

Time to ramp up scalability

Vaisala's recent growth has been supported by strong underlying demand and the alleviation of the pandemic's impact. As economic conditions have become more challenging, the company now has an opportunity to confirm its competitiveness and demonstrate the sustainability of its growth. Furthermore, the projected scalability should be unleashed from 2024 onwards.

Vaisala focuses on high-end measurements

Vaisala strategically targets niche segments within the global high-end measurements markets. The company focuses exclusively on providing solutions that deliver substantial value-add, thereby enhancing its pricing position and customer loyalty. Vaisala places great emphasis on R&D, considering it as a vital component of its growth. With an annual R&D investment of approximately 12% of net sales, Vaisala aims to ensure long-term growth and maintain its competitive edge. The company's steadfast commitment to R&D has yielded double-digit growth and an expansion of market share in recent years in our view.

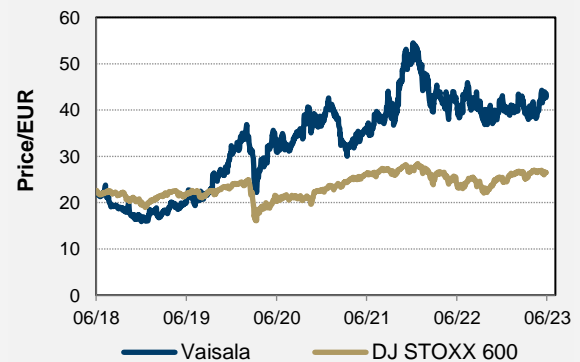
Strategy has proceeded as expected

Vaisala updated its well-succeeded strategy in 2021 to better reflect the core of its business, vision, and megatrends applying to its industry. Simultaneously, the company elevated its growth and profitability targets. Vaisala has made significant progress in achieving its growth targets, although there is still work to be done to reach the EBIT margin target of 15%. Currently, the company is making substantial investments in its digital services and other growing business segments. Our view is that these segments will serve as the primary growth catalysts in the coming years, while the flagship businesses, particularly in W&E, are expected to develop moderately.

Figures seen to improve, valuation at a neutral level

We foresee a robust growth trajectory for Vaisala, with a projected CAGR of 7.4% (2022-25). The expected EPS growth is even more impressive, with a growth rate of 17.7%. We find Vaisala's current valuation to be relatively neutral, as it's trading in alignment with its historical and peer median multiples. With the recent upward trend in the share price, we downgrade our rating to HOLD (BUY). We reiterate our TP of EUR 44.0, with our estimates relatively intact.

Rating 🟡 HOLD



Share price, EUR (Last trading day's closing price) 43.50

Target price, EUR 44.0

Latest change in recommendation 12-Jun-23

Latest report on company 8-May-23

Research paid by issuer: YES

No. of shares outstanding, '000's 36,165

No. of shares fully diluted, '000's 36,165

Market cap, EURm 1,573

Free float, % 0.0

Exchange rate EUR/USD 0.000

Reuters code VAIAS.HE

Bloomberg code VAIAS FH

Average daily volume, EURm 0.0

Next interim report 28-Jul-23

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🟢 BUY 🟡 HOLD 🟠 SELL

KEY FIGURES

	Sales EURm	EBIT EURm	EBIT %	FCF EURm	EPS EUR	P/E (x)	EV/Sales (x)	EV/EBIT (x)	FCF yield %	DPS EUR
2021	437.9	50.1	11.4%	58.4	1.08	49.4	4.3	37.9	3.0	0.68
2022	514.1	62.5	12.2%	-12.3	1.25	31.6	2.8	23.1	-0.9	0.72
2023E	564.5	73.2	13.0%	57.7	1.55	28.1	2.7	21.2	3.7	0.85
2024E	605.0	87.9	14.5%	56.2	1.89	23.0	2.5	17.3	3.6	1.08
2025E	637.4	94.6	14.8%	62.5	2.06	21.1	2.4	15.9	4.0	1.13
Market cap, EURm		1,573	Gearing 2023E, %			-8.5	CAGR EPS 2022-25, %			17.7
Net debt 2023E, EURm		-24	Price/book 2023E			5.6	CAGR sales 2022-25, %			7.4
Enterprise value, EURm		1,549	Dividend yield 2023E, %			2.0	ROE 2023E, %			21.1
Total assets 2023E, EURm		474	Tax rate 2023E, %			20.6	ROCE 2023E, %			22.3
Goodwill 2023E, EURm		49	Equity ratio 2023E, %			59.2	PEG, P/E 23/CAGR			2.5

Investment summary

Value-adding measurement solutions for weather, environmental and industrial customers

Vaisala is a leading company specializing in the development, manufacturing, and selling of cutting-edge measurement equipment, systems, and services for weather, environmental, and industrial measurements. The company aims to provide high value-adding measurement solutions, which positions it as a critical partner for its customers. Vaisala operates in two main business areas: Industrial Measurements (IM) and Weather and Environment (W&E). IM primarily caters to private corporations, offering solutions to help them understand and optimize industrial processes. By providing precise measurements and data, IM empowers its customers to improve their efficiency and save valuable resources. On the other hand, W&E's solutions provide its customers with comprehensive measurements and data to increase awareness, safety, protection, and efficiency. W&E's customer base is primarily public sector-related.

Wide product portfolio with a strong focus on R&D activities

Vaisala places a strong emphasis on research and development to sustain its technology leadership, defend its position as a market leader in selected markets, and launch new growth-generating solutions. The company focuses on delivering high-end solutions by providing top-of-the-line measurement products and services in specialized markets. Vaisala's products are predominantly tailor-made and produced on demand, utilizing a high-mix/low-volume production approach. With over 300 product families and 9,000 distinct products, Vaisala offers an extensive range of options to meet its customers' unique requirements. Additionally, Vaisala has a track record of regularly acquiring new businesses to broaden its portfolio and expand into new markets, enabling the company to maintain its competitive edge.

Vaisala has multiple competitive advantages

Vaisala's science-based technology leadership, combined with its ability to manage high-mix/low-volume operations, provides the company with a significant competitive edge over bulk and average-level producers. Vaisala has built a reputation as a dependable partner, known for delivering precise measurements and orders with short lead times, especially in industrial measurements. To our understanding, Vaisala has gained market share notably during 2021-22 due to its strong availability with reliable and fast delivery times. During the last few years, Vaisala has optimized its supply chain which, in our view, has softened the impact of the component shortage on its operations and sales. Furthermore, the industries in which Vaisala operates require high level of technological expertise, creating high entry barriers for potential new competitors. Overall, Vaisala's strong technological capabilities and efficient operations have cemented its position as a leading player.

Industrial solutions showing strong growth

In 2022, Vaisala recorded net sales of EUR 514.1m and an adjusted EBIT margin of 13.7%. Over the 2010-22 period, the company's revenue has grown at a CAGR of 6.1%. However, over the last 5 years, Vaisala's annual growth rate has increased to 9.1% with the strong market momentum of IM. From 2017 to 2022, IM experienced an impressive CAGR of 15.4%, while W&E has shown a growth rate of 5.4%. During the period of 2023-2025, we expect Vaisala's growth to persist, albeit at a slower pace compared to 2022. This deceleration is a result of the robust momentum experienced previously and the prevailing uncertain economic conditions. By prioritizing investments in efficiency, we are confident in Vaisala's ability to enhance its EBIT margin towards its target of 15%.

Under-valuation has neutralized

We view Vaisala's valuation using several methods, including historical and relative peer valuation, as well as the DCF model. Given Vaisala's strong net cash position, we consider EV-based multiples, in addition to earnings-based multiples. Overall, we find Vaisala's current valuation as not challenging, but the share offers no sufficient short-term upside potential compared to our TP. Therefore, we downgrade our rating to HOLD (BUY). Our target price for Vaisala remains at EUR 44.0.

Company overview

Business critical partner providing accurate measurement solutions

Vaisala is a leading player in developing, manufacturing, and selling equipment, instruments, and systems for weather, environmental and industrial measurements. The company's accurate measurements are integral to its customers' operations, making them a critical component of their businesses, and generating substantial value-add. In addition to measurement equipment, the company provides installation, testing, and training as well as maintenance, calibration, and digital services. Moreover, Vaisala designs and implements large-scale weather and environmental projects around the Globe. The company serves both public and private customers in its weather and environmental measurement markets and mostly private customers in industrial measurement markets.

Over 85 years of experience in measuring the environment

The company was founded in 1936 by a Finnish meteorologist and physicist, Professor Vilho Väisälä, when the first radiosonde pieces were sold to the MIT. The company was listed on the Helsinki OTC-list in 1988 and has been listed on the Helsinki primary stock exchange since 1994. Current President and CEO Kai Öistämö joined Vaisala from the US technology company InterDigital, where he held the position of COO since 2018, before which he served as a Member of the Board. Öistämö has also worked at private equity company Siris Capital and been in several leadership positions at Nokia, where he was part of the company's Executive Board between 2006 and 2014.

Global player headquartered in Finland

Vaisala operates in 150+ countries and has 25+ offices in 17 different countries. The company is headquartered in Vantaa, Finland with an R&D center, offices, and production facilities. Vaisala has direct sales organizations in 20 countries and the company uses distributors or agents in over 100 countries. The company sells its products also through its online store. Vaisala employs over 2,200 persons, with ~30% working in R&D.

Vaisala provides high value-adding solutions

The company primarily delivers high value-adding solutions. Vaisala highly emphasizes R&D, product and technology leadership, and a high-mix/low-volume operation approach. The company holds a portfolio of 300 product families, that is composed of 9,000 different products. Vaisala operates manufacturing facilities in Vantaa (Finland), Boulder (Colorado, USA), Paris/Saclay (France), and Shanghai (China), where it produces critical components, assembles, calibrates, and tests measuring equipment in-house. For standardized components, the company sources from both strategic partners and other suppliers. Digitalization has significantly increased the role of software in Vaisala's solutions, with a notable proportion of its R&D personnel being software developers.

Figure 1: Personnel by regions

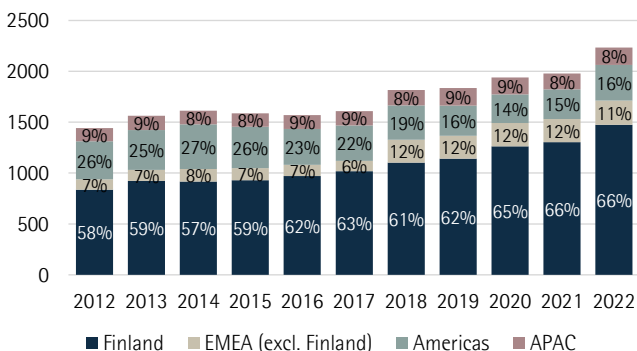
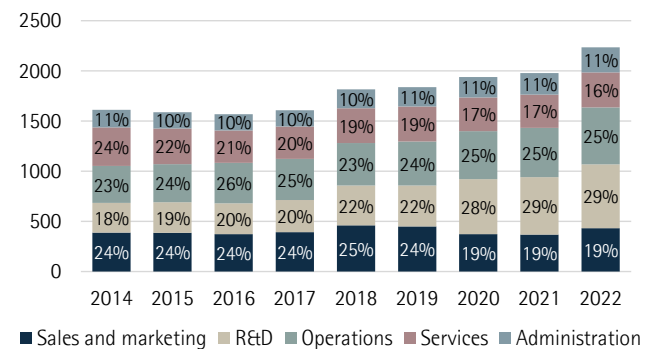


Figure 2: Personnel by units



Source: Vaisala

Business model

R&D is in the heart of Vaisala

Vaisala has an asset-light business model that allows for strong returns on capital. One of its key success factors is its continuous investments in R&D activities. The company invests ~12% of its net sales in R&D annually to ensure its technology leadership, modernize outdated (or commoditized) products and develop completely new products and technologies. Through this investment, Vaisala also fights against competition and price erosion.

Providing highly customized solutions

Vaisala emphasizes its high-mix/low-volume operations and focuses mostly on high value-adding products. The company aims to be a valuable partner by addressing customers' business-critical challenges. Vaisala leverages its scientific research and expertise to produce high-end technology that can be utilized in challenging environments such as space, data centers, offshore wind farms, and maritime. A significant share of Vaisala's products is customized and made on-demand to meet the specific needs of customers, except for radiosondes which are produced in mass production, however, to a marginal extent. Additionally, Vaisala offers near-product services and comprehensive weather and environmental projects. Through R&D and acquisitions, Vaisala has initiated scalable weather and environment data services (D/SaaS) that are based on valuable recurring revenue.

The product portfolio consists of 9,000 different products

With the concept of the Vaisala Production System (VPS), the company is mastering over 300 product families and around 9,000 different products. Vaisala produces sensors and critical chips in its cleanroom in Vantaa (Finland). Meanwhile, the company outsources standardized, less critical, and asset-intensive processes to trusted partners. Final assembly, calibration, and testing are conducted in Vaisala's four factories. Within VPS and other operations, the company is constantly seeking opportunities to increase efficiency to further scale the business accordingly with its strategy.

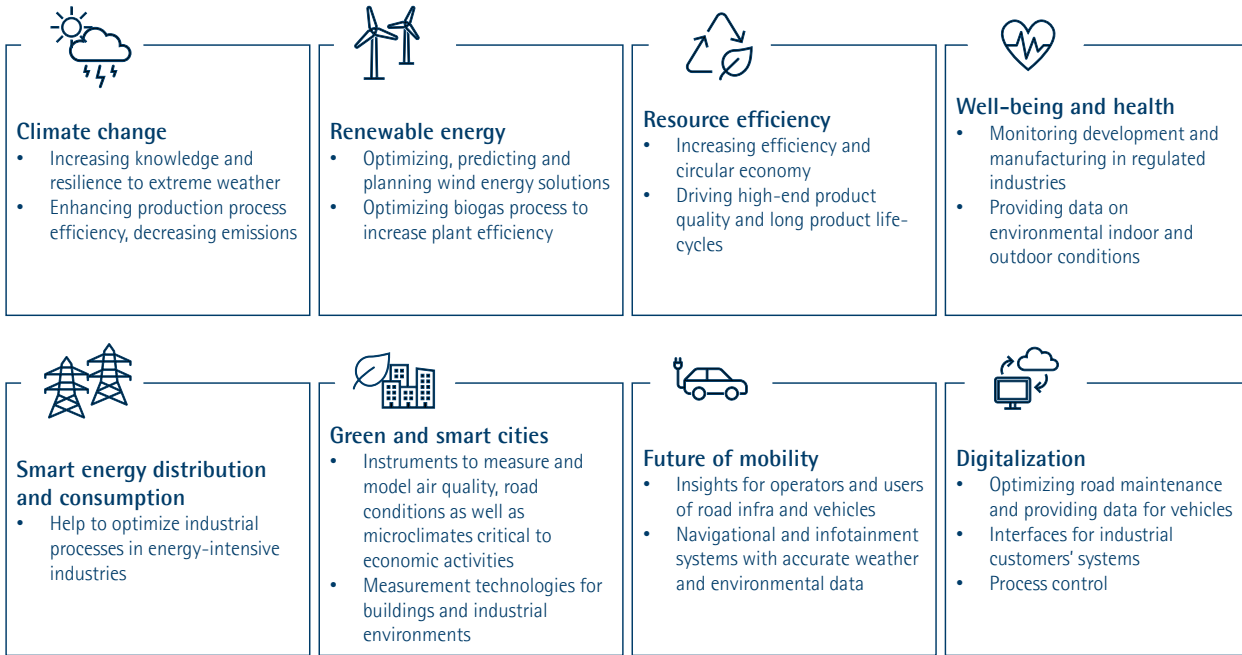
Bolt-on acquisitions to bring new technologies

M&A has also been an essential part of Vaisala's business development. In the past, Vaisala has acquired multiple companies and technologies mainly for supporting its Weather and Environment business area. Through acquisitions, Vaisala aims to enter new technologies and markets as well as gain new competencies. In January 2022, Vaisala announced the acquisition of the US-based software company AerisWeather which provides weather and environmental data services. Through the acquisition of AerisWeather, Vaisala grew its digital business (D/SaaS), obtained crucial development tools and capabilities, and expanded further its customer base and offering.

Megatrends drive the market growth

Vaisala has built its business model around multiple megatrends that change the world and consuming behaviour; climate change being perhaps the most influential. Other crucial megatrends, such as renewable energy, resource efficiency, and well-being and health, provide Vaisala with new avenues for applying its technologies and know-how, creating fresh business opportunities. Vaisala places great emphasis on its "handprint", referring to how its solutions can reduce the effects of climate change.

