

**Action Summary – 7 January 2025**

Analyst Theodore R. O'Neill – Business update – Reiterate buy and €12 PT

- **Solid acquisition announcement.** On October 21, 2024, MLVIR agreed to acquire Simumatik AB for EUR1.37MM (EUR0.45MM in cash and EUR0.92MM in stock). This transaction closed in December, and we expect it will open doors to additional business with multiple cross-selling opportunities. We believe it could significantly elevate the brand as a nearly one-stop shop for simulation and emulations software.
- **Simumatik adds Emulation to the legacy VR Simulation.** Specifically, it is an enhanced ability to develop new products through “digital twins.” The digital-twin approach can be applied to products, manufacturing processes and entire value chains. It does this not by “simulating” an environment, like the assembly line of a widget making factory, but by combining multiple types of models and process data to make a better approximation of a real object, or “digital twin.”
- **VIROO training win with EV batteries.** On December 12, 2024, MLVIR announced it joined forces with two Canadian companies and the Government of Canada to use the VIROO platform to train workers in how to manufacture and handle EV batteries. We believe this is an ideal application for VIROO.
- We expect to update our estimates once more information has been released about Simumatik.
- **Attractive Valuation.** Based on our discounted future earnings model, the value of all future earnings stands at €12/share.

1/6 price: EUR8.40	Market cap: EUR40 million	Multiple of book: 33x	Market Cap/2025 Sales: 6.1
Diluted shares outstanding: 4.6MM	Insider ownership: >80%	3-mo avg. daily trading volume: 400	Dividend/Yield: NA/NA

**GAAP estimates (EPS in EUR – Revenue in EUR thousands)**

Period	EPS	Revenue	Op Margin
1H22A	(€0.05)	€1,484	
2H22A	<u>€0.14</u>	<u>€1,735</u>	
FY22A	<u>€0.10</u>	<u>€3,219</u>	<u>0.9%</u>
1H23A	€0.04	€2,148	
2H23A	<u>(€0.04)</u>	<u>€2,404</u>	
FY23A	<u>€0.00</u>	<u>€4,552</u>	<u>3.4%</u>
1H24Prelim	€0.03	€2,034	
2H24E	<u>€0.06</u>	<u>€2,300</u>	
FY24E	<u>€0.09</u>	<u>€4,334</u>	<u>14.8%</u>
1H25E	€0.05	€2,450	
2H25E	<u>€0.07</u>	<u>€2,700</u>	
FY25E	<u>€0.12</u>	<u>€5,150</u>	<u>16.6%</u>

Numbers may not total due to rounding. See the full model at the end of this report.

**Cash balance (in EUR thousands)**

• 2022A	• €172
• 2023A	• €301
• 2024E	• €259
• 2025E	• €1,089

**Debt (in EUR thousands)**

• 2022A	• €1,197
• 2023A	• €957
• 2024E	• €1,000
• 2025E	• €1,000

**Risks/Valuation**

- Risks: emerging technology, potentially competitive markets, regulatory risk, technological risk, foreign currency exchange risk
- Our €12 price target is derived from our discounted future earnings model.

**Company description:** Headquartered in Bilbao with offices in Toronto and Orlando, Florida, Virtualware is considered one of the world's leading experts in 3D-driven enterprise software as a service. The company delivers a professional and practical approach to real-time 3D by providing companies and institutions with the tools and support they need to grow, strengthen, and advance in their adoption of this technology.

Figure 1 – Virtualware – One-year trading snapshot USD



Source: FactSet

## Acquisition update

On October 21, 2024, MLVIR agreed to acquire Simumatik AB for EUR1.37MM (EUR0.45MM in cash and EUR0.92MM in stock). This transaction closed in December, and we expect it will open doors to additional business with multiple cross-selling opportunities. We believe it could significantly elevate the brand as a nearly one-stop shop for simulation and emulations software.

