities & Equity	\$ 37,712,406	\$ 25,711,162	\$ 28,273,909	\$ 85,687,985	\$ 116,131,914	\$ 199,989,727	\$ 379,154,709	\$ 726,637,970

Commentary

- Revenue Momentum:** FY25 revenue is projected at \$6.95M (up from \$2.3M in FY24), with a significant and seemingly steep ramp to \$20.16M in FY26; expanding Neptune (127 to 315) /Triton (1 to 31) deployments, shipping new modules, and increasing software revenue.
- Gross Margin Expansion:** Gross margins improved from 48% in FY23 to 73% in FY24 and are forecasted to stabilize at ~77% by FY26, driven by software revenue scaling and operational efficiencies.
- Operating Losses:** Operating losses remain high, with FY25 projected at -\$22.8M (increased from -\$21.2M in FY24 and -\$17.4M in FY23).
- Burn Rate:** Cash burn remains a concern, with negative cash flow from operations of ~\$19M in FY25.
- Headcount Growth:** Headcount is expected to grow from 91 employees in FY24 to over 845 by FY30, significant scaling across R&D, sales, and marketing functions.
- Capital-Intensive:** Investments in fleet expansion and deferred contract acquisition costs are substantial, delaying profitability but critical for scaling ARR.
- Profitability:** Profitability is not expected until FY29 at \$2.76M – driven by new product and market expansions.
- R&D Focus:** Lumafield's R&D expenses remain substantial, projected at \$11M in FY25.
- Customer Concentration:** While the top 20 customers makeup a significant portion of booked and deployed ARR – raising concentration risk, it has a weighted sales pipeline of \$30.6M for FY25 with strong top-of-funnel activity.

FINANCIAL OVERVIEW: NEW BASE, DOWNSIDE, AND UPSIDE CASES

We couldn't align management's ambitious forecasts with our findings, so we decided to create our own baseline to mitigate any potential biases.

