

IDEX Biometrics ASA

(NASDAQ: IDBA)

Orders Continue to Roll In as Cards Roll Out

OUTLOOK

We are valuing IDEX on 2025 estimated revenues discounted to today using the average EV/Sales of other fabless semiconductor companies that trade at 8.4 times 2023 estimated sales.

IDEX Biometrics is a Norwegian-headquartered fabless semiconductor company largely operating from the US with a US-based senior management team that provides hardware and software systems to create biometric fingerprint-protected payment cards and other smart card solutions. Next-generation payment cards are being rolled out and starting to ship in volume now. Visa, Mastercard, and China UnionPay have already certified its technology. Its solution results in a payment card cost that is 30-50% less expensive than cards built with the competition's solution through leading-edge design and is protected by IP. Without a legacy product to cannibalize, IDEX provides a pure play in fingerprint-based biometric solutions.

Current Price (2/22/2023) **\$5.44**
Valuation \$57.00

SUMMARY DATA

52-Week High **18.35**
 52-Week Low **4.79**
 One-Year Return (%) **-65.3**
 Beta **1.9**
 Average Daily Volume (sh) **2,032**

Risk Level
 Type of Stock
 Industry

High
 Small Growth
 Elec Comp-Semis

ADS Outstanding (mil) **15.6**
 Market Capitalization (\$mil) **\$84.9**
 Short Interest Ratio (days) **0.8**
 Institutional Ownership (%) **N/A**
 Insider Ownership (%) **2**

Annual Cash Dividend **\$0.00**
 Dividend Yield (%) **0.00**

5-Yr. Historical Growth Rates
 Sales (%) **N/A**
 Earnings Per Share (%) **N/A**
 Dividend (%) **N/A**

P/E using TTM EPS **N/M**
 P/E using 2022 Estimate **N/M**
 P/E using 2023 Estimate **N/M**

ZACKS ESTIMATES

Revenue

(In millions of US\$)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2021	\$0.6 A	\$0.7 A	\$0.7 A	\$0.8 A	\$2.8 A
2022	\$1.0 A	\$1.1 A	\$0.9 A	\$1.1 A	\$3.9 A
2023	\$1.5 E	\$1.8 E	\$2.0 E	\$4.0 E	\$9.3 E
2024					\$45.0 E

Earnings per ADS

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2021	-\$0.65 A	-\$0.59 A	-\$0.61 A	-\$0.80 A	-\$2.66 A
2022	-\$0.60 A	-\$0.68 A	-\$0.67 A	-\$0.40 A	-\$2.39 A
2023	-\$0.41 E	-\$0.39 E	-\$0.39 E	-\$0.29 E	-\$1.48 E
2024					-\$0.29 E