Figure 3: Megatrends

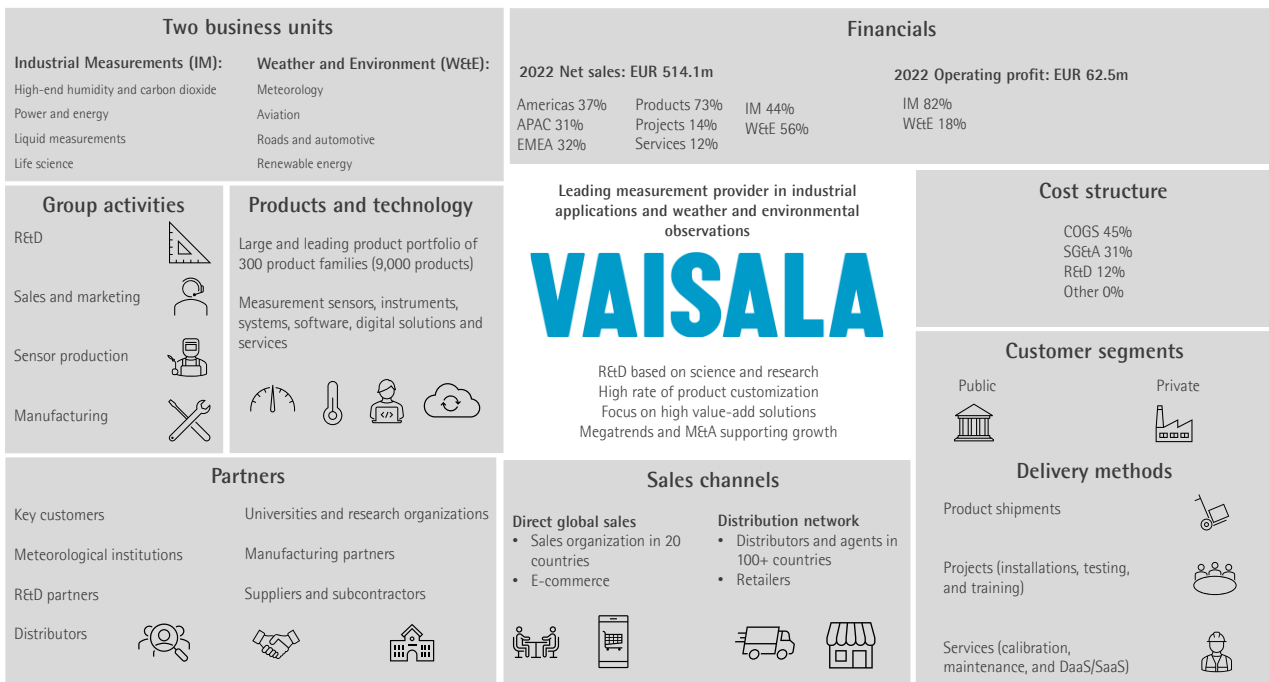


Source: Vaisala

Products, services, and projects as a part of portfolio

Vaisala serves a wide range of customers, both public and private, through its global sales organizations and distribution network. With sales organizations in approximately 20 countries and a distribution network spanning over 100 countries, Vaisala offers customers multiple ways to access its products and services. Customers can purchase Vaisala's products through a sales representative, online store (primarily for IM solutions), or authorized retailers. Vaisala's portfolio includes off-the-shelf or customized products, customized projects (installation, testing, and training), and a range of services such as calibration, maintenance, and digital services (Data/Solution as a Service). Product sales remain the primary source of revenue for the company.

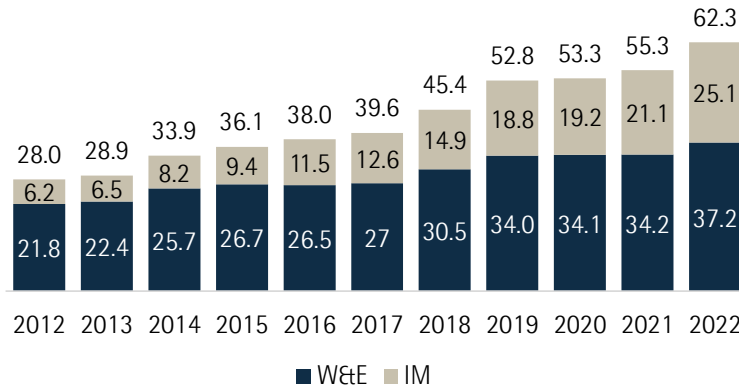
Figure 4: Vaisala's business model



Source: Vaisala, Evli Research

R&D

Figure 5: R&D expenditure in EURm



Source: Vaisala

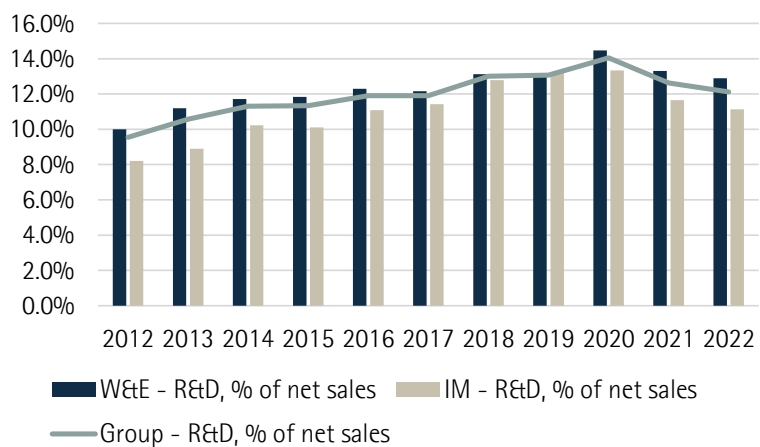
~12% of net sales reinvested in R&D

Vaisala's research and development scope range from silicon chips to complete systems, software, and digital solutions. The company has seen a significant increase in R&D investments, with costs of approximately amounting to EUR 62.3m (12% of net sales) in 2022. The average level of R&D investment has varied around 12-13% of net sales in recent years. Previously, W&E has accounted for two-thirds, while IM has represented a third of total R&D costs. However, with its robust revenue growth, IM has been increasing its share of R&D investments within the Vaisala group. Jointly with its in-house R&D, Vaisala also collaborates with research institutes, consortiums, and universities across various scientific and technological fields.

SW has become a crucial part of R&D

Nowadays software development is an essential factor in Vaisala's R&D as all its products include some sort of software. In addition, the company develops digital solutions which include more sophisticated IoT hardware as well as software and AI/machine learning algorithms. Ultimately, Vaisala's (weather) forecasts rely on observed data as well as models and algorithms designed by its engineers.

Figure 6: R&D expenditures, % of net sales



Source: Vaisala

W&E has higher R&D-%

In relative terms, W&E has had considerably higher R&D-% (costs as a percentage of net sales). However, in recent years, IM has been catching it up to some extent. For example, in 2019, the R&D-% was quite even between the two units. On average, W&E has had 1.3%-p. larger R&D-% during 2012-22. In our view, this is explained by the higher customization rate of W&E. Traditionally, IM's products are less customized, and thus relative R&D needs might be lower.

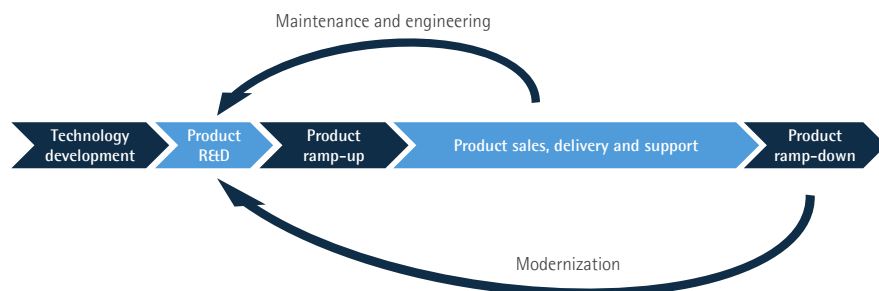
R&D-% has decreased from 2020 due to several factors

Figure 6 also describes Vaisala's improved efficiency quite well. In 2022, group R&D-% amounted to 12.1% while in 2020 it was 14%. However, the phenomenon may depend also on other factors. In 2020, business travel costs decreased notably, and with that, we asses that Vaisala allocated the traveling budget to other categories such as R&D. In addition, group net sales decreased by 6% in 2020 which in part increased R&D-% since R&D costs include a considerable number of fixed elements such as personnel expenses. Considering the longer time perspective, the relative level of R&D has however grown over time from 10% to 12% during 2010-22. When considering future development, we view a 12% allocation of R&D expenses as a sustainable level for the company.

R&D is a way to modernize outdated technologies

Approximately two-thirds of Vaisala's R&D expenditures are related to the renewal of existing offerings and defending its current market position. Around 50% of annual R&D spend is used for product modernization whereas the development of new products accounts for ~20%. Meanwhile, a fifth relates to the maintenance of the current product portfolio while the rest ~10% of R&D expenditures is used for new technology pre-studies and research projects. Vaisala applies for patents selectively since the application process reveals valuable information to its competitors.

Figure 7: Illustration of R&D process



Source: Vaisala, Evli Research

Operations

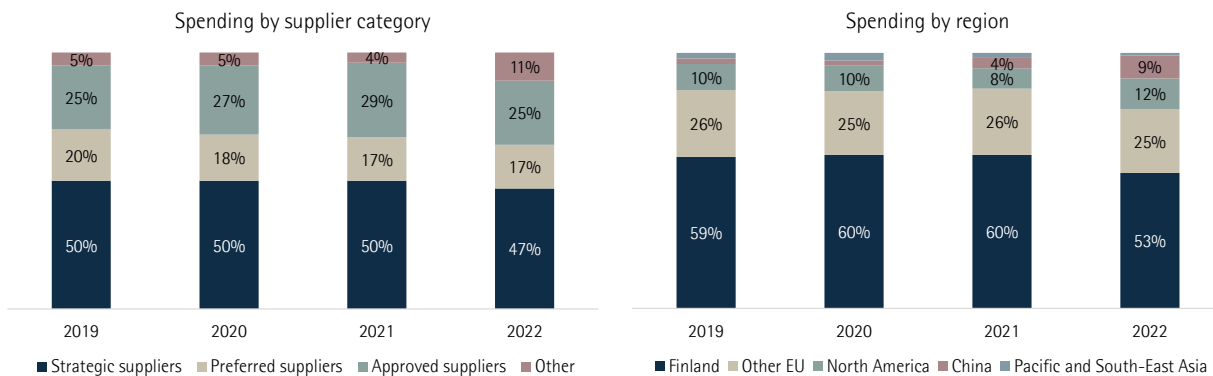
Vaisala has four factories located across the Globe

Vaisala's Operations unit manufactures products for both business areas and ensures that high-mix/low-volume procedure is functioning efficiently. The command of a large product portfolio without compromising quality is one of Vaisala's core strengths. Sensors and crucial chips, the most critical parts of Vaisala's equipment, are manufactured in the company's cleanroom in Vantaa, Finland. Meanwhile, the manufacturing of subassemblies is outsourced to partners such as Enics and Scanfil. Final assembly, calibration, and testing are conducted in Vaisala's four factories. Vaisala's main factory locates in Finland, while facilities in the US are primarily for the needs of American customers. Facilities in Paris/Saclay, France, and Shanghai, China were obtained through the acquisition of Leosphere, and today, LiDARs and some of IM's products (Shanghai) are produced there. To our understanding, Vaisala has still room for extra capacity in its existing facilities as the factories operate in two shifts (possibility for a third shift).

1,100 engineering changes were made to respond to customers' needs

Vaisala's offering covers over 300 product families and approx. 9,000 products. Due to variations in customers' needs and low component availability, Vaisala made over 1,100 product changes in 2022. The products are typically highly customized and made on-demand according to customer specifications, which results in limited inventories of finished products. In larger project deliveries, Vaisala utilizes external partners in areas such as civil engineering and on-site installation. Meanwhile, project consulting and training are conducted by Vaisala.

Figure 8: Facts about Vaisala's suppliers



Source: Vaisala

Supplier network is constructed carefully

Vaisala's supplier management model has four different categories: potential, approved, preferred, and strategic suppliers. In addition to these categories, suppliers may be, for example, in phase-out when their contracts are being discontinued gradually or on a watch list when they are monitored closely due to serious issues experienced. The classification defines the relationship between Vaisala and the supplier and outlines the management model for each category. All suppliers are expected to meet certain requirements before they can be approved and categorized.

Components are sourced mainly from Finland, the EU, and the US

Vaisala has optimized its supply chain by reducing the number of subcontractors over the past few years, which allows for more efficient procurement. Vaisala's direct suppliers are typically located near its factories and assembly centers. Subassemblies, components, and mechanical parts are sourced mainly from Finland and other European countries as well as the United States which in total represented 90% of Vaisala's material spending in 2022. The other 10% is sourced from Asia with China representing 9%.

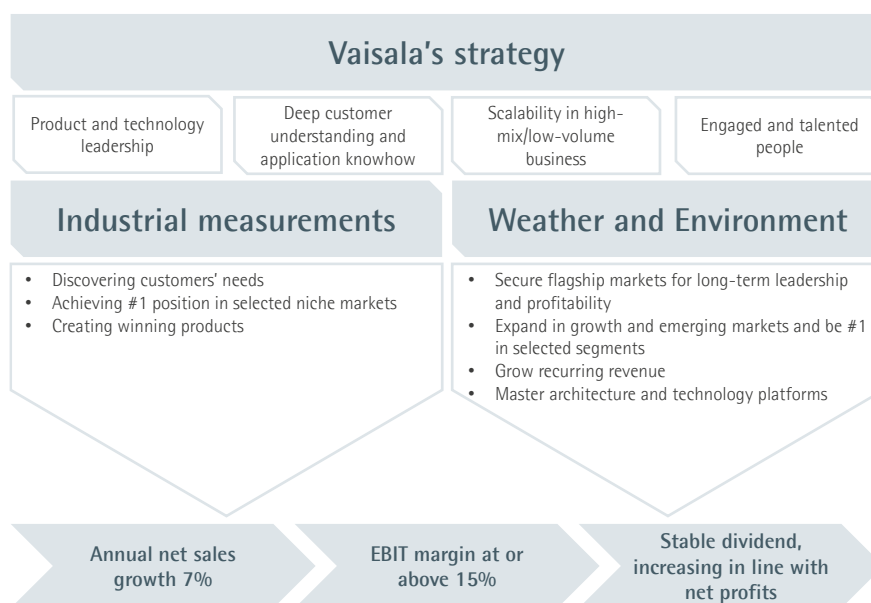
We view Vaisala's supply chain and procurement as efficient

Vaisala has not been immune to the component shortage, but it has mitigated its issues quite effectively. With its strong procurement, the company has been able to secure all its components such that no order has been delayed. However, that has been seen in elevated material costs, due to spot-component purchases, that have decreased Vaisala's gross margins. From our perspective, strong product availability can be attributed to Vaisala's well-maintained supplier relationships, as well as their strategy of placing centralized orders for components without exceeding optimal scale.

Group strategy

Vaisala updated its well-succeeded strategy in 2021 to better reflect the core of its business, vision, and megatrends applying to its industry. The company's strategy is built upon four different pillars: product and technology leadership, customer experience, scalability in high-mix/low-volume business, and engaged and talented people. In a big picture, Vaisala's strategic objectives remained quite unchanged.

Figure 9: Vaisala's strategy



Source: Vaisala

Product and technology leadership:

Vaisala's success relies on research and all its technologies are based on scientific innovations. The company makes significant investments in R&D in order to innovate and create new technologies and defend and grow its market share in selected niche markets. Vaisala's high-quality and reliable technologies range from sensors to digital solutions. Digital solutions also enable business models based on recurring revenues.

Customer understanding and application expertise:

The company's measurement solutions are based on a deep understanding of its customers' needs in versatile applications of weather, environment, and industrial measurements. To serve and understand its customer better, Vaisala acts as a continuous collaborator from the beginning of the design phase to ongoing services after the product delivery.

Scalable business model:

Vaisala's portfolio includes hundreds of product families and thousands of products, and the company serves customers through various sales channels in over 150 countries. Engineering changes are regularly incorporated into Vaisala's products, necessitating on-demand manufacturing and a strong emphasis on operational excellence. This is supported by the development of corresponding work methods and scalable product platforms. Both business areas utilize the same R&D facilities and personnel, as well as ERPs, which by finetuning provide potential for scalability.

Engaged and talented employees:

Vaisala offers versatile opportunities for talented and motivated professionals who value work with a purpose and learning opportunities. The company supports the well-being of its employees and is committed to ensuring that they have opportunities for professional development within the organization. In an annual employee survey, the company monitors how its employees are feeling about their work. Additionally, Vaisala founded a work group to find new ways of working and ensure that its employees stay motivated also in the years to come.

Evli's comments on Vaisala's strategy:

We see Vaisala having a clear competitive advantage regarding its product portfolio quality and technological leadership. For example, IM's high-end customers usually choose Vaisala based on the company's high-technology products and reliable measurements. Moreover, Vaisala has gained market share during 2021-22 by having better availability than most of its competitors.

Vaisala's target is to know its customers better. Especially in IM, the company has lots of retail customers whom the company doesn't know directly. However, clever usage of data provides Vaisala an opportunity to serve its unknown customers better. Furthermore, we anticipate that Vaisala will continue to work in close partnership with its established customers, leveraging this to design and deliver advanced measurement technologies.

In order for the company to achieve its profitability targets, Vaisala must improve its scalability. While IM has demonstrated good scalability, W&E has still room for improvement. However, with W&E expanding its presence in digital business, we foresee an improvement in the company's overall scalability and an expansion of profit margins over time. Furthermore, as IM grows its share of total sales, the group's profitability is expected to further improve.

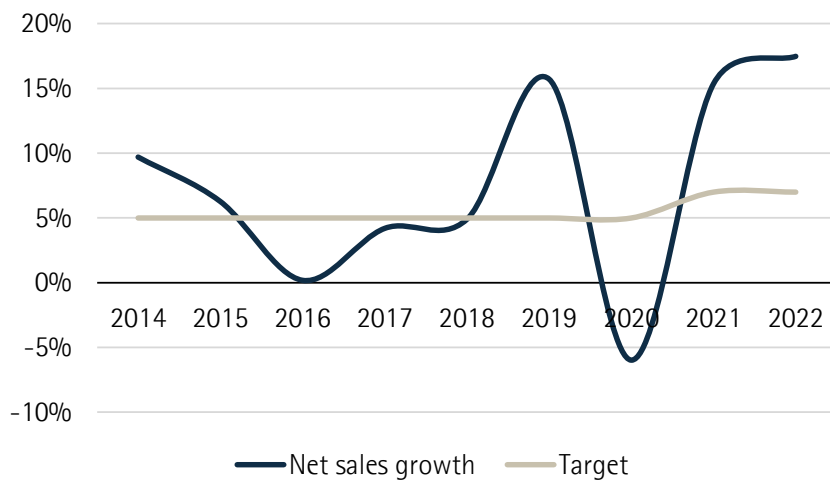
Another critical aspect for the company is attracting top talent and sustaining employee satisfaction at Vaisala. To improve its position as a leading tech-employer, the company has made investments in its personnel. For instance, Vaisala has established new premises near Helsinki's city center to attract skilled software developers to its R&D division. Moreover, Vaisala has a strong employee engagement rate of 4.2/5 which has clearly improved over recent years.

Financial targets

Targeting 7% growth and an EBIT margin of 15%

With its revised strategy the company also upgraded its long-term financial targets to correspond to increased ambition and its focus on operational excellence. The company now aims to achieve an average annual growth of 7% and an operating profit (EBIT) margin of 15% by the end of the strategy period, compared to the previous revenue growth target of 5% and an EBIT margin of over 12%. Vaisala aims to distribute stable dividends to its shareholders that grow in line with its net profit development, however, by maintaining high solvency and considering future investment needs.