Choose a scenario: 2
Note: 2= Westly Base case 3= Bull 4= Bear

	Actuals		Westly Base, Upside, and Downside Cases					
	FY 2023	FY 2024	Outlook FY 2025	Outlook FY 2026	Outlook FY 2027	Outlook FY 2028	Outlook FY 2029	Outlook FY 2030
Income Statement								
Revenues	\$ 528,800	\$ 2,259,668	6,602,810	10,570,663	25,499,782	43,002,918	75,471,758	124,614,691
Revenue YoY% (Westly Base Case)			95%	152%	126%	83%	71%	62%
Revenue YoY% (Bull case)			105%	200%	166%	108%	94%	82%
Revenue YoY% (Bear case)			90%	95%	79%	52%	45%	39%
COGS	\$ 72,690	\$ 502,501	1,466,419	2,327,362	4,661,418	7,000,928	11,382,255	17,409,869
% Revenue (Westly Base Case)			22%	22%	18%	16%	15%	14%
% Revenue (Bull case)			28%	28%	24%	22%	21%	20%
% Revenue (Bear case)			32%	32%	28%	26%	25%	24%
Gross Profit	\$ 253,673	\$ 1,652,912	5,136,391	8,243,301	20,838,364	36,001,990	64,089,503	107,204,822
% Gross Margin	48%	73%	78%	78%	82%	84%	85%	86%
S&M Expenses	\$ 3,831,866	\$ 8,106,854	\$ 11,927,129	\$ 23,136,566	\$ 38,683,536	\$ 55,658,623	\$ 79,375,583	\$ 109,520,621
Sales	\$ 1,605,124	\$ 3,079,982	\$ 3,500,277	\$ 6,508,841	\$ 10,132,671	\$ 14,044,346	\$ 18,970,124	\$ 22,710,916
Solutions Engineering	\$ 491,420	\$ 1,613,752	\$ 2,297,553	\$ 2,793,960	\$ 6,023,320	\$ 9,170,640	\$ 15,504,080	\$ 24,551,480
Marketing	\$ 1,735,322	\$ 3,413,120	\$ 6,129,299	\$ 13,833,764	\$ 22,527,544	\$ 32,443,637	\$ 44,901,379	\$ 62,258,225
G&A Expenses	\$ 2,593,195	\$ 3,559,389	\$ 4,807,917	\$ 7,016,790	\$ 11,427,536	\$ 18,145,156	\$ 27,788,305	\$ 38,101,685
R&D Expenses	\$ 11,627,804	\$ 12,382,639	\$ 11,089,892	\$ 14,033,580	\$ 19,045,893	\$ 30,241,926	\$ 50,018,949	\$ 71,440,659
Operating Income / (Loss)	\$ (17,799,192)	\$ (22,395,970)	\$ (22,688,547)	\$ (35,943,636)	\$ (48,318,600)	\$ (68,043,715)	\$ (93,093,334)	\$ (111,858,144)
EBITDA	\$ (17,444,207)	\$ (21,871,098)	\$ (21,652,081)	\$ (33,550,883)	\$ (43,323,418)	\$ (58,942,375)	\$ (76,996,206)	\$ (84,684,948)
Net Income/(Loss)	\$ (17,356,200)	\$ (21,226,236)	\$ (22,701,158)	\$ (37,179,924)	\$ (53,760,208)	\$ (80,286,908)	\$ (116,508,371)	\$ (152,274,270)
Cash Flow Statement								
Net Income / (Loss)	\$ (17,356,200)	\$ (21,226,236)	\$ (22,701,158)	\$ (37,179,924)	\$ (53,760,208)	\$ (80,286,908)	\$ (116,508,371)	\$ (152,274,270)
Total Cash from Operations	\$ (16,265,362)	\$ (18,813,736)	\$ (20,043,794)	\$ (26,386,234)	\$ (35,034,229)	\$ (47,213,171)	\$ (59,423,394)	\$ (59,854,889)
Total Cash from Investing	\$ (1,982,806)	\$ (5,878,828)	\$ (5,942,173)	\$ (18,837,855)	\$ (30,575,211)	\$ (49,968,945)	\$ (85,874,720)	\$ (131,513,064)
Total Cash from Financing	\$ 35,355,278	\$ 2,827,081	\$ 22,607,589	\$ 72,744,325	\$ 38,923,927	\$ 69,812,232	\$ 118,929,122	\$ 188,757,954
Total Change in Cash	\$ 17,107,110	\$ (21,865,483)	\$ (3,378,379)	\$ 27,520,236	\$ (26,685,513)	\$ (27,369,884)	\$ (26,368,992)	\$ (2,609,999)
Free Cash Flow	\$ (15,120,954)	\$ (13,968,942)	\$ (15,620,691)	\$ (9,334,665)	\$ (7,531,681)	\$ 91,368	\$ 19,243,983	\$ 61,882,590
Balance Sheet								
Total Assets	\$ 37,712,406	\$ 25,711,162	\$ 28,351,088	\$ 79,094,663	\$ 89,659,040	\$ 123,958,552	\$ 201,954,714	\$ 357,176,527
Total Liabilities	\$ 1,991,540	\$ 10,630,127	\$ 20,493,253	\$ 57,975,345	\$ 121,609,084	\$ 235,156,137	\$ 428,090,488	\$ 733,398,235
Total Equity	\$ 35,720,866	\$ 15,081,035	\$ 7,857,835	\$ 21,119,318	\$ (31,950,045)	\$ (111,197,585)	\$ (226,135,774)	\$ (376,221,708)
Total Liabilities & Equity	\$ 37,712,406	\$ 25,711,162	\$ 28,351,088	\$ 79,094,663	\$ 89,659,040	\$ 123,958,552	\$ 201,954,714	\$ 357,176,527