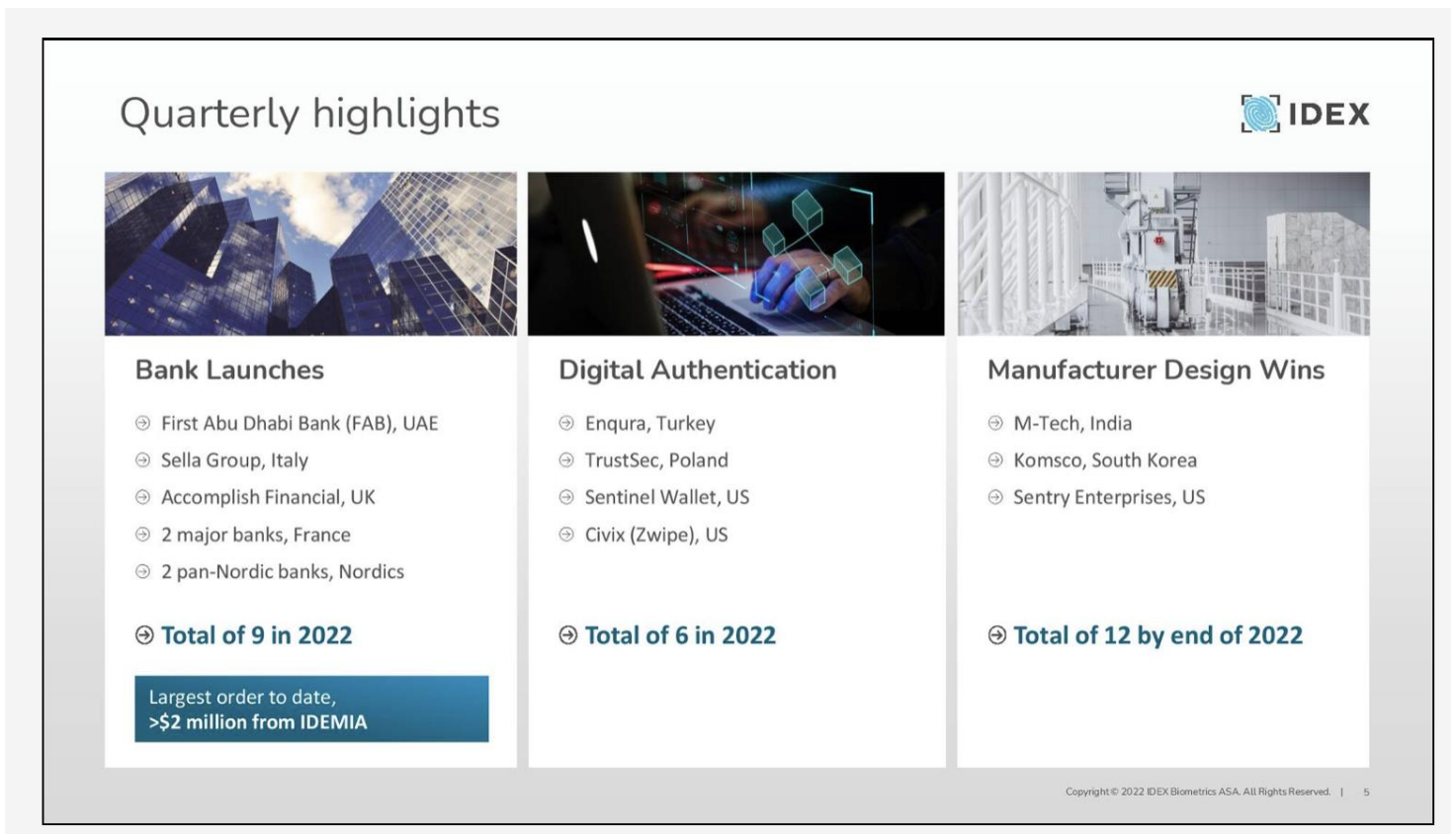
WHAT'S NEW

Is 2023 the Inflection Point Year?

The biometric card industry is finally rolling out cards around the world, albeit slower than expected and we expect IDEX to reach volumes that would make it cash flow break even in 2024 just based on the customers it already has. According to Nilson, it operates in an industry with an addressable market of 2.5 billion cards per year. The banks that have already launched with IDEX inside have a total of 16 million customers. The 12 manufacturers that are now buying from it produce 1 billion cards per year and even at a 1% penetration that it is \$30-40 million in revenues to IDEX which at its goal margins makes it a highly profitable company. This does not even address the other applications which pay much higher prices such as access control and high-profile crypto wallets. The company is targeting 50% gross margins and 30% operating margins and it expects to keep operating expenses fairly flat to achieve those percentages. We expect next year's margins will be below that target as revenues ramp.

Biometrics hopes to replace the arduous multifunction authentication currently in use that takes much time and effort and includes sending codes to phones and has many steps. Biometric authentication is by definition already two-factor but it occurs instantly in a single step. Hopefully, biometrics can replace authentication in other applications. Many users are already used to using fingerprints on a laptop, and they may demand them on all other applications due to speed and simplicity. We are comfortable with fingerprint authentication on cards compared with other biometric methods as they do not require a database of fingerprints out there somewhere as the customer's fingerprint is stored strictly on the card. Hacking and skimming are not possible with this scheme and entities (corporations or governments) cannot collect and store your biometrics.

Chart 1. IDEX Biometrics Q4 Highlights



Source: IDEX Biometrics

IDEX expects 12 launches of payment cards in 2023 with six already identified. The six identified are Rucker, Manager.one, fidor, First Abu Dhabi Bank (FAB), Selma, and Accomplish Financial. The 12 are the total combined from Zwipe, banks and issuers, and via IDEMIA.

Some customers are coming through Zwipe. Zwipe's partners and customers include fidor, the national bank of Iraq, Legic, Placard, Wisecard, Qatar Fintech Hub, Modular, SCS Jordan, Mediterranean Bank, K2, and Mansour Bank. It shipped its first commercial order in Q4 2022. According to its Q4 report, Zwipe has seven pilots in the works and five more about to start. In October, Zwipe announced a partnership with Civix to bring biometric access control cards to airports in the US and elsewhere in the Americas. There is now a proof-of-concept trial going on at Richmond International Airport (RIC) in Virginia. Revenues for Zwipe in 2022 were NOK\$3.9 million and forecasts for 2023 are NOK\$52 (US\$5.1 million) and 2024 are NOK\$321.

During the Quarter

On October 24th IDEX announced it is working with **TrustSEC**, a leading European provider of **digital authentication** solutions for access control and crypto wallets to create new biometric smart card solutions. They plan to combine the TrustSEC smart card module, including the card operating system and applets, with the IDEX Biometrics TrustedBio fingerprint sensor solution to secure access to digital and crypto currency hashwallets, as well as to manage physical and logical access for enterprises. The hardware combines IDEX biometric sensor with TrustSEC's Smartcard OS "SLCOS" running on Infineon's latest generation Secure Element chip, the SLC38. The solution is targeted to launch in Q1 2023.

On November 3rd IDEX began working with a UK issuer and processor of **payment cards**. This issuer is a B2B solution provider to fintech and banks across the UK, Europe, and North America. These cards are expected to be in consumers' hands by Q1 2023.