Figure 10: Revenue growth target during 2014-22

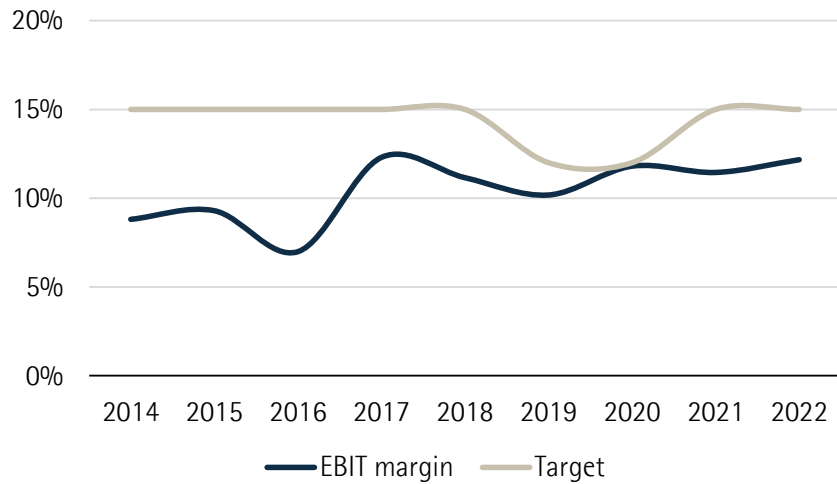


Source: Vaisala

2021-22 growth was strong and outpaced Vaisala's growth target

Upon examining its long-term topline development, Vaisala has surpassed its previous growth target of 5%, achieving a CAGR of 6% between 2010 and 2022. However, this falls slightly below its new growth target of 7%. Following the decline of the pandemic year in 2020, Vaisala demonstrated even stronger growth both in 2021 and 2022, driven by both of its business areas. The current strategy period began on a strong note, with the company achieving a record-high growth rate of 15% in 2021, followed by even stronger growth of 17% in 2022. This momentum has been supported by favourable market demand. We believe that the company's continuous investments in R&D and its continued gains in market share in industrial measurements position it well to achieve its growth target of 7% in the future.

Figure 11: EBIT margin target during 2014-22



Source: Vaisala

Margin target is still far away

Vaisala has faced challenges in achieving its profitability targets in recent years. However, in 2020, the company managed to achieve an actualized relative profitability that was nearly in line with its target level at that time (EBIT margin of 12%), despite decreased volumes caused by the COVID-19 pandemic. Subsequently, in 2021, the company revised its operating profit margin target to 15%, reflecting increased ambition and a focus on future investments in operational excellence. While we observe an upward trend in EBIT margin development over the past few years, we note that there is still approximately a 3%-p. gap to the company's target of 15%.

EBIT margin target to be achieved with multiple factors

To our understanding, the new EBIT margin target relies somewhat on the growing share of Vaisala's more profitable business of Industrial Measurements, which has been growing strongly during recent years and the outlook seems bright with the megatrends supporting the market growth. However, achieving the EBIT margin target of 15% requires growth and improving margins also in the W&E business. We estimate 24E EBIT margin landing below the company's target of 15%, as we wait for further evidence of the company's scalability development, especially considering the large increases in fixed costs seen in Q1'23.

Competitive advantages

Figure 12: Competitive advantages



Source: Evli Research

Vaisala competes with quality and reliability

Vaisala operates in the field of high-technology measurements that require specialized expertise. The company serves customers who value the high level of technology and are willing to pay the corresponding price. Typically, Vaisala's solutions represent a small portion of its customers' overall costs, excluding large-scale projects which are typically funded by governments or municipalities. This, coupled with the company's position as a high-tech leader, often enables Vaisala to apply solid pricing power. In this context, Vaisala generally competes on the basis of quality and reliability, rather than price, particularly in the Industrial Measurements business area. This approach enables the company to avoid engaging in price competition.

R&D supports Vaisala's technology leadership and competitive position

Vaisala's annual investments in R&D play a critical role in maintaining and enhancing its technology leadership. The company has an extensive experience in the measurement industry for over 85 years. Due to the high technology intensity, the industry's entry barriers are also quite high. The company operates its own cleanroom, which promotes seamless collaboration between production and R&D and results in improved lead times. Furthermore, the cleanroom enables Vaisala to make rapid product changes and adapt to changes in the environment. For instance, in response to a component shortage during 2021-22, Vaisala made additional engineering changes to its products.

Value-add with high rate of product customization

Vaisala leverages its high-mix/low-volume operations to provide customized solutions or substitute products that meet customers' specific needs. The company's ability to combine fast delivery times and on-demand production has also been commendable. For instance, while a considerable portion of IM's orders is made on-demand, the delivery times average from just a day to a few days.

Close relationships with its clients and partners

In our view, Vaisala's close relationships with clients and partners generate an additional competitive factor. According to the company's management, some customers only accept Vaisala's products as part of their solution, even if the competitors' price is significantly lower. We believe this is due to Vaisala's technology leadership, as well as its reputation for customer experience and reliability. By solidifying its position as an irreplaceable partner, Vaisala strengthens and deepens its relationship with such customers. This also enables Vaisala greater pricing power.

Financial position

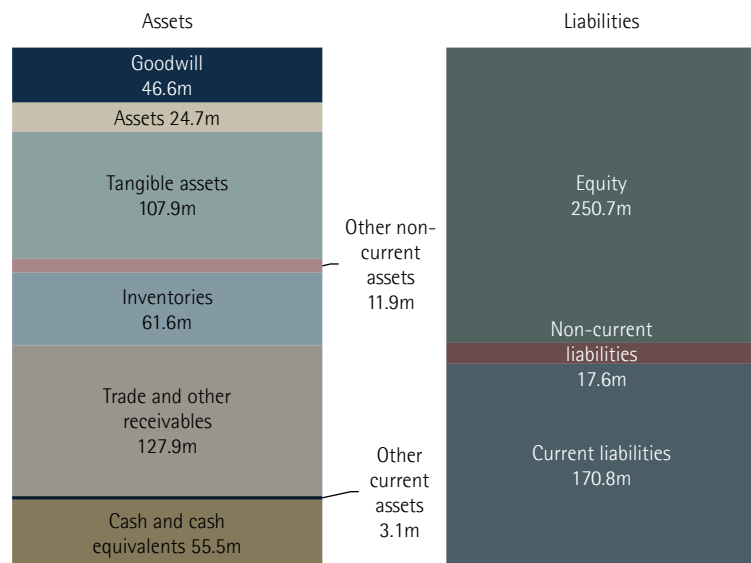
Vaisala has a strong balance sheet that provides stability and allows growth through selected acquisitions. At the end of 2022, Vaisala's balance sheet amounted to approx. to EUR 439m.

Vaisala's intangible assets worth EUR 71m consists mostly of goodwill and technology-based intangible assets such as patents and trademarks. At the end of 2022, Vaisala's balance sheet contained goodwill worth EUR 46.6m which was entirely allocated to the W&E business area. Technology-based intangible assets amounted to EUR 42.3m. The company's tangible assets amounted to EUR 107.9m which consists mostly of buildings, structures, machinery, and equipment.

During 2020-22, Vaisala's inventories have increased relatively fast, partly driven by increased component buffer due to component shortage. At the end of 2022, inventories amounted to EUR 61.6m. Vaisala had a strong cash position, with cash and cash equivalents amounting to EUR 55.5m at the end of 2022. The cash position was negatively impacted by the acquisition of AerisWeather in Q2'22 as well as elevated working capital. In Q1'23, the company's cash position had recovered to EUR 75.4m with strong cash flow.

Vaisala's equity accounted for EUR 205.7m at the end of 2022. Return on equity (ROE) has varied between 16-18%. A substantial equity ratio exceeding 50% invariably influences the ROE. We have estimated that a conservative owner base somewhat limits the possibility to use extensive leverage. The company had current interest-bearing debt worth EUR 52.5m at the end of 2022 (Q1'23: 39.5m). Net debt, excluding interest-bearing lease liabilities, at the end of 2022 amounted to EUR -14m (Q1'23: -35.9m). Return on invested capital (ROIC) has been strong by varying between 19-21% in recent years which in our view has generated notable shareholder value.

Figure 13: Balance sheet at the end of 2022



Source: Vaisala

Two business areas

Technology and cost synergies between business areas

Vaisala operates in two distinct business areas, namely Industrial Measurements (IM) and Weather & Environment (W&E). Historically, W&E has been the leading business area, but IM has recently been gaining ground with its success in fast-growing markets. The business areas enjoy some synergies by using the same production lines, cleanroom, and ERPs. The two business areas benefit from technology synergies as a result of sharing R&D facilities and exchanging human capital knowledge between them. In contrast, IM and W&E are clearly different in terms of customer base. W&E serves mostly large public sector clients directly. In contrast, IM serves mostly private sector clients, many of them through distributors. Furthermore, there is a notable difference in the industries where the two units operate. Therefore cross-selling and other revenue synergies are out of reach in our view.

Markets

Figure 14: Vaisala's markets

Total market size EUR 2.9-3.4bn				
Units	Industrial Measurements EUR 1.5-1.8bn ~8% CAGR		Weather & Environment EUR 1.4-1.6bn ~5% CAGR	
Markets	Flagship markets EUR 900-1,100m 6% CAGR	Growth markets EUR 600-700m CAGR 5-10%	Flagship markets EUR 750-850m 0-5% CAGR	Growth and emerging markets EUR 600-700m 5-10% CAGR
Market share*	15-20%	~10%	25-30%	~10%

Source: Vaisala, Evli Research
* Evli's assessment

Vaisala has stable position in its flagship markets

Vaisala's current market size, valued at EUR 2.9-3.4bn (based on the company's assessment), is a result of combining the addressable markets of both of its business areas. However, there is a difference in growth rates between the two market areas. IM's flagship markets are anticipated to grow at a CAGR of 6%, while its growing markets are expected to see an annual growth between 5-10%. In contrast, W&E's flagship market is predicted to grow at a moderate rate, varying between 0-5%. Nevertheless, W&E's growth and emerging markets are expected to grow at a CAGR of 5-10%. Considering Vaisala's position in its growing markets, we assess that the company has been recording revenue increases above market growth rates and therefore gained market share.

Implied market share approx. 15-20%

The markets in which Vaisala operates are highly fragmented, with only a few players, including Vaisala, focusing on a wide range of measurements. Competitors typically concentrate on specific applications, industries, or technologies. Considering the level of fragmentation, Vaisala's implied market share is in our view strong by fluctuating around 15-20%.

Technologies and parameters outside Vaisala's current portfolio are excluded from the market estimates. Meanwhile, estimates include such regions in which Vaisala is not currently operating but sees as attractive.

Competition

Competitive field very fragmented

Vaisala operates in various niche markets globally and therefore, the competitive field is very fragmented. Contrary to Vaisala, its competitors tend to focus on specific types of products or applications, which makes it difficult to identify direct competitors. The competition in industrial instruments is more global and competitors include also larger companies. Meanwhile, the number of listed competitors especially in many weather-focused niche markets is limited and potential competitors are usually smaller non-listed and local companies. Moreover, many competitors have also other businesses outside the industries of weather, environmental and industrial measurements.

Strong track record implies favorable competitive position

From our perspective, Vaisala holds a robust competitive position with its advanced technological know-how and its focus on niche markets. Recently, the company has gained a competitive edge with its reliable availability and robust lead times. Vaisala targets customers who prioritize its high-technology know-how over price which lowers the company's exposure to price competition. However, in larger projects delivered to public clients, orders are typically tendered, which subjects the company to heightened competition. Vaisala's ability to consistently demonstrate growth rates above those of the market signifies the company's strong competitive position in our view.

Table 1: Selected competitors

Competitor	Business	Segment
Aeroqual	W&E	Air quality
Campbell Scientific	W&E	Multiple
E+E	IM	Multiple
Ecotech	W&E	Air quality
EKO Instruments	W&E	Solar
Ellab	IM	Life science
Endress+Hauser	IM	Multiple
Honeywell	IM	Multiple
HORIBA	W&E/IM	Multiple
Hukseflux	W&E	Solar
Kipp & Zonen	W&E	Solar
Lufft	W&E	Multiple
Met One Instruments	W&E/IM	Multiple
NRG Systems	W&E	Lidars
Siemens	IM	Multiple
Teledyne Technologies	W&E	Air quality
Tomorrow.io	W&E	W&E data and software
TSI Inc	W&E	Air quality
ZX Lidars	W&E	Lidars

Source: Evli Research

Acquisitions

Vaisala has reinforced its growth with various acquisitions

Vaisala, particularly W&E, has boosted its growth and technology portfolio as well as expanded into new markets with selected acquisitions. While W&E has been proactive in making acquisitions, IM has only made two acquisitions - Canadian Veriteq and K-Patents from Finland - in the 21st century. Vaisala's acquisition targets have been primarily small businesses with limited net sales but with a foothold in markets or technologies where Vaisala has a small market share or is not present yet.

W&E's previous acquisitions have focused on bringing new technologies or capabilities

In 2018, Vaisala made its largest acquisition to date when it acquired Leosphere, a French manufacturer of remote wind sensing LiDAR instruments for wind energy, aviation, meteorology, and air quality applications. Leosphere had net sales of EUR 27m in 2017, and the deal was valued at EUR 38m, representing an EV/Sales multiple of 1.4x. Given the growing demand for non-fossil energy sources, we foresee the technology well-positioned for the increased investments in renewable energy and the transition to green energy. In 2019, Vaisala reinforced its weather forecasts and digital abilities by acquiring Foreca's B2B weather forecast business, which serves professional customers in the fields of meteorology, transportation, energy, and other industries. At the beginning of 2022, Vaisala acquired AerisWeather, a US-based weather software company that provides weather and environmental data services on a subscription basis. AerisWeather had net sales of USD 3.2m and a break-even operating profit in 2021, and the deal was valued at USD 26m, representing an 8.1x EV/Sales multiple. With AerisWeather's industry-leading data services and developer tools combined with Vaisala's existing measurement and forecasting technologies, the acquisition has the potential to accelerate the company's digital business even further.

IM has entered into new markets through two acquisitions

In 2010, Vaisala strengthened its position in life science measurements with the acquisition of Veriteq Instruments which provides continuous monitoring systems and data loggers. The deal was valued with an EV/Sales multiple of 1.7x. Later in 2013, Vaisala incurred a one-time impairment charge specifically associated with the recorded goodwill from the acquisition of Veriteq. At that time, the life science market was experiencing a period of stagnation. However, recently, it has emerged as one of the primary drivers of IM's growth. In December 2018, Vaisala acquired the Finnish K-Patents Group to enter the liquid measurement market. K-Patents had net sales of EUR 11.4m in 2017, and the purchase price was EUR 12.5m, representing a 1.1x EV/Sales multiple. The acquisition allowed Vaisala to expand IM's portfolio from gas measurements to high-end liquid measurements, thus strengthening its position in environmental and industrial measurements. K-Patents was a global market leader in in-line process refractometers with applications in various industries such as pulp and paper, food and beverage, pharmaceutical, and semiconductor. Its liquid measurement applications range from measuring the sugar content of soft drinks and juices to measuring the concentration of paper-coating chemicals.

Few divestments made throughout its history

Vaisala has a history of divesting or writing down businesses that have either been commercialized or unsuccessful. The latest divestment was made in 2016 when the company divested some of its transportation products and services. Meanwhile, Vaisala wrote down intangible assets of acquired Second Wind Systems and 3TIER worth EUR 10.5m. As of 2000, Vaisala has divested four of its businesses and made two write-downs. To our understanding, Vaisala's core strategy is to concentrate on technologies that provide substantial value-add and allow for robust pricing power. While technological advancements could potentially result in further divestments in the future, we presently view Vaisala's product portfolio as highly competitive and do not anticipate any divestments in the near term.

Table 2: Selected transactions

Year	Type	Target name	Revenue, millions	Deal/charge value, millions	Curr.	Revenue year	EV/S multiple	Details
2001	Acquisition	Meteorological Systems Unit of Radian International LLC , USA	5	-	EUR	2000	-	The acquired unit was a global market leader in wind profilers.
2002	Acquisition	Global Atmospheric Corporation , USA	15.3	14	USD	2001	0.9	
2005	Acquisition	Sigmat Corporation , USA	8.8	16.5	EUR	2005	1.9	Weather radar signal processor and application software company
	Acquisition	CLH Inc. , USA	3.1	2.8	EUR	2004	0.9	Automated weather observing systems and related services for the US airports
2008	Acquisition	Aviation Systems Maintenance, Inc (ASMI) , USA	1.8	2.3	EUR	2008 est.	1.3	An airport service company
2009	Acquisition	Quixote Transportation Technologies, Inc. (QTT) , USA	22.6	20	USD	2009	0.9	Road weather and information technology company
2010	Divestment	Oxygen measurement technology and business	-	-	-	-	-	
	Acquisition	Veriteq Instruments Inc. , Canada	5	8.5	EUR	2009	1.7	Continuous monitoring systems and data loggers for life science market
2012	Divestment	Wind profiler business						
2013	Acquisition	3TIER Inc. , USA	6.3	11.5	EUR	2012	1.8	A renewable energy assessment and forecasting services company
	Acquisition	Second Wind Systems Inc. , USA	7	1.4	EUR	2012	0.2	Remote sensing technology and data services for the wind energy industry
	Impairment charge	Goodwill and intangible assets related to Veriteq Instruments Inc.	-	4.3	EUR	-	-	
	Divestment	Three non-weather road transportation product lines	-	-	-	-	-	
2016	Acquisition	Technology and air quality monitoring products from Envitem Oy , Finland	-	-	-	-	-	
	Divestment	Certain Transportation products and field services	-	-	-	-	-	
	Write-down	Related to Second Wind Systems Inc. and 3TIER Inc intangible assets	-	10.5	EUR	-	-	
2017	Acquisition	Vionice , Finland	0.2	3.7	EUR	2016	18.5	Computer vision and artificial intelligence
2018	Acquisition	Leosphere SAS , France	27	38	EUR	2017	1.4	LiDAR wind measurement equipment
2018	Acquisition	K-Patents , Finland	11.4	12.5	EUR	2017	1.1	High-end liquid measurement instruments
2019	Acquisition	Foreca B2B Weather Services , Finland	-	7	EUR	-	-	Professional Business-to-Business weather services
2022	Acquisition	AerisWeather , USA	3.2	26	USD	2021	8.1	Weather and environmental data solutions, SaaS business

Source: Vaisala, Evli Research

Future M&A targets to support Vaisala's strategic goals

Given Vaisala's robust net cash position and consistently increasing cash flow, we foresee that future acquisitions are not only possible but also highly likely. Vaisala's strategic objective with M&A is to pursue novel technologies, competencies, and market opportunities. The selection of potential acquisition targets is based on their alignment with Vaisala's core strategic goals, particularly the ambition to establish itself as the leading player in specific niche markets.