		FY 2024 A	FY 2025 E	FY 2026 E	FY 2027 E	FY 2028 E	FY 2029 E	FY 2030 E
MGMT	Revenue	\$ 2,259,668	6,950,327	20,163,655	52,038,382	105,792,030	200,131,728	355,900,091
	COGS	\$ 502,501	1,891,116	5,447,652	12,114,654	22,512,675	40,189,404	67,517,665
	Gross Profit	\$ 1,652,912	5,059,211	14,716,004	39,923,729	83,279,356	159,942,324	288,382,427
	% Gross Margin	73%	73%	73%	77%	79%	80%	81%
	EBITDA	\$ (21,871,098)	\$ (21,729,261)	\$ (27,078,180)	\$ (24,238,053)	\$ (11,665,010)	\$ 18,856,615	\$ 96,492,656
	Net Income/(Loss)	\$ (21,226,236)	\$ (22,778,338)	\$ (30,509,421)	\$ (33,880,657)	\$ (30,728,607)	\$ (15,339,551)	\$ 39,987,178
Our Base	Free Cash Flow	\$ (13,968,942)	\$ (15,697,871)	\$ (2,664,162)	\$ 12,347,870	\$ 49,649,668	\$ 120,412,803	\$ 254,144,038
		FY 2024 A	FY 2025 E	FY 2026 E	FY 2027 E	FY 2028 E	FY 2029 E	FY 2030 E
	Revenue	\$ 2,259,668	6,602,810	10,570,663	25,499,782	43,002,918	75,471,758	124,614,691
	COGS	\$ 502,501	1,466,419	2,327,362	4,661,418	7,000,928	11,382,255	17,409,869
	Gross Profit	\$ 1,652,912	5,136,391	8,243,301	20,838,364	36,001,990	64,089,503	107,204,822
	% Gross Margin	73%	78%	78%	82%	84%	85%	86%
Bear	EBITDA	\$ (21,871,098)	\$ (21,652,081)	\$ (33,550,883)	\$ (43,323,418)	\$ (58,942,375)	\$ (76,996,206)	\$ (84,684,948)
	Net Income/(Loss)	\$ (21,226,236)	\$ (22,701,158)	\$ (37,179,924)	\$ (53,760,208)	\$ (80,286,908)	\$ (116,508,371)	\$ (152,274,270)
	Free Cash Flow	\$ (13,968,942)	\$ (15,620,691)	\$ (9,334,665)	\$ (7,531,681)	\$ 91,368	\$ 19,243,983	\$ 61,882,590
		FY 2024 A	FY 2025 E	FY 2026 E	FY 2027 E	FY 2028 E	FY 2029 E	FY 2030 E
	Revenue	\$ 2,259,668	6,255,294	6,606,664	15,937,364	26,876,824	47,169,849	77,884,182
	COGS	\$ 502,501	1,466,419	2,327,362	4,661,418	7,000,928	11,382,255	17,409,869
Bull	Gross Profit	\$ 1,652,912	4,240,525	4,491,396	11,430,241	19,813,561	35,338,955	59,214,596
	% Gross Margin	73%	68%	68%	72%	74%	75%	76%
	EBITDA	\$ (21,871,098)	\$ (22,547,947)	\$ (37,302,787)	\$ (52,731,541)	\$ (75,130,804)	\$ (105,746,755)	\$ (132,675,175)
	Net Income/(Loss)	\$ (21,226,236)	\$ (23,597,023)	\$ (41,075,574)	\$ (63,607,495)	\$ (97,428,756)	\$ (147,131,019)	\$ (203,678,729)
	Free Cash Flow	\$ (13,968,942)	\$ (16,516,557)	\$ (13,230,314)	\$ (17,378,968)	\$ (17,050,481)	\$ (11,378,665)	\$ 10,478,131
		FY 2024 A	FY 2025 E	FY 2026 E	FY 2027 E	FY 2028 E	FY 2029 E	FY 2030 E
	Revenue	\$ 2,259,668	7,297,843	13,873,995	33,468,464	56,441,330	99,056,682	163,556,782
	COGS	\$ 502,501	2,058,650	3,887,102	8,126,219	12,575,198	20,882,610	32,663,860
	Gross Profit	\$ 1,652,912	5,239,193	9,986,892	25,342,244	43,866,132	78,174,072	130,892,922
	% Gross Margin	73%	72%	72%	76%	78%	79%	80%
	EBITDA	\$ (21,871,098)	\$ (21,549,279)	\$ (31,807,292)	\$ (38,819,537)	\$ (51,078,233)	\$ (62,911,637)	\$ (60,996,848)
	Net Income/(Loss)	\$ 1,652,913	\$ (22,598,356)	\$ (35,379,227)	\$ (49,058,161)	\$ (71,975,249)	\$ (101,526,841)	\$ (126,928,845)
	Free Cash Flow	\$ (13,968,942)	\$ (15,517,889)	\$ (7,533,968)	\$ (2,829,634)	\$ 8,403,026	\$ 34,225,514	\$ 87,228,015