On November 10th, IDEX announced it was working with Enqura Information Technology to develop and market biometric smart cards for **digital authentication** in Turkey that are anticipated to reach the market in H1 2023. Enqura is an ID verification solution provider with financial customers such as HSBC, Odeabank (Bank Audi), Burganbank, ALJ Finance, and QNB Finans Invest. These cards are designed for access and to authenticate sign-ins.

On November 16th IDEX received a \$2 million volume production order from **IDEMIA**, representing the largest order to date for IDEX TrustedBio sensors. The order will begin shipping in Q1 2023. In early November the two companies announced a full-scale biometric card program by First Abu Dhabi Bank. IDEX also recently confirmed agreements with issuers in Turkey and the UK for biometric card programs, anticipated to be available to card members in the first half of 2023.

On November 22nd, IDEX announced that Sella Group in Italy has launched biometric payment cards in collaboration with IDEMIA, powered by IDEX Biometrics sensor solution. Sella Group is Italy's largest privately owned and independent banking group with a presence in five countries. The biometric **payment card** will initially be offered to selected target segments.

On December 1st, IDEX and Accomplish Financial, a payment solution provider to fintechs and banks across the UK, Europe, and North America announced that Accomplish Financial will launch biometric **payment cards** enabled by the IDEX Biometrics TrustedBio Turnkey solution, powered by the SLC38 chip from Infineon Technologies. This is the previously unnamed UK issuer announced in November. Its cards are still expected to reach consumers in Q1 2023.

After the Quarter Ended

On January 10th, IDEX announced landing its second biometric **payment card** program in Turkey with a regional bank. Cards from this bank will be available throughout Turkey and are estimated to be in consumers' hands in the first half of 2023.

On January 30th [Sentry Enterprises](#) announced it selected Infineon Technologies' latest generation secure element SLC38 together with IDEX Biometrics sensor solution to power their next-generation biometric identity platform for **access** (SentryCard) and its Sentinel **cold wallets**.

Q4 2023 Financial Results

In Q4 of 2022, the company generated \$1,067,000 in revenues up from \$928,000 in Q3 and compared to \$787,000 in Q4 2021 comprised of record product sales. Sales were hampered by a 12-week shutdown of the company's sensor assembler in China in Q3 and thus it could not ship as many products as planned. 2023 revenues should be unaffected.

Q4 sales yielded a gross margin of 35.6% versus 45.4% last year as more sales were from lower-margin payment cards. Gross margins are to improve as volumes ramp to production levels.

Operating expenses decreased to \$7.3 million in Q4 2022 versus \$9.4 million in Q4 2021 as the staff was reduced as the company shifts from R&D to production. Expenses were reduced by almost a million dollars sequentially. At the end of December, there were 99 employees compared to 106 at the end of 2021. R&D staff was reduced as development work wound down.

The operating loss was \$6.9 million compared to a loss of \$9.0 million last year. The net loss was \$6.3 million versus \$10.2 million a year ago. The non-GAAP loss was \$5.9 million versus \$8.3 million, a decrease of \$2.5 million. The non-GAAP loss takes out stock-based compensation.

GAAP loss per share was \$0.005 versus \$0.011, and non-GAAP was also a loss of \$0.005 compared to \$0.008 a year ago. The average share count increased by 20.9% to 1.166 billion primary shares. GAAP loss per ADS was \$0.40 versus a loss of \$0.80 last year. The non-GAAP loss per ADS was \$0.35 versus \$0.63. Adjusted EBITDA loss in this quarter was \$5.6 million compared to \$9.6 million in Q4 2021. Free cash flow (not including changes in working capital) was a negative \$ 8.4 million compared to a negative \$6.5 million.

Balance Sheet

At the end of December, IDEX had \$16.1 million in cash and equivalents, \$18.8 million in working capital, and no debt. As of February 2, 2023, the company had 1,166 million primary shares outstanding, or **15.6 million** ADSs. The company has reduced cash burn to about \$5.5 million per quarter which it expects to reduce as sales ramp. We expect it could reach positive cash flow by next year and will need to raise more cash between now and then. As it nears cash breakeven and has more orders in hand it is possible it could raise cash via debt rather than equity so dilution is not assured.

On November 16th IDEX raised gross proceeds of \$15 million by selling 150 million shares at NOK 1.00 per share (\$0.10 per share or \$7.50 per ADS). The private placement attracted strong interest from institutional investors and was significantly oversubscribed. Post-deal IDEX had 1,166,080,417 shares outstanding (15.5 million ADS).