IM to look complimentary technologies

Taking a closer look at IM's M&A strategy, the business area seeks companies that have adjacent and complimentary technologies as IM does. IM is especially interested in technology companies that have already some sort of customer base. This facilitates its entry to the market, instead of starting from scratch to acquire new customers. IM recognizes that purchasing competitors is unnecessary since their technology tends to be inferior compared to IM's. According to the company's management, IM regularly evaluates potential companies on a weekly basis, but finding suitable partners to acquire appears to be a challenging.

W&E to enhance its growing businesses via M&A

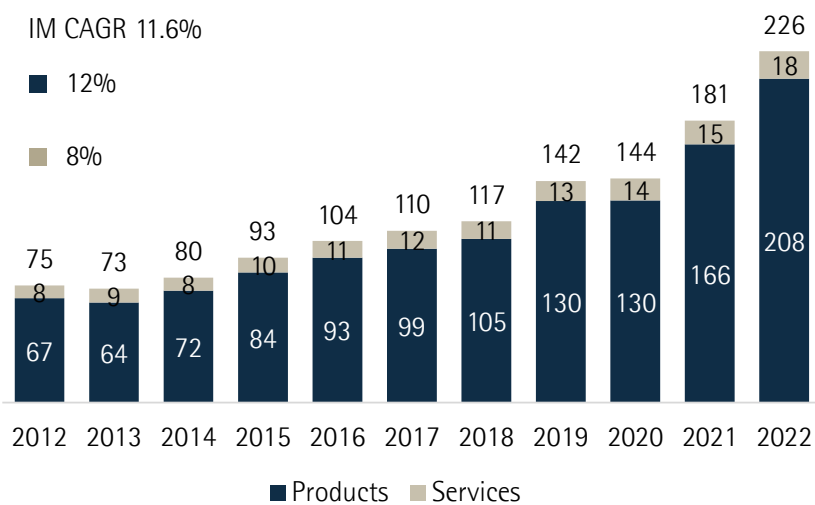
In our view, W&E's potential M&A activities will primarily concentrate on its growing businesses. We foresee that similar principles to IM's M&A strategy will also apply to W&E. The most recent acquisitions have centered around bolstering the digital services aspect. It wouldn't be unexpected if the next acquisition somehow supports X-weather's operations. While acknowledging that renewable energy remains a core focus area for W&E, it is reasonable to consider technological inorganic expansion within this particular segment.

Industrial Measurements (IM)

IM focuses on business-critical applications in niche markets

Industrial Measurements (IM) business area serves customers in selected industrial applications, providing indoor measuring systems that help clients to improve product quality, productivity, energy efficiency, maintenance activities, and regulatory compliance. IM manufactures and develops instruments, systems, and related services for tens of thousands of different customers. IM operates in selected niche industrial applications in which the measurement is business-critical feature and measurement conditions are usually challenging requiring experience and high technology know-how. Vaisala's advanced technology and extensive R&D capabilities enable IM to provide customers with cutting-edge measuring solutions.

Figure 15: IM's net sales development in EURm during 2012-22



Source: Vaisala

Revenue has tripled during 10 years

The business area has experienced strong net sales growth over the past decade, with a CAGR of 12%. The growth has primarily been organic, as IM has executed only two acquisitions during the given period. In 2022, service sales represented approximately 8% of IM's total net sales, with product deliveries being the primary driver of the business. Over the period of 2012-2022, service sales have grown steadily at a CAGR of 8%, while product sales exhibited more pronounced growth, with a CAGR of 12%.

Customers

IM's customer base consists primarily of private B2B customers

To our understanding, IM primarily serves private customers, including system integrators, OEMs, and other end users. IM classifies its customer base into three categories: key customers, non-active but significant customers, and retail customers. While the company is well-acquainted with its key customers and to some extent non-active customers, its understanding of retail customers is relatively limited. In line with its renewed strategy, the company is placing greater emphasis on customer understanding and investing resources in improving its knowledge of retail customers.

Solutions are sold directly and through distributors

IM distributes its products through multiple channels including its online store, sales representatives, and distributors, owing to its wide-ranging and diverse customer base. As the focus of IM's sales is primarily on products, the average delivery time is typically only a few days, resulting in a small inventory of finished products. To our understanding, IM's average transaction size is relatively low, typically amounting to a few thousand euros. However, the price points of larger system deliveries, such as CMS (continuous monitoring systems), are significantly higher. IM's products generally represent a small portion of clients' total capital expenditures, allowing for greater pricing power and wider product margins. Additionally, the demand for industrial solutions has shown to be relatively insensitive to economic cycles. Moreover, we assess IM's customer risk to be quite moderate, given its extensive customer base.

IM operates in several industrial markets

In certain industries, IM is considered a prominent market leader. According to the company's management, Vaisala's solutions are used by all major data center providers, as the company meets the customer requirements better than any other player in the market. Additionally, IM's management has stated that nearly all of the world's largest pharmaceutical manufacturers rely on Vaisala's technology in their processes. IM operates in industries such as:

- Food, beverage, and agriculture
- Traditional industrial manufacturers
 - Automotive
 - Battery
- Power plants and transformers
- Biogas
- Data centers
- Life science and pharmaceutical
- Semiconductors
- Fuel, oil, gas, and petrochemicals
- Research facilities and cleanrooms

Products and services

The number of measured parameters increases consistently

Vaisala's solutions within industrial measurements include transmitters, handheld devices, OEM modules, and continuous monitoring systems, all of which feature wireless options for added flexibility and convenience. Depending on customers' needs and requirements, the company is continuously exploring and expanding its range of parameters to measure. Currently, Vaisala's industrial measurement devices observe parameters such as:

- Humidity
- Carbon dioxide
- Vaporized hydrogen peroxide
- Hydrogen
- Temperature
- CO₂
- Dew point
- Moisture in oil
- Structural moisture
- Pressure
- Methane
- Dissolved gas in oil
- Other crucial parameters

In addition to product deliveries, Vaisala also offers a variety of services related to its products. IM's service offerings primarily include calibration, CMS (continuous monitoring system), consulting, warranties, technical support, and system maintenance.

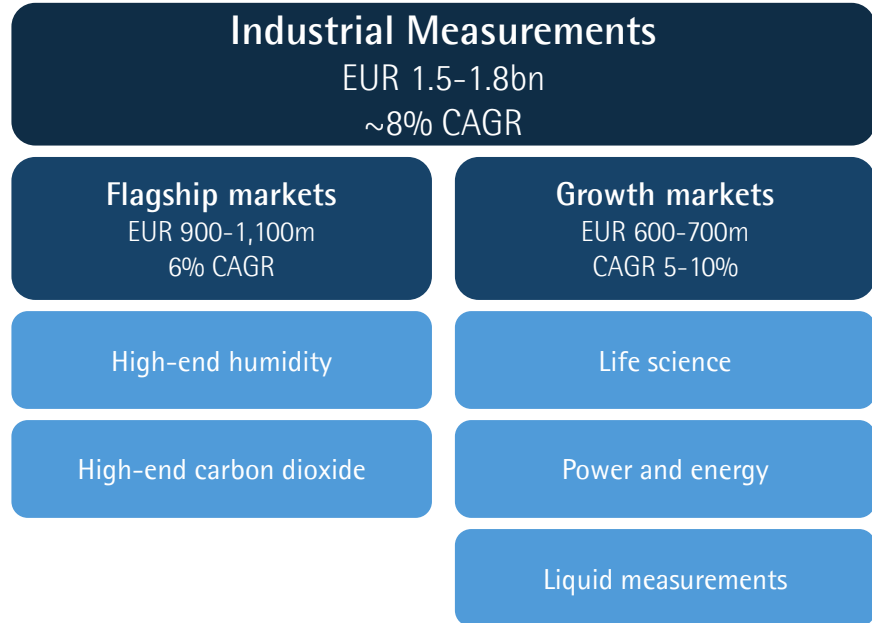
Strategy

IM solving customers' problems better than others

IM's strategic objective is to offer superior problem-solving capabilities to its customers by creating high-end solutions that outmatch its competitors. From the design phase onwards, Vaisala works closely with its major customers to gain a better understanding of the objects being measured, ultimately resulting in the creation of market-leading products that provide significant value-add for its customers. The company's management has stated that IM's continued investments in R&D have surpassed that of its competitors, which is reflected in triplicated revenue over the past decade.

Markets

Figure 16: Industrial Measurements' markets



Source: Vaisala, Evli Research

Flagship markets represent the majority of IM's business

IM is a prominent market leader in its flagship markets with an extensive experience of 30-50 years. These markets, which specialize in high-end measurements for parameters such as humidity and carbon dioxide, account for approximately 75% of the company's revenue. With a steady annual growth rate of 6%, these markets are estimated to be worth EUR 900-1,100m according to the company's calculations.

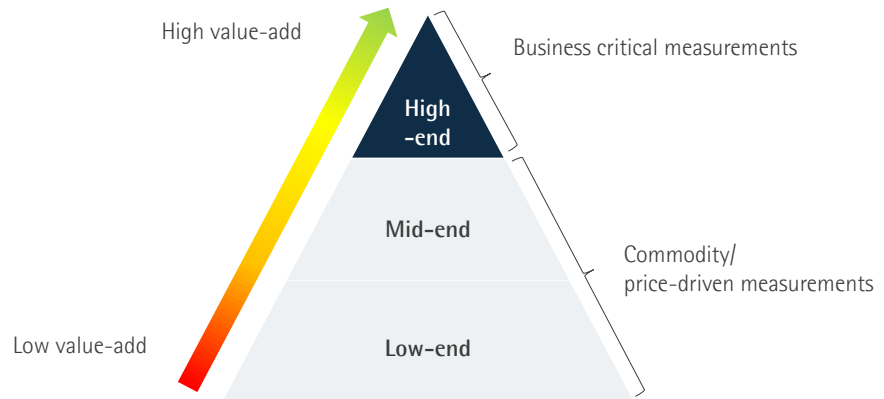
Other markets showing high growth rates

IM's growth markets consist of life science, power and energy, and liquid measurements segments, where Vaisala is a new but rapidly expanding player. Currently, these markets contribute to a quarter of the business area's sales according to our assessment. Due to the strong megatrends and market sentiment, the markets are experiencing rapid growth and are expected to increase their share over IM's traditional sales. According to the company's estimates, the total market size for these growth markets is approximately worth EUR 600-700m. In contrast to the flagship markets, IM is placing greater emphasis on investing in its solutions in the growth markets in order to expand its customer base and enhance its market share.

High value-creation "on top of the pyramid"

IM is focused on operating in the high-end categories, particularly those that are positioned at the top of the value pyramid (refer to Figure 17) where measurements are considered critical to customers' business success. This strategy enables Vaisala to maintain strong pricing power and avoid extensive competition. In case a product falls among price-competitive categories, Vaisala may consider either divesting or modernizing it to return to the high-end category.

Figure 17: IM's position



Source: Vaisala (CMD 2021)

Need for precise and reliable measurements is increasing

With the fast pace of change in product characteristics and manufacturing processes as well as technological development, the ways of measurement change quite rapidly. As a result, there is a growing demand for accurate and dependable measurements in complex and demanding industrial processes, which creates new business prospects for Vaisala. Moreover, companies are increasingly motivated to enhance their efficiency, leading to a heightened focus on increasing the measurements in manufacturing processes. To capitalize on these opportunities, Vaisala must continue to invest in research and development and stay ahead of the competition.

Opportunities

- **Green transition and energy self-sufficiency:** European Commission has set a target of 35bn cubic meters (today: ~3bn) of annual biomethane production in EU-27 countries by 2023 in order to enhance green transition and reduce the dependency on Russian energy.¹ Vaisala's management has also recognized biogas measurements as a significant market opportunity.
- **Ever-increasing need for precise measurements and leading with data:** According to the company's management, the demand for precise high-end measurement equipment is ever-increasing. With precise measurements and clever usage of data, companies can run their processes and produce products more efficiently and at the same time increase the quality as well as save resources.
- **Well-being and health awareness:** With the aging population and illness increasing, we view the demand for pharmaceutical and life science measurements to steadily increase.

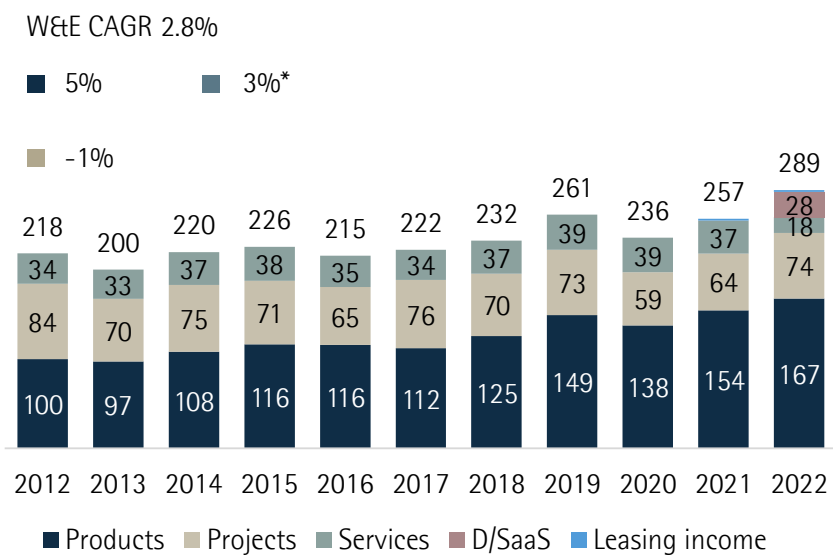
¹ European Biogas Association: Biomethane production potentials in the EU

Weather and Environment (W&E)

Vaisala provides safety, protection, and efficiency with its W&E solutions

The weather and Environment business area serves selected weather-dependent customers with products, projects, and services to monitor real-time weather and environmental data. The business area provides measurements and decision-making support that focus on the safety of people, protection of property, and efficiency of operations under any environmental conditions. W&E serves customer segments such as meteorology, aviation, transportation, and renewable energy. While W&E has a considerable number of customers from the public sector, the company also caters to private corporations operating in various industries, such as automotive, maritime, and energy.

Figure 18: W&E's net sales development



Source: Vaisala
* Services + D/SaaS

W&E's historical growth somewhat modest

W&E's growth over the past decade has been slower than that of IM. From 2012 to 2022, W&E experienced annual growth of 3%, which was supported by several acquisitions. During this period, product sales grew at a CAGR of 5%, while project sales declined by 1% on average and service sales showed a 3% annual increase. Divestments of certain technologies have also affected W&E's net sales development.

Customers

Public customers represent the majority of W&E's business

W&E provides solutions to public sector institutions, including meteorological institutes, airports, transportation agencies, military, and municipalities, as well as private corporations in industries such as district heat, wind energy, maritime, and automotive, among others. However, we estimate that over 70% of W&E's revenue is derived from public funding, making the company somewhat reliant on the public sector's budgetary allocations. Nevertheless, W&E's business is largely driven by certain megatrends, which are currently being supported by public funding and should provide some insulation against economic volatility.

Market leader in flagship markets

According to the company's management, Vaisala's W&E business area is a market leader in providing weather- and environment-dependent solutions to meteorological institutions worldwide. To our understanding, Vaisala's equipment can be found in almost every country's meteorological space. In addition, W&E's technologies power over 50% of the world's largest and most significant airports. While the coverage of weather measuring equipment is already extensive in developed nations, W&E sees opportunities for growth in developing countries weather and environment infrastructures. The business area also focuses on the implementation of large system projects, with a strong emphasis on enhancing weather-related capacity building in emerging economies. Although project deliveries typically take longer and yield lower margins than product deliveries, they can have a significant impact on W&E's gross profit, and their sales support Vaisala's product sales. With its new digital business, the company aims to increase its scalable recurring revenue over time by delivering digital weather D/SaaS solutions to various industries, including automotive, energy, municipalities, and other OEMs.

Products

- **Sounding products** are used for measuring upper-air atmosphere. Vaisala's offering mainly consists of dropsondes, radiosondes, and semiautomatic/automatic sounding stations.
- **Weather radar products** include radars, transmitters, receivers, and signal processors.
- **Weather stations and sensors** measure wind speed and direction, lightning, cloud height, visibility, air quality, surface temperature, water depth, precipitation, and rain.
- **Wind LiDAR systems** are used to measure the wind speed and direction from the distance. LiDARs are used in wind farms, aviation weather, meteorology, and maritime.

Projects

Providing large-scale project deliveries in developing economies

Vaisala's projects usually involve system deliveries, encompassing hardware, software, service, and training. Additionally, Vaisala categorizes the delivery of larger, high-complexity products as projects in its revenue reporting. At any given moment, the company has over a hundred active projects, with varying durations that typically range from 2 to 6 months. Some projects involve preparation and implementation that span several years. Vaisala's role can range from an integrator to a subcontractor, and it usually cooperates with meteorological institutes to deliver state of art solutions. We estimate that Vaisala's projects range in size from hundreds of thousands to tens of millions of euros, with the majority worth a few million euros or less. For example, the ongoing Ethiopian project is valued at EUR 13m and is expected to take 2-3 years to implement.

Vaisala aims to close at least one major infrastructure project annually in which the total revenue impact nears or exceeds EUR 10m. Currently, to our understanding, Vaisala has three such projects in progress, located in Sweden, Argentina, and Ethiopia.