Paurakh Rajbhandari, Ph.D. | Biosensor Research Scientist at Meta

"The cost seems like a great deal; although, as an IC I care more about the quality of scan than cost"

"I don't want to feel limited by the machine we have in house even if we can get some workflow done with smaller Scanner"



RETURN ANALYSIS

Not a good outlook.

					Analysis using MGMT Case			Returns Overview	
					Revenue	EBITDA		Our Base Case	Management Case
					2024A	2024A	2025E	2030F Revenue: \$124.6M	2030F Revenue: \$355.9M
Pre-Money									
Total Valuation	Price Per Share	Total Investment	Ownership	Ownership %				MOIC	MOIC
\$200M	4.87	\$10.00	2,053,388	5%	\$2.30	91.3x	(\$21.80)	57.3x	163.7x
\$196M	4.77	\$15.00	3,144,654	7%		91.7x	-10.03x	53.5x	152.8x
\$192M	4.67	\$20.00	4,282,655	9%		92.1x	-9.36x	51.6x	147.3x
\$188M	4.57	\$25.00	5,470,460	12%		92.5x	-13.91x	55.0x	157.2x
\$184M	4.47	\$30.00	6,711,409	14%		92.9x	-14.84x	53.5x	152.8x
\$179M	4.37	\$35.00	8,009,153	16%		93.3x	-9.36x	52.4x	149.7x
\$175M	4.27	\$40.00	9,367,681	19%		93.6x	-14.13x	54.5x	155.5x

- **Evaluating EBITDA:** The negative EBITDA in the Management case makes it less meaningful to rely on EBITDA multiples for deriving valuations and returns
- **Challenges of Revenue Multiples:** While we projected revenue multiples as the best option given the dataset, they can be misleading in a hardware-software subscription model. Continued high customer acquisition costs, especially as Triton sales cycle begin, can significantly cut into margins and further stretch the already lengthy sales cycles -- pushing the cash flow further out and leading to an even higher burn rate.
- **Investment amount scenarios:** We must weigh the potential for returns against the likelihood of meeting growth targets amid ongoing losses.
- **Questions:** we should prioritize understanding how management plans to manage burn, cash reserve, new funds, and EBITDA while capturing the significant revenue opportunities ahead

VALUATION COMPS – PRECEDENT TRANSACTIONS & PUBLICLY TRADED

Concentrated market within the conventional CT industry. Active M&A space, although valuations aren’t as enticing.