KEY POINTS

- IDEX Biometrics was founded in Norway in 1997 and since 2014 has largely become a US-centric product company with extensive expertise in fingerprint biometrics and semiconductor and systems design. It is a fabless semiconductor company that targets primarily the payment card industry and is just starting to ship production volumes of its next-generation sensors and solutions to major card providers.
- Next-generation payment cards have fingerprint authentication embedded sensors and chips. Importantly this generational switch will not require new POS equipment as with chip and PIN and the transition should occur much faster. This technology is expected to reduce fraud and increase usage easily providing payback for banks even with the incremental cost. IDEX's unique patent-protected "off-chip" design allows cards to be manufactured at less than half the price of competitors by separating the fingerprint sensor from its controller chip thus allowing the use of smaller, newer, and more powerful chips.
- Despite the existence of smartphone-based payment systems, market researcher Nilson still believes the market for payment cards will increase by 7.3% per year. There are 23.6 billion payment cards in use globally. In 2021, 2 billion of them were contactless. Biometric payment card units are expected to grow to 500 million by 2025. IDEX could receive \$3-4 per card of the market share it captures.
- IDEX has already had its design certified by the three major card networks, VISA, Mastercard, and China UnionPay. Banks around the world have started rollouts this quarter.
- As a fabless semiconductor company with high operating leverage, it is expected to be at very high pretax margins once it ramps revenues and it deserves an enterprise value to sales valuation in line with its peers that trade at 8.4 times 2023 revenues. It currently trades at an \$85 million market cap and a \$69 million enterprise value. Depending on how fast the industry ramps we believe that by 2026 it still has the potential of \$500 million in sales at which point it could be valued as a \$3.3 billion company.

OVERVIEW

IDEX Biometrics was founded in 1997 and is headquartered in Norway. The company has 106 employees and currently operates from offices in Wilmington, MA, Rochester, NY, Farnborough, UK, Shanghai China, and Norway. It files financials in Norway and is listed on the Oslo Bors, and NASDAQ trades its ADR.

It sells its system solutions which include fingerprint sensors, chips, and the software to make them function, to companies that incorporate fingerprint identification technology into their products. IDEX is targeting primarily the payments card market including contactless debit and credit cards. The company also supplies its products for access control and IoT. It has developed a unique design that fits the specific parameters required for cards including energy harvesting and low-power operation at industry-leading costs. Its only competitor is Fingerprint Cards AB (FPC) of Sweden, which has participated in more pilots with partners but is offering an older, more expensive, larger, and kludgy solution. IDEX believes customers will see its cost, design, and performance advantages and it will capture a large market share in this nascent industry.

VALUATION

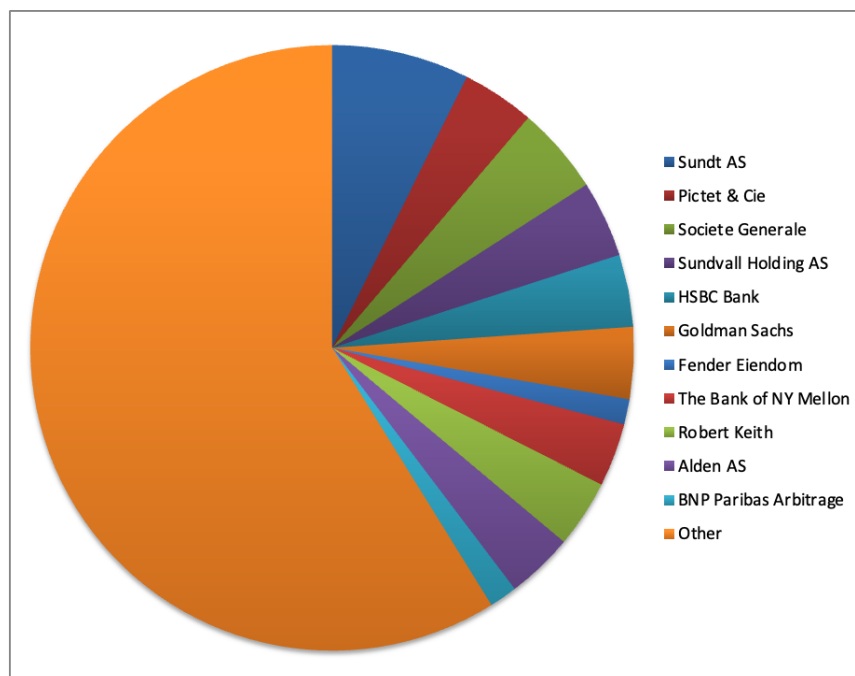
IDEX is now at a run rate of approximately \$4.4 million in revenue but it will be entering the production ramp of its life cycle in 2023. To value the company, we need to look to future years and discount valuations back to today to calculate a current price for IDEX. The comp chart below shows that the average fabless semiconductor company trades at an average of 8.4 times enterprise value to 2023 estimated sales (6.5xs if you throw out NVDA). If the market is 500 million cards by 2026, and the company can take 50% of the market (since there are only two players) and gets paid at least \$3 per card, by 2025 IDEX could easily reach \$500 million in sales, or higher. That would result in an enterprise value of \$3.3 billion. The company has a fully diluted share count of approximately 1.3 billion fully diluted shares. Dividing by 1.3 billion gives us a stock price of \$2.50 per share. Discounting that by 30% per year to the current value gives a stock price of \$1.14 per share. To be conservative we can cut that in half and get a valuation of \$0.76 per share and will increase that as we see it ramp revenues and land design wins on the path to our earnings expectations. Translating that \$0.76 price per share to ADS is \$57.00 per ADS.