Figure 19: Examples of ongoing projects

Sweden	Argentina	Ethiopia
<ul style="list-style-type: none"> In Feb 2019, approx. EUR 7m contract signed with Swedish Transport Administration. Delivery of at least 600 road weather information stations throughout Sweden. Deliveries scheduled for 2022-24. 	<ul style="list-style-type: none"> In Mar 2019, EUR 15m (later reduced to EUR 5.6m) contract signed with the Argentine Air Navigation Service Provider (EANA). Automated weather observing systems to 31 airports across Argentina. 	<ul style="list-style-type: none"> EUR 13m contract signed with National Meteorology Agency in Ethiopia in Oct 2019. Modernization of Ethiopia's weather and climate observation and monitoring systems. Implementation started in 2021 and the project is estimated to run for 2-3 years.

Source: Vaisala, Evli Research

Services

Traditional services to support product sales

Along with product deliveries, Vaisala also provides services connected to its products. IM's services consist mainly of calibration, CMS (continuous monitoring system), consulting, warranties, technical support, and system maintenance. W&E's service sales in 2022 accounted for EUR 17.6m, which have grown quite steadily during the recent decade.

Digital services

New digital services to improve margins

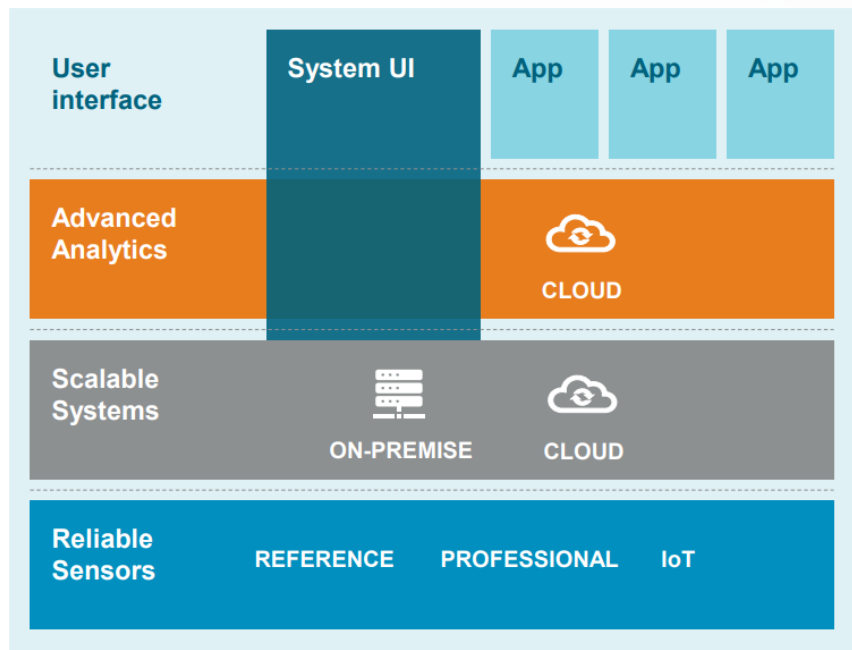
In addition to traditional services introduced above, W&E provides scalable weather and environmental data services based on monthly recurring payments. One of Vaisala's latest strategic initiatives, called X-Weather, leverages algorithms, IoT sensors, and data to offer highly precise forecasts as a service to both public and private clients. The company's data and forecasts are sought after by a range of organizations, including road authorities, district heat producers, car manufacturers, and municipalities. Vaisala is currently making substantial OPEX-based investments in its D/SaaS business, which operates with healthy gross margins, although it is yet to achieve operational profitability. Vaisala started to report its D/SaaS revenue separately, which in total amounted to roughly EUR 28m in 2022.

Strategy

Strategy aims to expand growth and improve scalability

W&E's strategic targets are set to secure its position as a market leader in its flagship businesses and expand its presence in growing and emerging markets. In addition, W&E aims to grow its recurring revenue and master its architecture and scalable technology platforms. While W&E continues to invest smartly in its core businesses, substantial investments are directed to its growing or emerging businesses. In a broader context, W&E aims to enhance its analytical capabilities to deliver value-adding solutions to customers and, thereby gain a competitive edge and expand Vaisala's market presence in the future. Vaisala calls its comprehensive product and system platform as "full stack" which reaches from sensors all until to systems, analytics, and user interfaces.

Figure 20: W&E's full stack platform

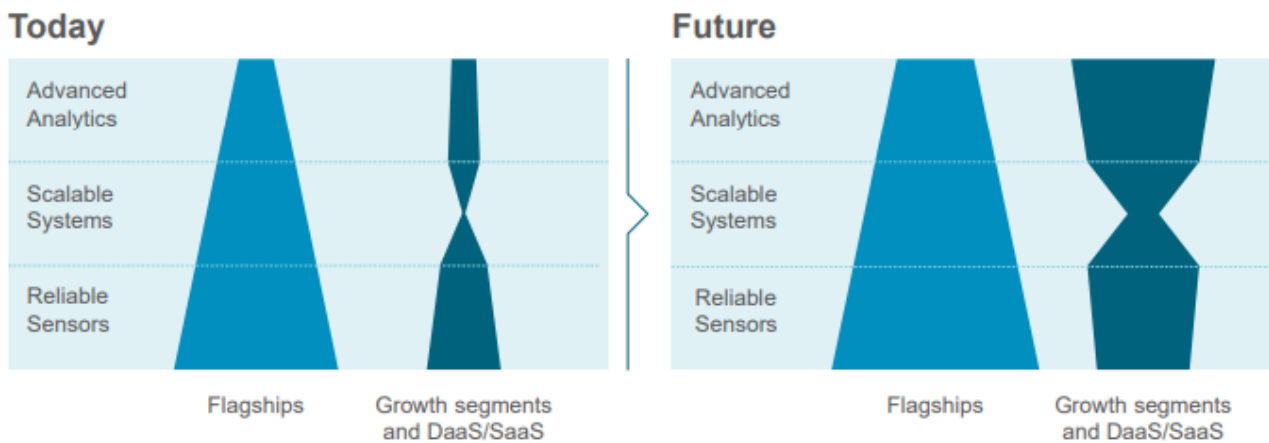


Source: Vaisala

Only player providing "full stack"

In summary, W&E stands out as the sole player in the industry that concentrates on delivering a complete package encompassing sensors, user interfaces, and self-developed systems and analytics. This strategic approach grants Vaisala a competitive advantage, enabling the company to offer the most comprehensive range of weather and environment solutions to its customers. Typically, competitors in the field tend to focus on either the sensor aspect or analytics and user interfaces separately. A prime illustration of Vaisala's full stack solution is its digital services, where customers can subscribe to data and forecasts through the company's cloud platform and improve the accuracy of measurements with additional IoT sensors.

Figure 21: Business development objectives



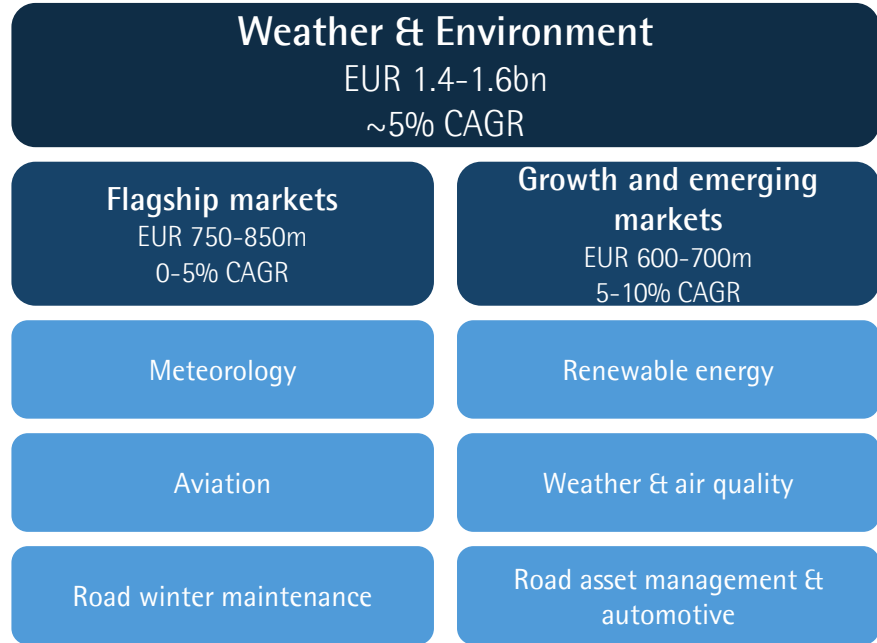
Source: Vaisala

The role of systems and analytics will be more valuable in the future

Mastering the full stack is a crucial aspect of W&E's strategic development. Figure 21 provides a depiction of W&E's plan to enhance its scalable systems and analytics across its growing businesses. The flagship businesses are expected to maintain their stability, and sensors will continue to hold greater value compared to analytics. However, in growing businesses, advanced analytics will play an increasingly significant role in driving value, surpassing the value contribution of Vaisala's reliable sensors. This rationale elucidates Vaisala's recent investments in recruiting software developers and analytics experts, underscoring their commitment to staying at the forefront of these advancements.

Markets

Figure 22: Weather and Environment's markets



Source: Vaisala, Evli Research

Other markets provide substantially higher growth than flagship markets

W&E's flagship markets - meteorology, aviation, and road winter maintenance - constitute approximately 60% of the business area's net sales, while the remaining 40% is covered by growth and emerging businesses such as renewable energy, weather and air quality, and road asset management, and automotive. Vaisala estimates the addressable market size for W&E to range between EUR 1.4-1.6bn. Despite the flagship markets experiencing modest annual growth ranging from 0% to 5%, Vaisala holds a leading position in all of them and continues to make strategic investments to maintain its market position. In contrast, the growth and emerging markets are expected to increase at a higher annual rate of 5-10%, prompting Vaisala to invest more heavily in this area. Although Vaisala's current market share in growth and emerging markets is relatively small, the company's strategic investments position it to tap into a significant source of growth.

Figure 23: Revenue share of W&E's key markets



Source: Vaisala

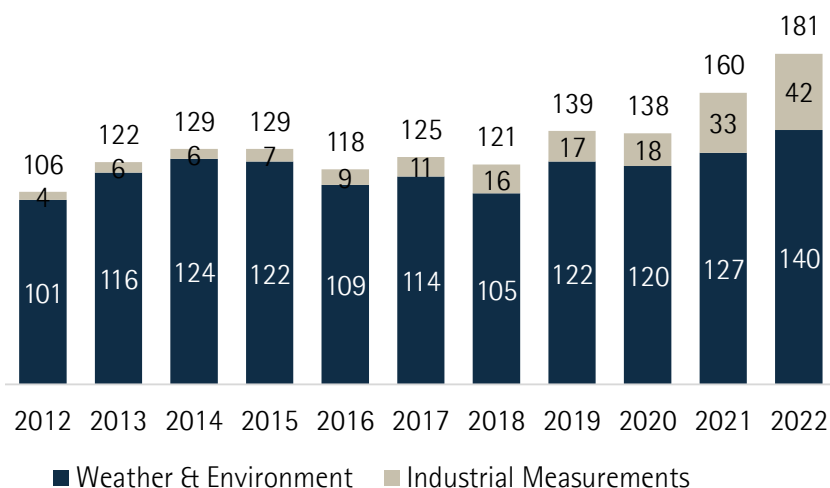
Opportunities

- **Green transition and renewable energy:** With the increased investment in green energy, for example in wind farms and wind-assisted maritime, we view the demand for Vaisala's LiDAR systems and solar solutions as strong.
- **Climate change:** extreme weather conditions increase the demand for large-scale weather stations, especially in developing countries.
- **Precise weather forecasts and real-time data:** Vaisala's digital D/SaaS-based weather data is increased significantly during the past few years. Vaisala offers precise weather data for car manufacturers, the energy industry, cities, etc. In our view, the demand for subscription-based services is on the rise due to their convenience and low capital requirements.
- **Future mobility:** In the future, with clever usage of data, more precise weather forecasts might be conducted based on real-time cluster observations for the needs of autonomic vehicles, drones, etc.
- **Urbanization:** urbanization has increased climate change and worsened the air quality in cities. With precise measurements and data, cities can mitigate climate change and improve air quality.

Financial performance

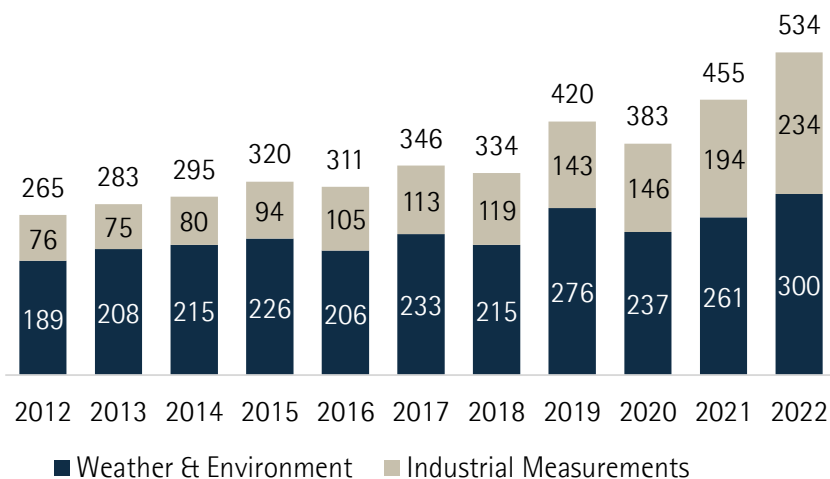
Orders

Figure 24: Order book in EURm



Source: Vaisala

Figure 25: Orders received in EURm



Source: Vaisala

IM's order book was at its record level in Q3'22

IM's order book offers quite limited guidance due to the fact that most of the segment's orders are delivered on-demand, i.e., within the same quarter they are received. At the end of Q1'23, Vaisala's order book was yet high, but below record Q3'22, at EUR 163.7m of which IM represented EUR 38.6m. During recent years, IM's order book has relatively increased due to its customers' front-loaded orders driven by the component shortage. However, we foresee this trend to abate over time with the component availability improving. IM's order intake has continued in a growing trend which indicates the demand sentiment continuing strong.

W&E's order book to bring some future predicting power

Conversely, the predictive power of W&E's order book is more prominent. In Q1'23, W&E's order book stood at EUR 125.1m, with EUR 96.1m expected to be delivered in 2023. Moreover, there was a double-digit increase in Q1 order intake compared to the previous year, which bodes well for Vaisala's revenue growth in 2023 and suggests that the underlying demand remains in favor of the company.

Net sales

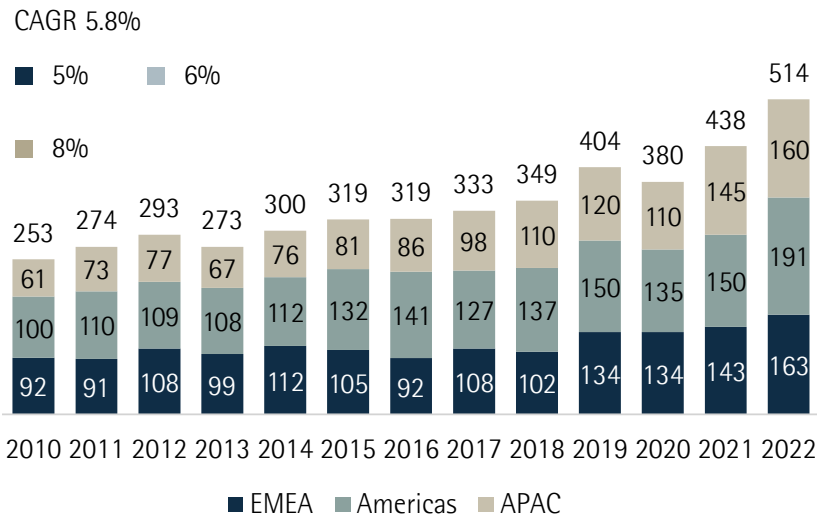
Vaisala has shown mid-single-digit growth during 2010-22

From 2010 to 2022, Vaisala's revenue has grown at a CAGR of 6.1%, reflecting the company's sustained focus on business growth. Following a robust performance in 2019, Vaisala experienced a 6% decline in revenue in 2020 due to reduced investment activity amid the COVID-19 pandemic. However, the company rebounded strongly in 2021, by recording a 15% growth. In 2022, Vaisala's growth trajectory accelerated further, with a y/y growth of 17%. Historic revenue growth has been supported by successful R&D investments in both of its businesses as well as selected acquisitions mostly made within its W&E business area. Moreover, during 2021-22, the company managed to win new customers with its reliable availability and lead times despite component shortages.

Business diversified between all major economies

Vaisala's revenue splits up smoothly between its three geographical regions, namely the EMEA and APAC regions and the Americas. From 2012 to date, Vaisala has grown its presence in the APAC region strongly while previously the Americas and the EMEA region have been the leading regions in terms of net sales generation. To our understanding, the growth in the APAC region has been primarily driven by Japan, South Korea, and China.

Figure 26: Net sales by regions in EURm



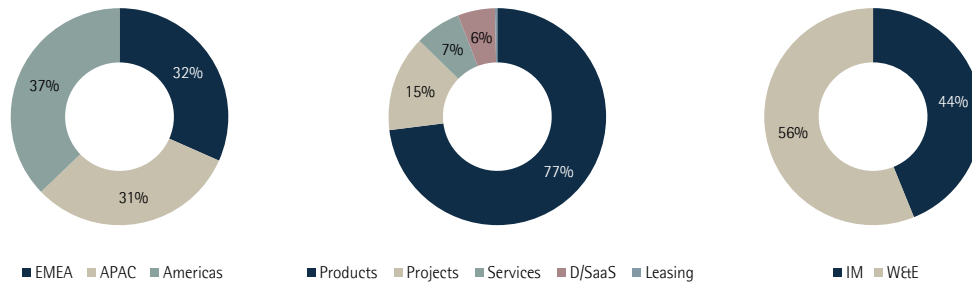
Source: Vaisala

77% of sales generated from product deliveries

Vaisala recently updated its revenue reporting structure to include five primary segments: products, services, projects, leasing income, and the newly introduced D/SaaS services. Products account for the largest share of Vaisala's net sales, constituting 77% of the total net sales in 2022. Projects, exclusively from the Weather and Environment business area, contributed to 15% of the group's net sales. Near product services represented 7% of the total net sales, while D/SaaS revenue accounted for 6% in 2022. Licensing income constituted merely 0.4% of the group's net sales in 2022. Licensing

income primarily stems from Vaisala's practice of leasing out various measuring devices, including advanced LiDAR equipment.