Public Tech-enabled Imaging Companies

Company Name	Market Cap (\$B)	Stock Price (USD)	Revenue CAGR (5-year)	EPS CAGR (5-year)	P/E Ratio	Price-to-Sales	Debt-to-Equity	EV/EBITD A
PerkinElmer Inc.	~\$14	~\$100	~8%	~12%	~35	~7x	~0.6x	~23x
Nikon Corporation	~\$3.8	~\$6	~-1%	~-2%	~15	~0.5x	~1.2x	~8x
Thermo Fisher Scientific	~\$228	~\$550	~10%	~15%	~30	~10x	~1.5x	~20x
Carl Zeiss Meditec AG	~\$5.3	~\$50	~6%	~8%	~28	~4x	~0.3x	~25x
OMRON Corporation	~\$6.5	~\$30	~4%	~5%	~20	~2x	~0.5x	~15x
Bruker Corporation	~\$8.8	~\$58	~8%	~10%	~28	~6x	~0.2x	~22x
Shimadzu Corporation	~\$10	~\$20	~5%	~7%	~17	~3x	~0.4x	~18x

	Obtainable Market (SOM)	
	Global	US
7% CAGR	Current: \$7B	Current:\$2B
14.8% CAGR	New: \$39B	New: \$12B

Precedent Transactions

Acquirer	Target	Deal Value (USD)	Segment
Hologic Inc.	Gynesonics	\$350M	Ultrasound Imaging
Lantheus Medical Imaging	Life Molecular Imaging	\$350M	Molecular Imaging
Boston Scientific Corp.	Bolt Medical	\$664M	Vascular Lithotripsy Systems
Apax Partners	Diagnostic Radiology Practices	\$80M	Radiology Practices
Other recent acquisitions: Canon Medical Systems acquired NXC Imaging, Frazier Healthcare Partners acquired DirectMed Imaging, GE HealthCare acquired AI Clinical Imaging Division, and Montagu Private Equity acquired Tyber Medical.			

	Total Market Size (TAM)	
	Global	US
7% CAGR	Current: \$7B	Current:\$2B
14.8% CAGR	New: \$396B	New: \$121B

Taha Sutarwala, Ph.D. | Battery Engineering Team Lead at Google

“In batteries, CT is very good for checking alignment. I wouldn’t use ultrasound for that.”

“Air gaps & separators won’t show up on a CT, which is are key components of the battery”



RISKS & CONSIDERATIONS

Riskier than we are comfortable with.

LIMITED THROUGHPUT	The one-at-a-time scanning process restricts Lumafield's ability to serve high-volume production sectors, potentially impacting market share despite an 85% reduction in QA time. Mitigation: The development of the Triton system and the future 2xD Inline Scanner (2028) aims to enhance throughput and automation in production environments.
INADEQUATE RESOLUTION	The current 25µm resolution is insufficient for detecting smaller defects (75µm to 100µm), limiting applications in advanced materials and electronics. Mitigation: Upcoming enhancements, including the Neptune Microfocus and nanofocus scanners (2025), are designed to improve resolution capabilities for critical applications.
HIGH COMPETITION	Competitors like ZEISS and Nikon offer superior resolution and larger scan volumes, constraining Lumafield's opportunities in high-end markets. Mitigation: Lumafield focuses on democratizing CT technology by targeting underserved mid-market segments where its solutions can provide significant cost and usability advantages.
THREAT FROM NEW TECHNOLOGIES	Ultrasound is more effective for certain battery inspection applications, which could limit Lumafield's market share in this sector despite a strong ROI for battery manufacturers. Mitigation: Lumafield is developing a battery module to enhance its capabilities in this vertical and focusing on machine learning to maximize the value of CT data.
UNSUSTAINABLE BURN RATE AND RELIANCE ON FUNDING	With a monthly burn rate exceeding \$3 million and projected operating losses of \$22.8M in 2025, continuous capital infusion is necessary, raising dilution risk for investors. Mitigation: The strategy to scale revenue through increased sales of Neptune and Triton systems is expected to mitigate the burn rate over time.
DISTANT PROFITABILITY TIMELINE	Profitability is not expected until after 2030, which may deter investors seeking shorter-term returns.
CUSTOMER ACQUISITION COSTS	High sales and marketing expenses (725% of revenue in 2023)
LONG SALES CYCLES AND TECH VALIDATION	Extended sales cycles and required customer validation can delay revenue recognition and growth, impacting deployment timelines.
VALUATION RISKS	A post-money valuation of approximately \$164M, driven by a high burn rate and distant profitability projections, may necessitate a discount to account for execution risks.