Simumatik adds additional dimension to MLVIRs legacy business (no pun intended). The simulation legacy MLVIR business virtual reality (VR) is used in many ways by its customers, such as:

- Training and Simulation: Lifelike VR simulators are used to enhance workforce skills and performance.
- Engineering and Prototyping: The platform accelerates Product Lifecycle Management by helping decentralized teams collaborate more efficiently.
- Marketing and Sales: VIROO aids in expediting sales cycles by delivering compelling, immersive product experiences.
- Research and Innovation: The company provides customizable VR labs for groundbreaking research.
- Education and Learning: VIROO also facilitates virtual education, both in-person and remotely.

Simumatik brings Emulation to MLVIRs capabilities. Specifically, it is an enhanced ability to develop new products through “digital twins” (see Figure 2). The digital-twin approach can be applied to products, manufacturing processes and entire value chains. It does this not by “simulating” an environment, like the assembly line of a widget making factory, but by combining multiple types of models and process data to make a better approximation of a real object, or “digital twin.”

For example, to gain and retain customers, products increasingly need performance improvements and features that may require the integration of complex and novel technologies. A simulation may show how a product works, but a twin can demonstrate how a product will perform under various conditions. Consumers expect next-generation products to be more sustainable, creating new constraints around material and component selection, repairability, and end-of-life considerations. To meet the challenge, companies are seeking to improve their digital-product-development capabilities, seeing these technologies as a way to speed up design and engineering cycles while cutting costs through R&D process optimization. This is why the Simumatik acquisition is important and, at the same time, offers tremendous cross selling opportunities.

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*Figure 2 – Virtualware – Digital Twins*

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**Digital twins are already changing the way products are designed, made, and improved.**

**Digital-twin use-case examples**



**Engineering**

- Digital configurator for early phase development
- Hardware-free prototyping and virtual test drives
- Metaverse for engineers



**Production**

- Supply chain resilience via enhanced sourcing transparency
- Quality management and waste reduction



**In service**

- Closed-loop optimization
- Improved next-generation products

Source: McKinsey & Company

**In addition, here are ways to think about Simulation versus Emulation and Real Device Testing**

- **Purpose**

Emulation is used to replace a device for actual use, while simulation is used for research and testing hypotheses.

- **Hardware and software**

Emulators mimic both hardware and software features, while simulators only mimic environment features that can be configured using software.

- **Testing**

Simulation is better for early-stage testing, while emulation is better for late-stage testing.

- **Implementation**

Simulators can be implemented using high-level programming languages, while emulators are typically written using assembly language.

- **Real-device testing**

Simulators are not a substitute for real-device testing because they may not perfectly emulate the hardware and software of a production environment.

**VIROO training win with EV batteries.** On December 12, 2024, MLVIR announced it joined forces with two Canadian companies and the Government of Canada to use the VIROO platform to train workers in how to manufacture and handle EV batteries. We believe this is an ideal application for VIROO. Making EV batteries is more art than science and training and involves potentially dangerous chemical reactions. Training to precisely repeat steps in the same order and the same cadence is key. VIROO training has shown itself valuable in other risky environments like nuclear power.

## Valuation and Price Target

### Valuation Methodology

We believe MLVIR is undervalued, and we support that belief with two valuation techniques. To determine our price target, we use a discounted future earnings model, which we then compare its valuation relative to peers. The following valuation techniques are being used:

- 1) The discounted value of all future earnings was used for our price target (see Figure 3)
- 2) Valuation relative to peers (see Figure 4)

### Discounted Future Earnings – Basis for Price Target

Our 12-month price target of €12 is based on a discounted earnings model. For valuation purposes, we sum up all future earnings and discount them by 8%. We assume the company grows rapidly until 2029 before growth eventually slows to GDP. Our valuation model is shown in Figure 3 below. Note, this model understates future new products and growth through acquisitions and probably understates the tax benefits, but offsetting that, the earnings never have a down year. The implied share price is €11.84, which we round to €12.