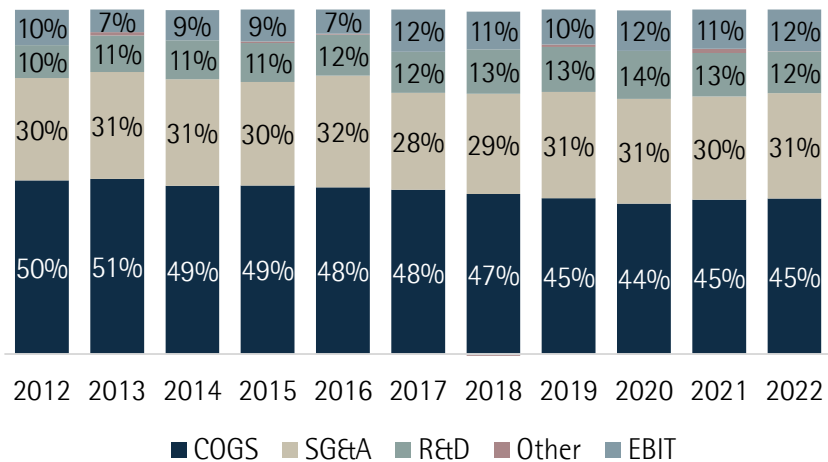
Figure 27: Net sales split in 2022



Source: Vaisala

Cost structure

Figure 28: Cost structure during 2012-22



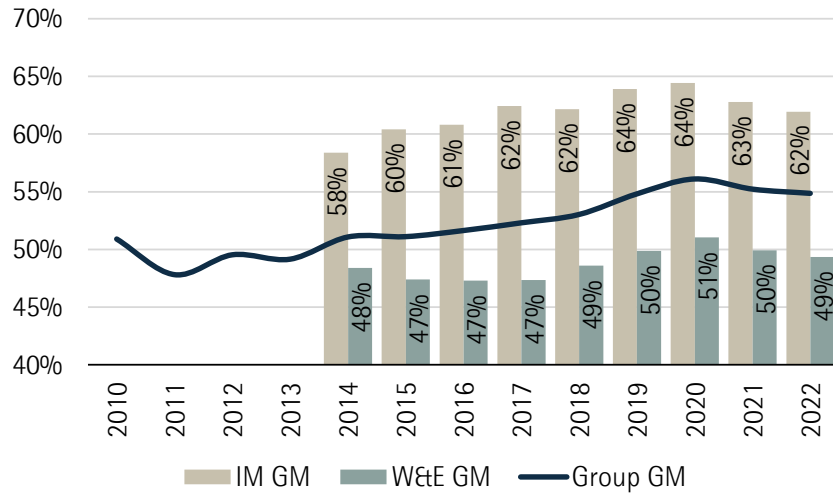
Source: Vaisala

Scalable cost structure, relative material costs have decreased over time

Vaisala has quite a scalable cost structure. Cost of goods sold (COGS), represents less than a half of total net sales and has been showing a declining trend. In the early 2010s, COGS hovered around 50%, but by 2022, this figure had decreased to 45%, partly indicating Vaisala's enhanced pricing power. Vaisala's R&D costs have increased steadily over the years. In 2022, Vaisala's R&D costs accounted for approximately 12% of total net sales. Sales, general, and administrative (SG&A) expenses have fluctuated around 30% during the period from 2010 to 2022, representing 31% of the group's net sales in 2022. Leveraging Vaisala's asset-light business model, depreciation and amortization (D&A) have remained low and stable at around 5%, accounting for 4.4% in 2022.

Gross margin

Figure 29: Gross margin



Source: Vaisala

Gross margin has improved during the past decade

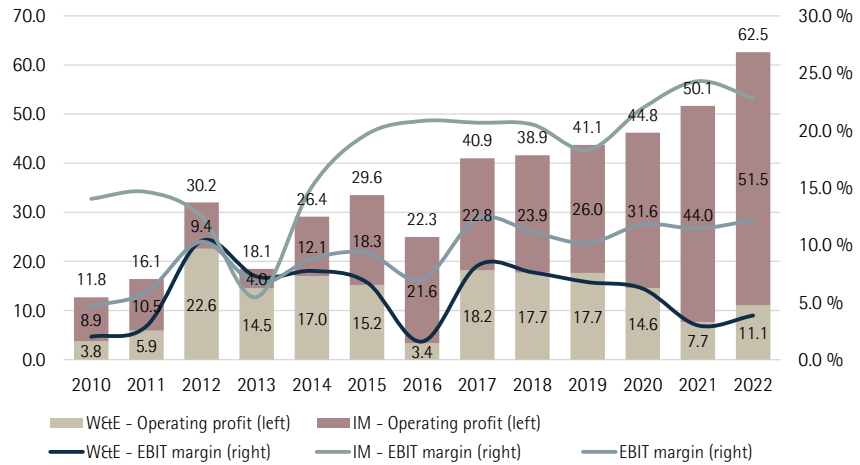
Vaisala has maintained a group gross margin exceeding 50% since 2014. IM has consistently exhibited a stronger gross margin compared to W&E, owing to its more scalable production capabilities. Additionally, IM enjoys favorable pricing positioning, while W&E often engages in publicly funded product and project deliveries that are subject to competitive tendering. In project deliveries, W&E usually outsources certain non-core tasks, such as civil engineering, which ultimately affects its overall margins. Despite the lower margins in W&E's project sales, Vaisala recognizes the significance of project business as it contributes to its long-term sales of higher-margin products and services. Looking ahead, we anticipate that W&E's gross margin will benefit from an increased proportion of scalable digital business.

Component shortage had an impact on gross margin

From 2014 to 2022, the gross margin of IM fluctuated between 58% and 64%, whereas the gross margin of W&E remained around 50%. In 2022, IM's gross margin reached 62% while W&E's gross margin stood at 49%, with the group's overall gross margin reaching 55%. However, Vaisala has experienced a steady decline in gross margin during 2020-2022 due to higher material costs resulting from component shortages and other issues in the global supply chains. There are now positive signs of improved component availability, which could potentially lead to an increase in the company's gross margin.

EBIT

Figure 30: EBIT in EURm and EBIT margin



Source: Vaisala

Large gap between business areas' earnings

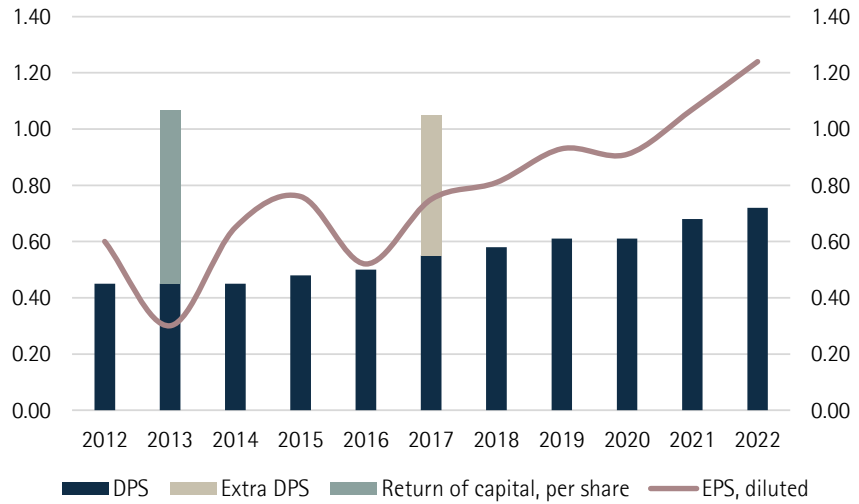
Supported by a stronger gross margin and more scalable fixed costs, IM has clearly outpaced W&E in profitability development. IM has been responsible for the majority of Vaisala's overall earnings from 2016 and the gap has continued to widen in recent years. In our view, increased involvement in project deliveries has resulted in higher operational expenses for W&E, consequently putting pressure on its EBIT. Conversely, IM's scalable business model and substantial focus on direct product sales contribute to the business area's favorable margins.

EBIT still below targets

During 2010-22, the group EBIT margin improved from approx. 10% to 12%. In 2022, Vaisala's EBIT reached EUR 62.5 million, with IM representing around 80% of this figure. While IM's EBIT margin has displayed an upward trend, the EBIT margin of W&E has experienced a decline compared to the levels seen in 2012 when it stood at approx. 10%. In line with its strategy, Vaisala has prioritized investments in future growth and scalability during 2022-23, which, in our assessment, has notably constrained margin expansion. However, as the IT renewal project goes live in late 2023 or early 2024, we anticipate a positive trajectory for margins, given revenue continues its solid growth trajectory. Furthermore, the significant personnel investments made during 2022-23 are expected to scale up from 2024 onwards. Nevertheless, based on our current estimations, we expect Vaisala to near but not reach its target of a 15% EBIT margin within the timeframe of its current strategy, which concludes in 2024.

EPS

Figure 31: EPS and DPS in EUR



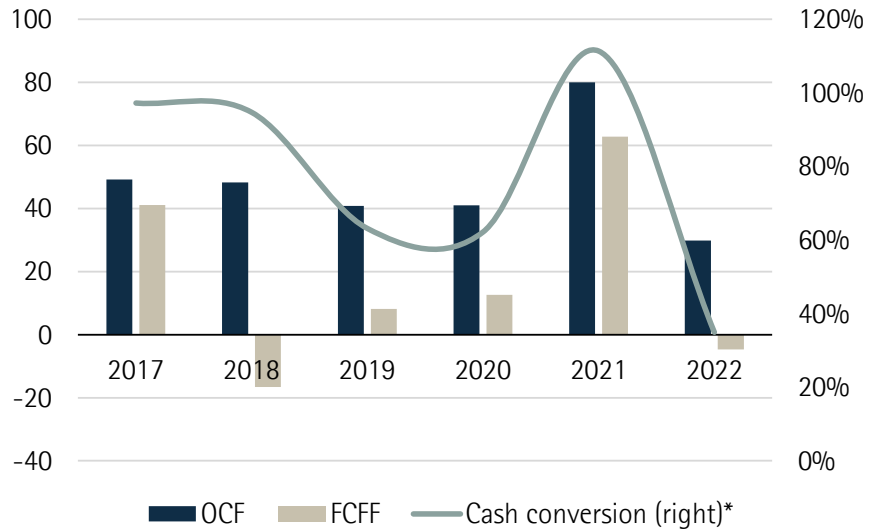
Source: Vaisala

High valuation has lowered dividend yields

Vaisala's earnings per share (EPS) have grown at a CAGR of 7.5% during 2012-22 slightly over its net sales development during the same period. Meanwhile, the development of dividend per share (DPS) has been more moderate. In 2013, Vaisala returned capital worth EUR 0.62 per share and in 2017 the company distributed an extra dividend worth EUR 0.50. Vaisala's historical dividend yield has been somewhat moderate in recent years. During 2015-18, the dividend yield varied around 3-5% while since 2019 the dividend yield has been clearly below 2% mainly due to hefty valuation. According to its financial targets, Vaisala aims to pay a stable dividend which will increase in line with net profit development. This approach takes into consideration the company's objectives of maintaining high solvency and factoring in future investment plans into account.

Cash flow

Figure 32: Operative and free cash flow in EURm, and cash conversion



Source: Vaisala, Evli Research
* Operative cash flow/EBITDA

Strong cash flow profile

Vaisala is a growth company with a robust operational cash flow profile, having attained a cash conversion ratio of 100% in the fiscal years of 2017, 2018, and 2021. This signifies the company's adeptness in efficiently transforming earnings into cash. However, Vaisala's free cash flow has seen occasional declines, for example in 2018 and 2022, owing to capital expenditure (CAPEX) investments as well as tied working capital. These investments and capital requirements are however fundamental for the company's expansion plans. For example, in 2018, Vaisala executed two strategic acquisitions through which its CAPEX saw a major increase, resulting in low FCFF. Notwithstanding, Vaisala's strong cash conversion ratio evidences the company's capacity to generate cash flow and uphold financial steadfastness.

Estimates

2023 guidance and market outlook

For the year of 2023, according to its official financial guidance, Vaisala expects:

- Net sales between EUR 530-570m and
- EBIT between EUR 70-85m.

Guidance implies growth and improving profitability

The guidance implies y/y growth of 3.1-10.9% (7% mid-point) and an EBIT margin ranging between 12.3-16.0%. Vaisala expects its markets for high-end industrial instruments, life science, power and energy, and liquid measurements to grow. The company foresees its markets for renewable energy as well as roads and automotive to grow. Market for aviation is expected to be stable or to grow and meteorology market is expected to be stable.

2023 estimates

Estimating approx. 10% y/y increase in 23 net sales

Vaisala reported solid Q1 order book, which we foresee driving the company's growth during 2023. In addition, the underlying demand seem to continue as good with only meteorological and aviation markets expected to remain stable. We expect group topline of EUR 564.5m, reflecting a y/y increase of 9.8%.

Price increases and lower usage of spot-components to support gross margin

We expect group gross margin to improve from that of the comparison period to 56.1%. Product margins are supported by lower usage of spot components as well as successful pricing actions. We however note that despite spot component purchases are expected to be over, Vaisala has such components left which will probably be recognized in its P&L during Q2-Q3'23.

Cost pressures to limit margin expansion

Increased cost pressures will limit margin expansion yet in 2023 in our view. The company is currently investing in its IT-capabilities and has recruited growth enabling talents during recent years. In Q1'23, the head count increased by 12% y/y and 6% q/q respectively. We estimate a 11% increase in fixed costs. With fixed costs limiting scalability, our 23E EBIT amounts to EUR 73.2m (13.0% margin), nearing the lower bound of the company's guidance.

Industrial measurements:

Based on a strong Q1 performance and decent order intake, we anticipate a growth rate of 12.3% for 2023, resulting in net sales of EUR 253.2m. The growth is driven by positive momentum across all main market segments. Furthermore, we expect the gross margin to improve, reaching 62.7%. This improvement is attributed to recent price increases and a decrease in the recognition of spot-priced components. However, we anticipate that fixed costs will grow at a faster rate than net sales, which limits the EBIT margin expansion. Nevertheless, the improved gross margin will help the EBIT margin to surpass the level of corresponding period, reaching 23.2%. Our estimated EBIT for the period stands at EUR 58.8m.

Weather and environment:

W&E's order book maintained its robust level and experienced solid growth during Q1. Based on this, we anticipate a y/y growth rate of 7.9% for the business area, resulting in net sales of EUR 311.3m. We expect to see an enhancement in the gross margin, driven by a combination of price increases and reduced utilization of spot-components. However, similar to the IM division, we anticipate significant growth in fixed costs, which limits the improvement in the EBIT margin. Our projected EBIT margin stands at 4.6%, with EBIT improving to EUR 14.3m.

2024-25 estimates

We approach our growth estimates for 2024-2025 with caution

We view the underlying demand to continue strong. However, considering the momentum observed in recent years, we expect Vaisala's growth rate to experience a slight deceleration. Furthermore, we exercise caution in our growth estimates for the years 2024-2025.

Growing markets to stand out in topline growth

In 2024, we anticipate a 7% growth for Vaisala, with IM expected to increase by 9% and W&E projected to grow by 6%. Looking ahead to 2025, we adopt a more cautious stance, forecasting a 5% growth for the company, supported by both business areas. Our view is that the growth drivers for W&E will primarily stem from the renewable energy segment and digital services. At the same time, we expect W&E's flagship businesses to experience moderate development. Within the IM division, we anticipate solid performance across all market segments during 2024-2025. However, we expect growing businesses such as life science, power, and energy to outperform the flagship businesses. The industries mentioned above have a strong underlying demand for precise measurements, and in general, the continuous development of technology presents Vaisala with new market opportunities to explore.

Expecting improving profitability

Based on our projections, considering the anticipated improvement in gross margin and the scale of fixed costs, we expect the group's EBIT margin to improve to 14.5% in 2024 and 14.8% in 2025. Although we anticipate solid margin expansion, we do not estimate Vaisala reaching its EBIT margin target of 15% by the end of 2024.

Table 3: Estimates

ESTIMATES	2018	2019	2020	2021	Q1'22	Q2'22	Q3'22	Q4'22	2022	Q1'23	Q2'23E	Q3'23E	Q4'23E	2023E	2024E	2025E
Net sales	348.8	403.6	379.5	437.9	118.8	120.5	133.3	141.5	514.1	131.8	135.6	142.4	154.6	564.5	605.0	637.4
Weather & Environment	232.3	261.3	235.6	256.9	65.7	65.9	75.7	81.3	288.6	68.8	74.4	80.2	87.8	311.3	330.3	343.5
Industrial Measurements	116.5	142.4	143.9	181.0	53.1	54.7	57.6	60.2	225.5	63.0	61.2	62.2	66.8	253.2	274.7	293.9
Reported EBIT	38.9	41.1	44.8	50.1	17.5	10.3	22.0	12.6	62.5	13.3	14.1	26.3	19.5	73.2	87.9	94.6
Weather & Environment	17.7	17.7	14.6	7.7	2.9	-1.0	7.5	1.8	11.1	-1.7	1.5	9.7	4.9	14.3	19.3	24.4
Industrial Measurements	23.9	26.0	31.6	44.0	14.6	11.5	14.6	10.8	51.5	15.0	12.6	16.6	14.6	58.8	68.6	70.3
Other operations	-2.7	-2.6	-1.4	-1.5	0.1	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. EBIT	42.6	50.7	52.3	57.6	19.5	12.4	24.1	14.5	70.6	15.4	16.1	28.3	21.5	81.4	96.0	94.6
Net sales growth	5%	16%	-6%	15%	29%	10%	20%	13%	17%	11%	13%	7%	9%	10%	7%	5%
Weather & Environment	5%	12%	-10%	9%	26%	1%	18%	9%	12%	5%	13%	6%	8%	8%	6%	4%
Industrial Measurements	6%	22%	1%	26%	34%	24%	22%	20%	25%	19%	12%	8%	11%	12%	9%	7%
EBIT margin	11.2%	10.2%	11.8%	11.4%	14.8%	8.6%	16.5%	8.9%	12.2%	10.1%	10.4%	18.5%	12.6%	13.0%	14.5%	14.8%
Weather & Environment	7.6%	6.8%	6.2%	3.0%	4.4%	-1.6%	9.9%	2.2%	3.9%	-2.5%	1.9%	12.0%	5.6%	4.6%	5.8%	7.1%
Industrial Measurements	20.5%	18.3%	22.0%	24.3%	27.5%	21.0%	25.3%	17.9%	22.8%	23.8%	20.7%	26.7%	21.8%	23.2%	25.0%	23.9%

Source: Evli Research

Valuation

Table 4: Implied value

Implied value	2023E	2024E	Weight
EV/EBITDA	44.5	46.5	30%
EV/EBIT	44.2	47.6	40%
P/E	43.3	43.4	10%
DCF	43.1	43.1	20%
Share value (EUR)	43.0	45.0	

Source: Evli Research

Several approaches to value Vaisala

We approach Vaisala's valuation utilizing EV-based multiples due to the company's strong net cash position. We construct justified multiples considering Vaisala's peer group and historical valuation as well as our DCF-model's intrinsic value. Vaisala has traditionally quite predictable cash flows which reduces the risks of wrongly assumed cash flows and provides quite decent proxy to value Vaisala.