Nick Poudel, PhD | Senior Failure Analysis Engineer at NVIDIA

"The cost is the most prohibitive...democratization of CT is huge! More people are able to afford [CT], less maintenance required."

"If you're going to put one product in the machine, close it, and then open it and take one out...that is not viable. Which factory will do that?"

Your critical feedback and a compelling case for YES.

Why did the current cap table say yes?

Investors like KPCB, Lux, DCVC, and Spark backed Lumafield, likely seeing an opportunity to build a category-defining company in industrial CT scanning.

- **New market opportunity:** A \$396B manufacturing market with low CT penetration, plus a 7x cost reduction (\$75K vs. ~\$500K), makes adoption feasible. Industry 4.0, reshoring, and automation trends further drive demand.
- **Early traction & business model:** 70%+ gross margins, and enterprise customers (Tesla, J&J, Rivian, Milwaukee Tool) suggested an early strong product-market fit.
- **Defensibility & strategic fit:** Proprietary detector tech (10x cheaper, 10x longer-lasting), an AI-native approach, and full stack hardware/software integration could create durable moats. Lux and DCVC likely leaned into industrial automation, while Spark saw SaaS-like scalability. Angel investors (Tony Fadell, Dylan Field) may have been drawn to parallels with their own experiences in disruptive hardware/software bets.

FURTHER DILIGENCE QUESTIONS

Example of some questions we need to ask management before passing on this deal

- **Tech:**
 - Battery Module: given expert feedback that CT scanning **cannot detect key battery components** such as **separators, air gaps, and cathodes**, and that **X-ray is already widely used for alignment and tab placement**, what **specific, novel use cases** does Lumafield's CT technology enable in battery manufacturing that cannot be achieved with **X-ray + ML, regular CT tech, or ultrasound**? Can management provide **customer-validated case studies** demonstrating a clear advantage over existing solutions outside of 1-2 limited use cases?
 - How does Lumafield plan to defend its position against emerging inspection technologies like **Ultrasound, and Spectral Photon-Counting CT (SPCCT)**, which offer **superior resolution, material differentiation, and functional imaging** for **battery inspections and other industrial applications**?
 - **Requests:**
 - A concrete ROI analysis and customer case studies demonstrating advantages over X-ray + ML, traditional CT, or ultrasound in battery applications
 - Quantify the addressable opportunity within battery manufacturing that's uniquely suited to Lumafield's technology
 - Detail the R&D investment and timeline to achieve feature parity in key areas where competitors currently lead
- **Pricing:**
 - Multiple enterprise customers (e.g., **NASA, Rivian**, etc.) have pushed back against subscription-based models. Has Lumafield tested alternative pricing structures (e.g., hardware purchase, pay-per-use)? If so, what were the findings?
 - What are the biggest constraints in scaling production of Neptune and Triton? Are there supply chain dependencies that could limit deployment speed and margin expansion?
 - I see different subscription rates for different clients, is it just because of the configuration or have you incentivized certain clients?
- **Other:**
 - Looking at the 2024-2030 financial projections, what supports the assumption of scaling from **1 to 882 Triton deployments** given the current technical limitations?
 - What percentage of R&D spend is currently allocated to Software AI vs. hardware?
 - I see that TriplePoint lent ~\$30M (per Pitchbook) and you refinanced in 2024, can you add some color on it and what the debt service schedule is?
 - If Lumafield's own leadership team had to name the top 3 risks to the business, what would they be? What steps are they taking to mitigate these risks?