Company	Ticker	2024E	Cal. Revenue		EBITDA	EBITDA Margin	Enterprise Value / Sales			EV/EBITDA	Included in Average?	Ent. Value
			2023E	LTM			2023E	2023E	LTM			
AMD	AMD	\$27,610	\$23,620	\$23,600	4,520	19%	4.4x	5.2x	5.2x	27.2x	y	122,800
Broadcom	AVGO	NA	\$35,200	\$33,200	19,270	58%	NA	7.8x	8.3x	14.3x	y	275,000
Cirrus Logic	CRUS	NA	\$1,843	\$2,010	489	24%	NA	3.0x	2.7x	11.2x	y	5,500
Lightwave Logic	LWLG	NA	NA	\$0	(19)	NM	NM	NM	NM	-33.9x	n	655
Marvell	MRVL	\$6,050	\$5,900	\$5,840	1,810	31%	6.7x	6.9x	7.0x	22.5x	y	40,800
Monolithic Power Sys	MPWR	\$2,300	\$1,960	\$1,790	566	32%	10.4x	12.2x	13.4x	42.4x	y	24,000
NVIDIA	NVDA	\$29,230	\$26,920	\$28,570	8,720	31%	18.2x	19.8x	18.6x	61.0x	y	532,000
Qualcomm	QCOM	NA	\$39,700	\$42,960	16,220	38%	NA	3.8x	3.5x	9.3x	y	151,040
Average							10.0x	8.4x	8.4x	11.9x		88,600

RISKS

- The use of biometric payment and security cards is just beginning to be offered and adopted by end-user customers. There is no assurance more customers will ultimately choose to use this technology or that it will work as expected.
- IDEX is just starting to move to produce larger volumes of products. There is no assurance they will be able to successfully manufacture products in the volumes needed at the cost expected.
- Production ramps and customer acceptance and rollouts have and may continue to take longer than expected and forecasts may not be achieved in the time frame we predict. This is the biggest risk to current valuations as it is unknown when the inflection point will hit.
- The company is still losing money and is cash flow negative. We expect it will need further funding before reaching cash flow break even, and if it chooses equity to raise the cash it will dilute current shareholders.