Valuation approx. in line with historical levels

On average, Vaisala has traded approx. with EV/EBIT and P/E multiples of 20x and 25x. During 2019-21, Vaisala's multiples provided a 20-80% premium to that of the levels today. Meanwhile, we interpret those valuation levels as an outcome of zero interest rates as well as economic upswing. Now, the company is valued with 23-24E EV/EBIT and P/E of 21-17x and 28-23x, approx. in line with historical average, which also reflect more normalized macroeconomic economic environment.

Still a slight discount on peer median with 2024 estimates

Compared to its peer group, Vaisala trades with a small discount using our 2024 estimates. Vaisala's peer group is valued with 23-24E EV/EBIT and P/E of 19-18x and 24-23x. In our view, such discount is unjustified and Vaisala should trade at least in line with its peer group median, given its technological leadership, decent growth trajectory and expected profitability improvement.

HOLD with a TP of EUR 44.0

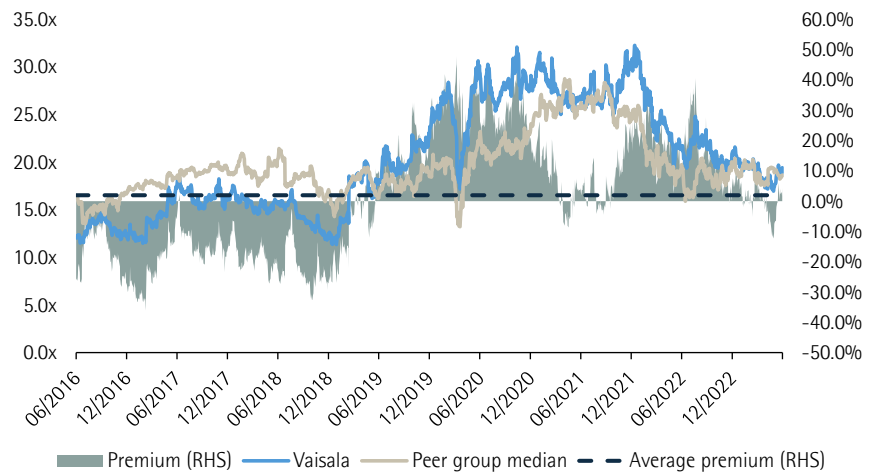
We made only minor adjustments to our 24E EBIT, which had no impact on the big picture nor investment case. Our 12-month target price value Vaisala with 23-24E EV/EBIT and P/E of 21-17x and 29-23x. Considering also our DCF's intrinsic value, our target price sets to EUR 44.0. With recent upward trend in Vaisala's share price, our TP provides no reasonable short-term upside and thus we downgrade our rating to HOLD (BUY). We however foresee favourable long-run trend in Vaisala's share value considering our expected EPS growth.

Historical valuation

On average Vaisala has traded above its peer group

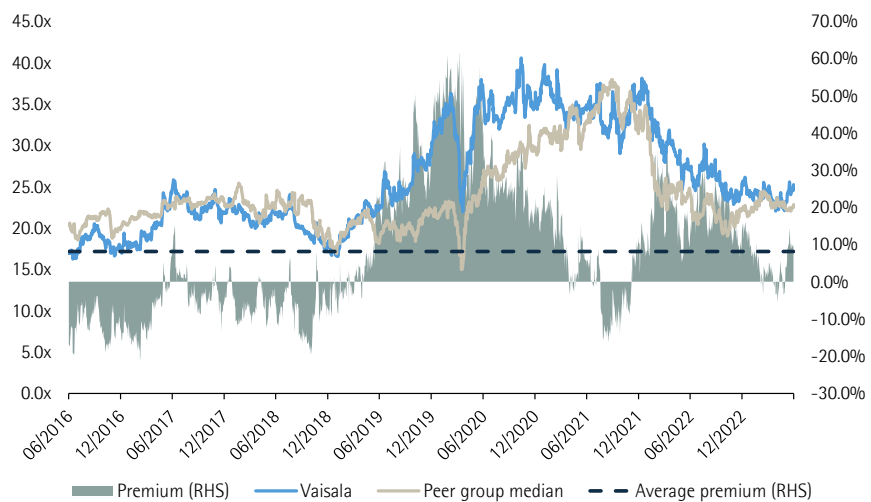
On average, Vaisala has traded 5-10% above its peer group median. From 2016 to 2019, the company was valued approximately in line with or even below its peers, while from 2019 onwards Vaisala has been valued with a premium to its peer group median. The premium increased notably during 2019-21, when the company's growth outlook improved, and overall market multiples expanded. With interest rate hikes and poorer economic conditions, Vaisala's as well as its peer group's multiples have decreased towards normalized levels. At the same time, Vaisala's premium has also reduced.

Figure 33: Historical 12-month forward EV/EBIT



Source: FactSet

Figure 34: Historical 12-month forward P/E



Source: FactSet

Peer group

Peer group consists of R&D focused measurement providers

Our peer group for Vaisala consists of R&D-focused electrical equipment and measurement solutions providers. Such providers usually engage both in hardware and software. Due to the lack of listed high-end industrial and weather and environment measurement competitors, peer group companies are not direct competitors for Vaisala. Peer group companies' offerings range from electronic measurement instruments to electronic control, and process instrumentation, as well as computerized measurement products. Our peer group is composed of the following listed companies:

- **Keysight Technologies** provides electronic measurement instruments, such as oscilloscopes, meters, and network analysers, and systems and related software and software design tools used to make electronic equipment. It provides product-related services and consulting.
- **National Instruments** supplies computer-based instrumentation hardware and software products for engineers and scientists. The company provides flexible application software and modular hardware that users combine with computers, networks, and the internet to create computer-based measurement and automation systems.
- **Spectris** manufactures, designs, and markets products for the electronic control and process instrumentation sectors. The company's products include digital indication and control products, industrial computer circuit boards, semiconductor-related devices, infrared equipment for temperature measurement, flying controls, gas analysis products, and analytical x-ray systems.
- **Oxford Instruments** produces advanced instrumentation equipment. The company's products are used for scientific research, chemical analysis, patient monitoring, semiconductor processing, and diagnostic imaging. Oxford conducts manufacturing operations in the United Kingdom and the United States.
- **Trimble** designs, develops, and manufactures land surveying instruments, navigations systems (GNSS and GPS), laser rangefinders, unmanned aerial vehicles, software processing tools, and other products and services for needs of architecture, building construction, civil engineering, geospatial, survey and mapping, agriculture, natural resources, utilities, transportation, and government.
- **Hexagon AB** develops and produces sensor, software, and autonomous solutions. The company provides metrology systems for fast and accurate measurements, sensors for capturing data from land and air as well as sensors for positioning via satellites, and related software solutions.
- **Sensirion Holding AG** manufactures digital microsensors and systems. The firm engages in the development, production, sales and servicing of sensor systems, modules, and components. Its products include gas and liquid flow sensors, differential pressure sensors, and environmental sensors for the measurement of humidity and temperature, volatile organic compounds, carbon dioxide, and particulate matter.
- **Halma Plc** is a holding company that develops, produces, and sales hazard and life protection solutions. The company provides products and applications, such as electronic instruments, detectors, and diagnostic equipment, for industrial, medical, and environmental needs.
- **FARO Technologies** provides solutions for manual and automated measurement and inspection in an industrial or manufacturing environment, solutions for as-built data capturing, and 3D visualization in building information modelling and construction information management applications.

Table 5: Peer group valuation

VAISALA PEER GROUP	MCAP MEUR	EV/Sales			EV/EBIT			P/E			Div. yield		
		23	24	25	23	24	25	23	24	25	23	24	25
Hexagon	29449	6.0x	5.6x	5.1x	22.0x	20.3x	18.7x	25.0x	22.9x	20.9x	1.2 %	1.3 %	1.4 %
Keysight Tech	26791	5.0x	4.7x	4.3x	17.6x	16.9x	15.5x	19.7x	18.7x	16.6x	0.0 %	0.0 %	0.0 %
Trimble	11541	3.8x	3.3x	2.9x	15.0x	13.4x	11.9x	19.2x	17.2x	14.7x	0.0 %	0.0 %	0.0 %
National Instruments	7105	4.4x	4.0x	3.7x	20.5x	18.3x	16.9x	22.9x	20.0x	17.8x	2.0 %	2.0 %	2.1 %
Spectris	4380	2.5x	2.3x	2.1x	15.4x	14.6x	12.9x	19.2x	17.6x	16.2x	2.3 %	2.4 %	2.7 %
FARO Technologies	266	0.8x	0.7x	0.5x		20.0x	6.3x		30.9x	7.9x	6.6 %	6.6 %	6.6 %
Oxford Instruments	1833	3.2x	2.9x	2.7x	18.7x	17.6x	16.4x	24.7x	23.7x	22.6x	0.8 %	0.8 %	0.9 %
Sensirion Holding	1424	3.7x	3.2x	2.7x	23.5x	21.2x	18.5x	30.5x	27.6x	23.9x	0.0 %	0.0 %	0.0 %
Halma	10705	5.0x	4.6x		24.1x	22.4x	21.5x	30.3x	28.3x	26.8x	0.9 %	0.9 %	1.0 %
Peer Group Average	9180	3.8x	3.5x	3.0x	19.6x	18.3x	15.4x	23.9x	23.0x	18.6x	1.5 %	1.6 %	1.8 %
Peer Group Median	4380	3.8x	3.3x	2.8x	19.6x	18.3x	16.4x	23.8x	22.9x	17.8x	0.9 %	0.9 %	1.2 %
Vaisala (Evli est.)	1573	2.7x	2.5x	2.4x	21.2x	17.3x	15.9x	28.1x	23.0x	21.1x	2.0 %	2.5 %	2.6 %
<i>Vaisala prem./disc. to peer median</i>		-27%	-25%	-16%	8%	-5%	-4%	18%	0%	19%	121%	162%	114%

Source: FactSet, Evli Research

Risks

We find the overall risk level of Vaisala quite modest with its stable market position and megatrends supporting the market growth. In addition, Vaisala has extensive experience in the industry and a wide customer base. We have specified risks concerning the investment case as follows:

- **Slowing economy:** Given the rise in inflation, potential interest rate hikes, and the global economy showing signs of slowdown, there is a possibility of temporary softness in the demand for Vaisala's solutions. Current macroeconomic indicators present a mixed picture, with the labor market performing well while inflation remains high. Central banks are tightening monetary policies, and GDP growth is decelerating in Western economies.
- **Geopolitical risks:** Following the onset of Russia's attack on Ukraine, Vaisala made the decision to conclude its business with customers in Russia and Belarus. Additionally, political tensions have escalated between China and Western countries. Vaisala currently has a factory in Shanghai, which was obtained through the acquisition of Leosphere. It is worth noting that the Shanghai factory has relatively modest production capacity, and Vaisala's customer base in China is not particularly extensive, but still reasonable.
- **Component availability:** Vaisala has been facing constraints in accessing vital components due to a shortage in the market. As a result, the company has been compelled to procure more costly components from spot markets. While market participants suggest that component availability is expected to improve, there is a possibility of continued bottlenecks in the supply chain, which could further prolong the component shortage and therefore have an impact on Vaisala's margin improvement.
- **Technology risk:** Vaisala's solutions are deeply rooted in research and scientific principles. Although there is a potential risk of decreased demand for Vaisala's technology or customer churn due to unsuccessful product launches and R&D challenges, we believe that the likelihood of this risk materializing is low.
- **High valuation:** Quality and technology companies typically command valuations higher than average market multiples. The combination of an elevated valuation and excessively high expectations can result in significant volatility in the share price, leading to a bias towards negative returns.

VALUATION RESULTS	BASE CASE DETAILS	VALUATION ASSUMPTIONS	ASSUMPTIONS FOR WACC
Current share price	43.50 PV of Free Cash Flow	573 Long-term growth, %	2.5 Risk-free interest rate, %
DCF share value	43.11 PV of Horizon value	1,020 WACC, %	7.4 Market risk premium, %
Share price potential, %	-0.9 Unconsolidated equity	0 Spread, %	0.0 Debt risk premium, %
Maximum value	43.1 Marketable securities	56 Minimum WACC, %	7.4 Equity beta coefficient
Minimum value	43.1 Debt - dividend	-89 Maximum WACC, %	7.4 Target debt ratio, %
Horizon value, %	64.0 Value of stock	1,559 Nr of shares, Mn	36.2 Effective tax rate, %

DCF valuation, EURm	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	Horizon
Net sales	514	564	605	637	663	686	706	728	749	772	791	811
<i>Sales growth, %</i>	<i>17.4</i>	<i>9.8</i>	<i>7.2</i>	<i>5.4</i>	<i>4.0</i>	<i>3.5</i>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	<i>2.5</i>	<i>2.5</i>
Operating income (EBIT)	63	73	88	95	97	96	99	102	101	104	107	109
<i>Operating income margin, %</i>	<i>12.2</i>	<i>13.0</i>	<i>14.5</i>	<i>14.8</i>	<i>14.6</i>	<i>14.0</i>	<i>14.0</i>	<i>14.0</i>	<i>13.5</i>	<i>13.5</i>	<i>13.5</i>	<i>13.5</i>
+ Depreciation+amort.	23	23	21	21	23	24	19	19	20	20	21	
EBITDA	85	96	109	116	119	120	118	121	121	125	128	
- Paid taxes	-15	-15	-18	-19	-19	-19	-20	-20	-20	-21	-21	
- Change in NWC	-38	3	-6	-5	-4	-3	-3	-3	-3	-3	-3	
<i>NWC / Sales, %</i>	<i>15.3</i>	<i>13.5</i>	<i>13.6</i>	<i>13.6</i>	<i>13.6</i>	<i>13.6</i>	<i>13.6</i>	<i>13.6</i>	<i>13.6</i>	<i>13.6</i>	<i>13.7</i>	
+ Change in other liabs	0	0	0	0	0	0	0	0	0	0	0	
- Operative CAPEX	-14	-18	-22	-23	-22	29	-16	-16	-16	-17	-6	
<i>opCAPEX / Sales, %</i>	<i>3.7</i>	<i>4.2</i>	<i>4.5</i>	<i>4.5</i>	<i>4.3</i>	<i>-3.4</i>	<i>3.1</i>	<i>3.1</i>	<i>3.1</i>	<i>3.1</i>	<i>1.7</i>	
- Acquisitions	-23	0	0	0	0	0	0	0	0	0	0	
+ Divestments	0	0	0	0	0	0	0	0	0	0	0	
- Other items	0	0	0	0	0	0	0	0	0	0	0	
= FCFF	-5	65	64	70	74	127	79	82	81	84	98	2,024
= Discounted FCFF		63	57	58	57	91	53	51	47	45	49	1,020
= DFCF min WACC		63	57	58	57	91	53	51	47	45	49	1,020
= DFCF max WACC		63	57	58	57	91	53	51	47	45	49	1,020