OWNERSHIP



INCOME STATEMENT

US\$ in Thousands	Q1 21	Q2 21	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22	Q1 23E	Q2 23E	Q3 23E	Q4 23E	2021	2022	2023E	2024E
Product sales	623	696	731	787	989	1,005	844	1,051	1,400	1,700	1,900	3,900	2,837	3,889	8,900	\$ 44,600
Other operating income	1	1	1	0	0	103	84	16	100	100	100	100	3	203	400	400
Total Revenue	\$ 624	\$ 697	\$ 732	\$ 787	\$ 989	\$ 1,108	\$ 928	\$ 1,067	\$ 1,500	\$ 1,800	\$ 2,000	\$ 4,000	\$ 2,840	\$ 4,091	\$ 9,300	\$ 45,000
Yr-to-yr growth	524.0%	367.8%	195.2%	31.6%	58.5%	59.0%	26.8%	35.6%	51.7%	62.5%	115.5%	274.9%	159.4%	44.0%	127.3%	-10.0%
Cost of revenue	220	304	300	430	676	1,034	819	715	1,005	1,170	1,240	2,400	1,254	3,244	5,815	24,750
Gross margin	404	393	432	357	313	74	109	352	495	630	760	1,600	1,586	847	3,485	20,250
Gross margin %	64.7%	56.4%	59.0%	45.4%	31.6%	6.7%	11.7%	33.0%	33.0%	35.0%	38.0%	40.0%	55.8%	20.7%	37.5%	45.0%
Operating expenses																
Compensation and benefits	5,101	4,682	5,044	6,280	4,978	4,776	5,081	4,378	3,700	3,700	3,700	3,800	21,107	19,213	14,900	15,000
Research & Development	608	881	659	532	1,029	958	1,033	230	939	900	900	200	2,680	3,250	2,939	3,000
Other operating expenses	1,713	1,763	1,729	2,142	1,938	2,314	1,783	2,367	1,900	1,900	1,900	1,900	7,347	8,402	7,600	6,000
Amortization and depreciation	454	460	460	428	369	334	333	316	300	295	290	285	1,802	1,352	1,170	1,000
Operating expenses	7,876	7,786	7,892	9,382	8,314	8,382	8,230	7,291	6,839	6,795	6,790	6,185	32,936	32,217	26,609	25,000
Operating income	(7,472)	(7,393)	(7,460)	(9,025)	(8,001)	(8,308)	(8,121)	(6,939)	(6,344)	(6,165)	(6,030)	(4,585)	(31,350)	(31,370)	(23,124)	(4,750)
Net financial items	(56)	156	(9)	(1,203)	(120)	(936)	(903)	631	22	22	22	22	(1,112)	(1,328)	88	0
Pretax loss from operations	(7,528)	(7,236)	(7,469)	(10,228)	(8,121)	(9,244)	(9,024)	(6,308)	(6,322)	(6,143)	(6,008)	(4,563)	(32,462)	(32,698)	(23,036)	(4,750)
Income taxes	0	0	0	90	0	0	0	(36)	0	0	0	(25)	90	(36)	(25)	100
Net loss	(7,528)	(7,236)	(7,469)	(10,318)	(8,121)	(9,244)	(9,024)	(6,272)	(6,322)	(6,143)	(6,008)	(4,538)	(32,552)	(32,662)	(23,011)	(4,850)
Non-GAAP net loss	(6,522)	(6,678)	(6,935)	(8,338)	(7,341)	(8,586)	(8,653)	(5,869)	(5,919)	(5,743)	(5,608)	(4,138)	(32,552)	(30,449)	(21,408)	(4,850)
Exchange differences on foreign operations	(91)	(60)	274	(113)	297	397	869	(189)	0	0	0	0	10	0	-	0
Total comprehensive income	(7,619)	(7,296)	(7,195)	(10,431)	(7,824)	(8,847)	(8,155)	(6,461)	(6,322)	(6,143)	(6,008)	(4,538)	(32,542)	(32,662)	(23,011)	(4,850)
Basic net loss per share	\$ (0.009)	\$ (0.008)	\$ (0.008)	\$ (0.011)	\$ (0.008)	\$ (0.009)	\$ (0.009)	\$ (0.005)	\$ (0.005)	\$ (0.005)	\$ (0.005)	\$ (0.004)	\$ (0.035)	\$ (0.032)	\$ (0.020)	\$ (0.004)
Yr-to-yr growth	-2.2%	-7.4%	-5.9%	19.5%	-6.7%	15.8%	9.6%	-49.7%	-32.5%	-42.3%	-42.2%	-27.7%	1.6%	-10.2%	-38.0%	3.0%
Non-GAAP loss per share	\$ (0.007)	\$ (0.007)	\$ (0.008)	\$ (0.008)	\$ (0.007)	\$ (0.008)	\$ (0.008)	\$ (0.005)	\$ (0.005)	\$ (0.005)	\$ (0.004)	\$ (0.003)	\$ (0.035)	\$ (0.030)	\$ (0.017)	\$ (0.004)
Basic shares outstanding in mil	874.4	917.5	918.9	964.9	1,011.1	1,012.5	1,012.6	1,166.3	1,166.3	1,166.8	1,167.3	1,167.8	918.9	1,026.9	1,167.1	1,263.6
Yr-to-yr growth	21.8%	22.2%	16.9%	19.1%	15.6%	10.4%	10.2%	20.9%	15.4%	15.2%	15.3%	0.1%	19.8%	11.8%	13.6%	6.8%
Diluted shares	898.5	915.3	922.8	986.5	1,026.7	1,034.1	1,093.2	1,246.9	1,248.4	1,248.9	1,249.4	1,249.9	940.4	1,032.0	1,249.2	1,343.6
Yr-to-yr growth	24.9%	21.7%	17.2%	13.0%	14.3%	13.0%	18.5%	26.4%	21.6%	20.8%	14.3%	0.2%	21.6%	9.7%	21.0%	6.3%
Basic net loss per ADS	\$ (0.65)	\$ (0.59)	\$ (0.61)	\$ (0.80)	\$ (0.60)	\$ (0.68)	\$ (0.67)	\$ (0.40)	\$ (0.41)	\$ (0.39)	\$ (0.39)	\$ (0.29)	\$ (2.66)	\$ (2.39)	\$ (1.48)	\$ (0.29)
Non-GAAP loss per ADS	\$ (0.54)	\$ (0.55)	\$ (0.56)	\$ (0.63)	\$ (0.54)	\$ (0.62)	\$ (0.59)	\$ (0.35)	\$ (0.36)	\$ (0.34)	\$ (0.34)	\$ (0.25)	\$ (2.60)	\$ (2.21)	\$ (1.29)	\$ (0.27)
Basic ADS outstanding in millions	11.7	12.2	12.3	12.9	13.5	13.5	13.5	15.6	15.6	15.6	15.6	15.6	12.3	13.7	15.6	16.8
Diluted ADS	12.0	12.2	12.3	13.2	13.7	13.8	14.6	16.6	16.6	16.7	16.7	16.7	12.5	13.8	16.7	17.9
Adjusted EBITDA	(6,212)	(6,375)	(6,466)	(6,540)	(6,852)	(7,380)	(7,404)	(6,220)	(6,044)	(5,470)	(5,340)	(3,900)	(25,593)	(27,218)	(19,154)	250

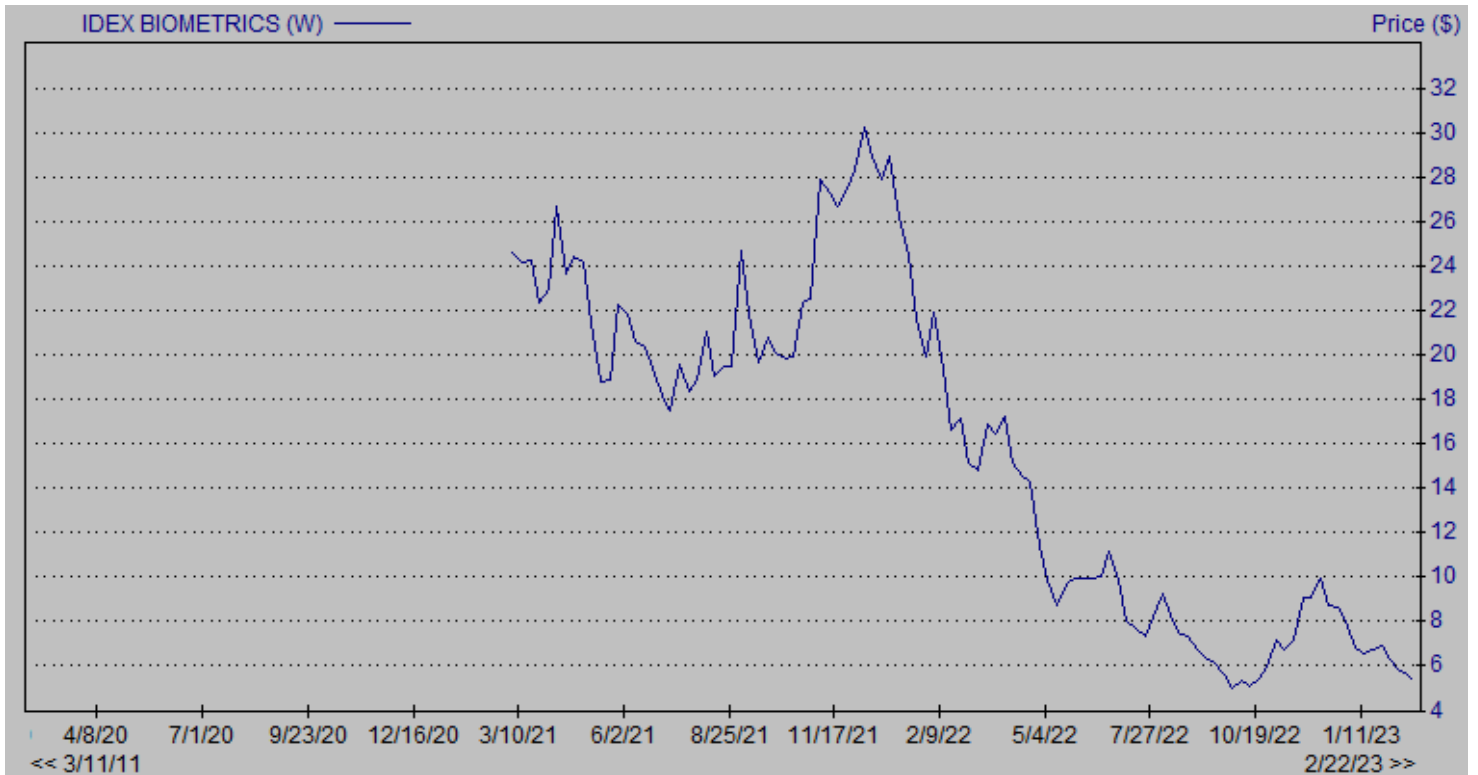
BALANCE SHEET

Thousands US \$	Dec 31, 2022	Sept 30, 2022	Qtr-Qtr % Growth	Dec 31, 2021	Yr-Yr % Growth
Current					
Cash and cash equivalents	\$ 16,124	\$ 9,060	78%	\$ 33,759	-52%
Inventory	4,447	2,927	52%	1,234	260%
Trade receivables	1,349	1,151	17%	801	68%
Prepaid expenses	986	1,004	-2%	851	16%
Other current receivables	929	105	785%	703	32%
Current Assets	23,835	14,247	67%	37,348	-36%
Goodwill	968	968	0%	968	0%
Other intangible assets	1,488	1,607	-7%	1,965	-24%
Property, plant and equipment	1,107	1,129	-2%	1,301	-15%
Right of use asset	1,545	696	122%	357	333%
Long-term receivable	73	66	11%	87	-16%
Total Assets	29,016	18,713	55%	42,026	-31%
Liabilities					
Accounts payable	1,540	678	127%	685	125%
Current lease liabilities	402	373	8%	362	11%
Public duties payable	394	263	50%	393	0%
Other current liabilities	2,697	2,184	23%	2,850	-5%
Current Liabilities	5,033	3,498	44%	4,290	17%
Non-current lease liability	1,142	323	254%	11	NM
Total liabilities	6,175	3,821	62%	4,301	44%
Shareholders' Equity					
Share capital	22,762	20,500	11%	20,410	12%
Share premium	22,036	9,963	121%	9,453	133%
Share-based payment reserve	23,576	23,172	2%	21,414	10%
Total paid-in capital	68,374	53,635	27%	51,277	33%
Foreign currency translation effects	(11,632)	(11,115)	5%	(12,312)	-6%
Capital reduction reserves	269,500			269,500	0%
Accumulated loss	(303,401)	(27,628)	998%	(270,739)	12%
Total shareholder's equity	22,841	14,892	53%	37,726	-39%
Tot Liabilities and Share. Equity	29,016	18,713	55%	42,027	-31%
Cash	\$ 16,124	\$ 9,060	78%	\$ 33,759	-52%
Current ratio	4.7	4.1	16%	8.7	-46%
Quick ratio	3.9	3.2	19%	8.4	-54%
Working capital	18,802	10,749	75%	33,058	-43%
Debt	0	0	0%	0	0%