INTERIM FIGURES

EVLI ESTIMATES, EURm	2022Q1	2022Q2	2022Q3	2022Q4	2022	2023Q1	2023Q2E	2023Q3E	2023Q4E	2023E	2024E	2025E
Net sales	118.8	120.5	133.3	141.5	514.1	131.8	135.6	142.4	154.6	564.5	605.0	637.4
EBITDA	23.1	16.1	27.9	18.2	85.4	19.1	19.8	32.0	25.2	96.2	108.8	116.1
<i>EBITDA margin (%)</i>	<i>19.5</i>	<i>13.4</i>	<i>20.9</i>	<i>12.9</i>	<i>16.6</i>	<i>14.5</i>	<i>14.6</i>	<i>22.5</i>	<i>16.3</i>	<i>17.0</i>	<i>18.0</i>	<i>18.2</i>
EBIT	17.5	10.3	22.0	12.6	62.5	13.3	14.1	26.3	19.5	73.2	87.9	94.6
<i>EBIT margin (%)</i>	<i>14.8</i>	<i>8.6</i>	<i>16.5</i>	<i>8.9</i>	<i>12.2</i>	<i>10.1</i>	<i>10.4</i>	<i>18.5</i>	<i>12.6</i>	<i>13.0</i>	<i>14.5</i>	<i>14.8</i>
Net financial items	-0.2	-1.0	-1.3	-0.4	-2.9	-0.8	-0.7	-0.7	-0.6	-2.8	-2.6	-1.6
Pre-tax profit	17.3	9.3	20.7	12.2	59.6	12.5	13.4	25.6	18.9	70.4	85.4	93.0
Tax	-3.6	-3.0	-4.7	-3.2	-14.5	-2.9	-2.7	-5.1	-3.8	-14.5	-17.1	-18.6
<i>Tax rate (%)</i>	<i>20.8</i>	<i>32.2</i>	<i>22.6</i>	<i>26.7</i>	<i>24.4</i>	<i>23.2</i>	<i>20.0</i>	<i>20.0</i>	<i>20.0</i>	<i>20.6</i>	<i>20.0</i>	<i>20.0</i>
Net profit	13.7	6.3	16.1	9.0	45.1	9.6	10.7	20.5	15.1	55.9	68.3	74.4
EPS	0.38	0.18	0.45	0.25	1.25	0.27	0.30	0.57	0.42	1.55	1.89	2.06
EPS adjusted (diluted no. of shares)	0.39	0.18	0.45	0.25	1.26	0.27	0.30	0.57	0.42	1.55	1.89	2.06
Dividend per share	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00	0.85	1.08	1.13
SALES, EURm												
Weather and Environment	65.7	65.9	75.7	81.3	288.6	68.8	74.4	80.2	87.8	311.3	330.3	343.5
Industrial Measurements	53.1	54.7	57.6	60.2	225.5	63.0	61.2	62.2	66.8	253.2	274.7	293.9
Total	118.8	120.5	133.3	141.5	514.1	131.8	135.6	142.4	154.6	564.5	605.0	637.4
SALES GROWTH, Y/Y %												
<i>Weather and Environment</i>	<i>25.8</i>	<i>0.7</i>	<i>17.5</i>	<i>8.6</i>	<i>12.3</i>	<i>4.7</i>	<i>13.0</i>	<i>6.0</i>	<i>8.0</i>	<i>7.9</i>	<i>6.1</i>	<i>4.0</i>
<i>Industrial Measurements</i>	<i>33.6</i>	<i>23.9</i>	<i>22.2</i>	<i>20.2</i>	<i>24.6</i>	<i>18.6</i>	<i>12.0</i>	<i>8.0</i>	<i>11.0</i>	<i>12.3</i>	<i>8.5</i>	<i>7.0</i>
Total	29.2	10.1	19.5	13.3	17.4	10.9	12.5	6.9	9.3	9.8	7.2	5.4
EBIT, EURm												
Weather and Environment	2.9	-1.0	7.5	1.8	11.1	-1.7	1.5	9.7	4.9	14.3	19.3	24.4
Industrial Measurements	14.6	11.5	14.6	10.8	51.5	15.0	12.6	16.6	14.6	58.8	68.6	70.3
Other	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	17.5	10.3	22.0	12.6	62.5	13.3	14.1	26.3	19.5	73.2	87.9	94.6
EBIT margin, %												
<i>Weather and Environment</i>	<i>4.4</i>	<i>-1.6</i>	<i>9.9</i>	<i>2.2</i>	<i>3.9</i>	<i>-2.5</i>	<i>1.9</i>	<i>12.0</i>	<i>5.6</i>	<i>4.6</i>	<i>5.8</i>	<i>7.1</i>
<i>Industrial Measurements</i>	<i>27.5</i>	<i>21.0</i>	<i>25.3</i>	<i>17.9</i>	<i>22.8</i>	<i>23.8</i>	<i>20.7</i>	<i>26.7</i>	<i>21.8</i>	<i>23.2</i>	<i>25.0</i>	<i>23.9</i>
<i>Other</i>	<i>50,000.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>-12,500.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
Total	14.8	8.6	16.5	8.9	12.2	10.1	10.4	18.5	12.6	13.0	14.5	14.8

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INCOME STATEMENT, EURm	2018	2019	2020	2021	2022	2023E	2024E	2025E
Sales	348.8	403.6	379.5	437.9	514.1	564.5	605.0	637.4
<i>Sales growth (%)</i>	<i>4.9</i>	<i>15.7</i>	<i>-6.0</i>	<i>15.4</i>	<i>17.4</i>	<i>9.8</i>	<i>7.2</i>	<i>5.4</i>
EBITDA	51.1	64.7	65.9	71.7	85.4	96.2	108.8	116.1
<i>EBITDA margin (%)</i>	<i>14.7</i>	<i>16.0</i>	<i>17.4</i>	<i>16.4</i>	<i>16.6</i>	<i>17.0</i>	<i>18.0</i>	<i>18.2</i>
Depreciation	-12.1	-23.6	-21.1	-21.6	-22.8	-23.0	-20.9	-21.5
EBITA	39.0	41.1	44.8	50.1	62.5	73.2	87.9	94.6
Goodwill amortization / writedown	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	39.0	41.1	44.8	50.1	62.5	73.2	87.9	94.6
<i>EBIT margin (%)</i>	<i>11.2</i>	<i>10.2</i>	<i>11.8</i>	<i>11.4</i>	<i>12.2</i>	<i>13.0</i>	<i>14.5</i>	<i>14.8</i>
Reported EBIT	39.0	41.1	44.8	50.1	62.5	73.2	87.9	94.6
<i>EBIT margin (reported) (%)</i>	<i>11.2</i>	<i>10.2</i>	<i>11.8</i>	<i>11.4</i>	<i>12.2</i>	<i>13.0</i>	<i>14.5</i>	<i>14.8</i>
Net financials	-1.4	-1.0	-3.4	-2.1	-2.9	-2.8	-2.6	-1.6
Pre-tax profit	37.6	40.1	41.4	48.1	59.6	70.4	85.4	93.0
Taxes	-8.0	-6.5	-8.5	-8.8	-14.5	-14.5	-17.1	-18.6
Minority shares	0.0	0.0	0.0	-0.3	0.0	0.0	0.0	0.0
Net profit	29.6	33.5	32.9	39.0	45.1	55.9	68.3	74.4
Cash NRIs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-cash NRIs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET, EURm								
Assets								
Fixed assets	102	108	120	125	121	121	127	133
Goodwill	25	30	30	29	49	49	49	49
Right of use assets	12	12	13	11	12	13	14	15
Inventory	32	40	45	50	62	68	73	76
Receivables	93	105	93	107	131	130	139	147
Liquid funds	73	56	45	78	56	85	91	96
Total assets	347	361	352	408	440	474	501	525
Liabilities								
Shareholder's equity	183	198	205	230	251	281	318	354
Minority interest	0	0	0	1	0	0	0	0
Convertibles	0	0	0	0	0	0	0	0
Lease liabilities	12	11	9	8	11	13	14	15
Deferred taxes	9	8	8	7	4	4	4	4
Interest bearing debt	41	40	45	40	53	48	28	8
Non-interest bearing current liabilities	89	94	76	116	111	119	127	134
Other interest-free debt	9	7	8	7	7	7	7	7
Total liabilities	347	361	352	408	440	474	501	525
CASH FLOW, EURm								
+ EBITDA	51	65	66	72	85	96	109	116
- Net financial items	-1	-1	-3	-2	-3	-3	-3	-2
- Taxes	-9	-9	-8	-9	-14	-14	-17	-19
- Increase in Net Working Capital	-4	-16	-7	17	-38	3	-6	-5
+/- Other	11	2	-6	3	0	0	0	0
= Cash flow from operations	48	41	41	80	30	81	84	91
- Capex	-14	-38	-35	-22	-19	-24	-27	-29
- Acquisitions	-52	0	0	0	-23	0	0	0
+ Divestments	0	0	0	0	0	0	0	0
= Free cash flow	-18	3	6	58	-12	58	56	62
+/- New issues/buybacks	5	3	-4	8	0	0	0	0
- Paid dividend	-37	-21	-22	-22	-25	-26	-31	-39
+/- Other	31	-1	9	-12	15	-3	-19	-19
Change in cash	-19	-16	-11	33	-22	29	6	5

Electronic Equipment & Instruments/Finland, June 12, 2023
Company report

KEY FIGURES	2019	2020	2021	2022	2023E	2024E	2025E
M-cap	1,159	1,454	1,924	1,437	1,573	1,573	1,573
Net debt (excl. convertibles)	-5	9	-30	8	-24	-49	-73
Enterprise value	1,154	1,466	1,899	1,445	1,549	1,524	1,500
Sales	404	380	438	514	564	605	637
EBITDA	65	66	72	85	96	109	116
EBIT	41	45	50	63	73	88	95
Pre-tax	40	41	48	60	70	85	93
Earnings	34	33	39	45	56	68	74
Equity book value (excl. minorities)	198	205	230	251	281	318	354
Valuation multiples							
EV/sales	2.9	3.9	4.3	2.8	2.7	2.5	2.4
EV/EBITDA	17.8	22.2	26.5	16.9	16.1	14.0	12.9
EV/EBITA	28.1	32.7	37.9	23.1	21.2	17.3	15.9
EV/EBIT	28.1	32.7	37.9	23.1	21.2	17.3	15.9
EV/OCF	28.3	35.8	23.7	48.5	19.0	18.2	16.4
EV/FCFF	141.5	115.8	30.3	-308.4	23.7	23.8	21.5
P/FCFE	413.9	259.7	33.0	-116.8	27.3	28.0	25.2
P/E	34.6	44.2	49.4	31.6	28.1	23.0	21.1
P/B	5.8	7.1	8.4	5.7	5.6	4.9	4.4
Target EV/EBITDA	0.0	0.0	0.0	0.0	16.3	14.2	13.1
Target EV/EBIT	0.0	0.0	0.0	0.0	21.4	17.5	16.0
Target EV/FCF	0.0	0.0	0.0	0.0	27.2	27.4	24.3
Target P/B	0.0	0.0	0.0	0.0	5.7	5.0	4.5
Target P/E	0.0	0.0	0.0	0.0	28.5	23.3	21.4
Per share measures							
Number of shares	35,881	36,000	36,101	36,020	36,165	36,165	36,165
Number of shares (diluted)	35,881	36,000	36,101	36,020	36,165	36,165	36,165
EPS	0.93	0.91	1.08	1.25	1.55	1.89	2.06
Operating cash flow per share	1.14	1.14	2.22	0.83	2.25	2.31	2.53
Free cash flow per share	0.08	0.16	1.62	-0.34	1.59	1.55	1.73
Book value per share	5.53	5.69	6.36	6.96	7.76	8.80	9.78
Dividend per share	0.61	0.61	0.68	0.72	0.85	1.08	1.13
Dividend payout ratio, %	65.3	66.8	63.0	57.5	55.0	57.0	55.0
Dividend yield, %	1.9	1.5	1.3	1.8	2.0	2.5	2.6
FCF yield, %	0.2	0.4	3.0	-0.9	3.7	3.6	4.0
Efficiency measures							
ROE	17.6	16.3	17.9	18.8	21.1	22.8	22.2
ROCE	17.0	17.7	18.6	21.2	22.3	25.1	25.7
Financial ratios							
Inventories as % of sales	9.8	11.7	11.4	12.0	12.0	12.0	12.0
Receivables as % of sales	26.0	24.4	24.4	25.5	23.0	23.0	23.0
Non-interest bearing liabilities as % of sales	23.2	20.1	26.6	21.6	21.0	21.0	21.0
NWC/sales, %	12.7	15.2	8.6	15.3	13.5	13.6	13.6
Operative CAPEX/sales, %	9.4	9.3	4.9	3.7	4.2	4.5	4.5
CAPEX/sales (incl. acquisitions), %	9.4	9.3	4.9	-0.8	4.2	4.5	4.5
FCFF/EBITDA	0.1	0.2	0.9	-0.1	0.7	0.6	0.6
Net debt/EBITDA, book-weighted	-0.1	0.1	-0.4	0.1	-0.2	-0.5	-0.6
Debt/equity, market-weighted	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity ratio, book-weighted	54.8	58.4	56.5	57.0	59.2	63.5	67.4
Gearing, %	-2.5	4.4	-13.1	3.2	-8.5	-15.5	-20.6

COMPANY DESCRIPTION: Vaisala develops, manufactures, and markets products, projects, and services for weather, environmental and industrial measurements. Vaisala's strategy relies on R&D and focusing on technology leadership in its selected segments. Vaisala has two segments: Weather & Environment (W&E), and Industrial Measurement (IM). The W&E customers include meteorological institutes, airports, roads and railroad, defense, and energy industry. IM serves industrial customers in life science, power transmission, and targeted industrial applications offering a broad range of measurement instruments to ensure operational quality and productivity. Headquartered in Finland, Vaisala employs over 2,000 professionals worldwide.

INVESTMENT CASE: Vaisala should continue to profitably grow due to continued good growth in IM, with possible additional organic and non-organic opportunities in other niche areas supporting growth, and increased share of digital business of W&E. Vaisala benefits from its strong R&D based market leadership in both segments, with main profitability drivers being economies of scale and increasing share of IM sales. The healthy business and strong net cash position support ability to pay an increasing dividend.

OWNERSHIP STRUCTURE	SHARES	EURm	%
Skandinaviska Enskilda Banken Ab (publ) Helsinki Branch	3,776,358	164.272	10.4%
Nordea Nordic Small Cap Fund	1,863,224	81.050	5.2%
Weisell-Säätiö Sr	1,700,710	73.981	4.7%
Citibank Europe Plc	1,331,296	57.911	3.7%
Voipio Mikko	1,268,312	55.172	3.5%
Caspers Anja	969,496	42.173	2.7%
Voipio Raimo Hannes	920,053	40.022	2.5%
Ilmarinen Mutual Pension Insurance Company	889,275	38.683	2.5%
Ten largest	12,718,724	553.264	35%
Residual	23,446,276	1,019.913	65%
Total	36,165,000	1,573.178	100%

EARNINGS CALENDAR	
July 28, 2023	Q2 report
October 27, 2023	Q3 report
OTHER EVENTS	

COMPANY MISCELLANEOUS	
CEO: Kai Öistämö	Vanha Nurmijärventie 21, 01670 Vantaa
CFO: Kaarina Muurinen	Tel:
IR: Paula Liimatta	

DEFINITIONS

P/E	$\frac{\text{Price per share}}{\text{Earnings per share}}$	EPS	$\frac{\text{Profit before extraord. items and taxes} - \text{income taxes} + \text{minority interest}}{\text{Number of shares}}$
P/BV	$\frac{\text{Price per share}}{\text{Shareholders' equity} + \text{taxed provisions per share}}$	DPS	Dividend for the financial period per share
Market cap	Price per share * Number of shares	OCF (Operating cash flow)	EBITDA – Net financial items – Taxes – Increase in working capital – Cash NRIs ± Other adjustments
EV (Enterprise value)	Market cap + net debt + minority interest at market value – share of associated companies at market value	FCF (Free cash flow)	Operating cash flow – operative CAPEX – acquisitions + divestments
EV/Sales	$\frac{\text{Enterprise value}}{\text{Sales}}$	FCF yield, %	$\frac{\text{Free cash flow}}{\text{Market cap}}$
EV/EBITDA	$\frac{\text{Enterprise value}}{\text{Earnings before interest, tax, depreciation and amortization}}$	Operative CAPEX/sales	$\frac{\text{Capital expenditure} - \text{divestments} - \text{acquisitions}}{\text{Sales}}$
EV/EBIT	$\frac{\text{Enterprise value}}{\text{Operating profit}}$	Net working capital	Current assets – current liabilities
Net debt	Interest bearing debt – financial assets	Capital employed/Share	$\frac{\text{Total assets} - \text{non-interest bearing debt}}{\text{Number of shares}}$
Total assets	Balance sheet total	Gearing	$\frac{\text{Net debt}}{\text{Equity}}$
Div yield, %	$\frac{\text{Dividend per share}}{\text{Price per share}}$	Debt/Equity, %	$\frac{\text{Interest bearing debt}}{\text{Shareholders' equity} + \text{minority interest} + \text{taxed provisions}}$
Payout ratio, %	$\frac{\text{Total dividends}}{\text{Earnings before extraordinary items and taxes} - \text{income taxes} + \text{minority interest}}$	Equity ratio, %	$\frac{\text{Shareholders' equity} + \text{minority interest} + \text{taxed provisions}}{\text{Total assets} - \text{interest-free loans}}$
ROCE, %	$\frac{\text{Profit before extraordinary items} + \text{interest expenses} + \text{other financial costs}}{\text{Balance sheet total} - \text{non-interest bearing debt (average)}}$	CAGR, %	Cumulative annual growth rate = Average growth per year
ROE, %	$\frac{\text{Profit before extraordinary items and taxes} - \text{income taxes}}{\text{Shareholder's equity} + \text{minority interest} + \text{taxed provisions (average)}}$		

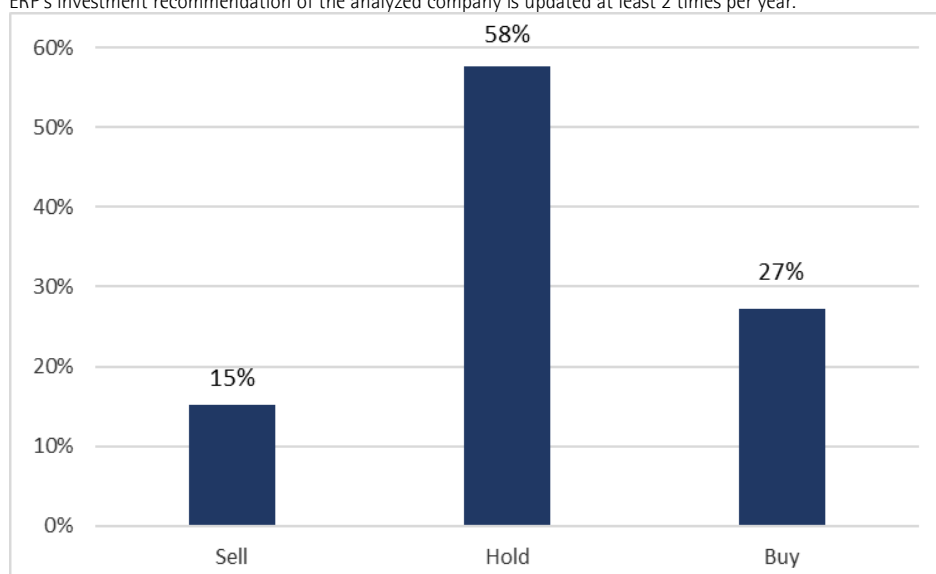
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Investment recommendations are defined as follows:

Target price compared to share price	Recommendation
< -10 %	SELL
-10 – (+10) %	HOLD
> 10 %	BUY

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Name(s) of the analyst(s): Heikura

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