CASH FLOWS

	YR 2020	Mar. 31, 2021	June 30, 2021	Sept 30, 2021	Dec. 31, 2021	YR 2021	Mar. 31, 2022	June 30, 2022	Sept 30, 2022	Dec. 31, 2022	YR 2022
		3 month	3 month	3 month	3 month		3 month	3 month	3 month	3 month	
Cash flows from operating activities:											
Net loss	\$ (26,853)	\$ (7,529)	\$ (7,236)	\$ (7,469)	\$ (10,844)	\$ (32,462)	\$ (8,121)	\$ (9,244)	\$ (9,024)	\$ (6,308)	\$ (32,698)
Adjustments to reconcile net loss to net cash used in operating activities:											
Amortization and depreciation	1,719	454	460	460	428	1,802	369	334	333	316	1,352
Stock-based compensation	2,755	806	558	534	852	2,750	780	594	384	403	2,161
Other non-cash operating expenses					(141)	95				(1,344)	525
Inventories	(139)	(52)	(87)	(95)	(43)	(375)	(776)	(13)	(904)	(1,522)	(3,215)
Accounts receivables	(414)	(50)	(186)	(35)	58	(314)	(505)	(104)	259	(198)	(548)
Accounts payable	141	(39)	402	(368)	1,456	53	129	(220)	47	902	858
Change in other working capital	(618)	(247)	(653)	611	187	482	(426)	(806)	410	958	136
Other operating activities	579	(218)	59	67	-	-	142	456	1,272	-	-
Interest expense	(27)	(5)	(2)	-	(4)	(11)	(6)	(17)	(34)	(40)	(97)
Income taxes	(437)	-	-	-	447	447	-	-	-	(372)	(372)
Net cash flows from operating activities	(23,294)	(6,880)	(6,685)	(6,295)	(7,604)	(27,533)	(8,414)	(9,020)	(7,257)	(7,205)	(31,898)
Cash flows from investing activities:											
Purchases of property, plant & equipment	(333)	(70)	(39)	(20)	(12)	(141)	(51)	(51)	(112)	(53)	(267)
Proceeds from sale of assets	-	-	-	-	-	-	-	-	-	-	-
Settlements of non-current receivables								7	7	(5)	9
Payments on non-current receivables	75	(4)	-	(25)	16	(13)	6	(6)	-	-	-
Interest received	26	4	3	-	4	11	6	17	34	40	97
Net cash flows from investing activities	(232)	(70)	(36)	(45)	8	(143)	(39)	(33)	(71)	(18)	(161)
Cash flows from financing activities:											
Proceeds from issue of shares	18,731	25,755	295	257	28,685	54,992	369	(1)	234	14,334	14,936
Payments on lease liabilities	(793)	(215)	(216)	(221)	(192)	(844)	(134)	(102)	(105)	(92)	(433)
Payment related to financed asset purchase	(500)	-	-	-	-	-	-	-	-	-	-
Net cash provided by financing activities	17,438	25,540	79	36	28,493	54,148	235	(103)	129	14,242	14,503
Net increase (decrease) in cash	(6,088)	18,590	(6,642)	(6,304)	20,897	26,472	(8,218)	(9,156)	(7,199)	7,019	(17,556)
Effect of exchange rate changes on cash	(740)	4	5	(13)	(8)	(11)	(9)	(51)	(66)	46	(80)
Cash at beginning of period	14,126	7,298	25,892	19,255	12,870	7,298	33,759	25,532	16,325	9,059	33,759
Cash at end of period	7,298	25,892	19,255	12,938	33,759	33,759	25,532	16,325	9,060	16,124	16,123
Cash flow	(22,379)	(6,269)	(6,218)	(6,475)	(9,564)	(27,910)	(6,972)	(8,316)	(8,307)	(5,589)	(29,185)
Free cash flow	(22,712)	(6,339)	(6,257)	(6,495)	(9,576)	(28,051)	(7,023)	(8,367)	(8,419)	(5,642)	(29,452)

HISTORICAL STOCK PRICE



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