Figure 3 - Virtualware - Price Target Calculation

Implied Value of Future Discounted Earnings: € 11.84		
Year 0 is 2024		
Year	Forecast EPS	Discounted EPS
0	€ 0.09	€ 0.09
1	€ 0.12	€ 0.11
2	€ 0.15	€ 0.13
3	€ 0.20	€ 0.16
4	€ 0.50	€ 0.37
5	€ 0.70	€ 0.48
Terminal Value		€ 10.51

Source: Litchfield Hills Research LLC

### Valuation Relative to Peers

Figure 4 is a summary of our MLVIR peer comparison. The average Market Cap/Sales for 2025 is ~7.47x and ranges from a low of 0.18x to a high of 47.75x and we would argue the shares should trade at the high end of the range. At our € 12.00 price target, its 2025 market cap to sales would be 13.4x but still well below the lead. All of this broadly confirms our view that, along with our discounted earnings model, the shares are undervalued.

Figure 4 – Virtualware – Valuation of Peers

FactSet Ticker	Company Name	Closing Price	Market Cap \$MM	EV \$MM	2025 Consensus Multiples (except book)				
					PE	EV /Sales	Price to Book	Market Cap / Sales	EV / EBITDA
NVDA-US	Nvidia Corporation	\$144.47	3,538,070	3,550,838	33.76	18.66	34.99	18.53	31.18
TCEHY-US	Tencent Holdings Ltd (Adr)	\$53.25	491,214	506,768	14.11	4.78	3.10	4.58	12.95
SIEGY-US	Siemens AG (Adr 2:1)	\$96.19	153,742	201,156	17.07	2.49	2.77	1.92	13.87
ANET-US	Arista Networks, Inc.	\$115.20	145,124	140,234	48.52	17.43	10.19	18.05	43.32
SNPS-US	Synopsys Inc	\$493.71	76,317	73,656	33.57	11.04	8.80	11.43	37.21
CSU-CA	Constellation Software Inc. (CA Listing	\$3,088.20	65,444	68,350	31.13	5.53	28.14	5.30	21.02
ADSK-US	Autodesk Inc	\$294.06	63,223	64,676	31.66	9.32	29.28	9.12	29.51
DASTY-US	Dassault Systemes SA (Adr)	\$33.46	44,784	43,096	24.52	6.51	7.42	6.72	21.45
ANSS-US	ANSYS, Inc.	\$338.38	29,591	29,311	30.25	10.63	5.85	10.75	
9613-JP	NTT DATA GROUP CORPORATION	\$19.27	27,033	49,107	22.07	1.50	1.98	0.85	9.46
TEF-US	Telefonica (Adr)	\$4.04	23,173	68,590	12.29	1.56	1.39	0.53	4.87
PTC-US	PTC Inc	\$184.54	22,210	23,946	31.10	9.40	6.75	8.72	28.05
BSY-US	Bentley Systems, Incorporated	\$47.07	13,684	17,099	39.13	11.34	17.50	9.43	33.44
U-US	Unity Software, Inc.	\$24.09	9,704	10,802	33.43	6.06	4.94	5.57	25.57
GLOB-US	Globant SA	\$219.28	9,494	9,904	30.02	3.58	5.93	3.45	19.22
PEGA-US	Pegasystems Inc	\$94.50	8,104	7,971	28.96	5.07	11.58	5.08	33.08
OTEX-CA	Open Text Corp. (CA Listing)	\$28.59	7,602	13,339	8.05	2.53	1.92	1.47	
CCCS-US	CCC Intelligent Solutions Holdings Inc.	\$11.55	7,225	8,008	28.68	7.47	3.85	6.93	31.50
AMTM-US	Amentum Holdings, Inc.	\$22.57	5,491	10,070	10.73	0.72	1.40	0.39	
SYM-US	Symbotic Inc.	\$25.64	2,727	1,936	96.93	0.89	13.55	6.83	15.75
MTTR-US	Matterport, Inc.	\$4.86	1,569	1,196		6.46	1.58	8.68	85.98
2498-TW	HTC Corporation (TW Listing)	\$1.45	1,210	896	75.69	3.01	1.87	3.98	
CXM-US	Sprinklr, Inc.	\$8.78	1,212	1,873	23.29	2.43	5.02	2.71	53.99
VUZI-US	Vuzix Corporation	\$4.39	323	284		40.98	1.67	47.75	
IMMR-US	Immersion Corp.	\$8.97	290	673	4.81		1.22	0.18	
KOPN-US	Kopin Corp.	\$1.47	233	148		2.71	7.72	4.46	
SNX-GB	Synectics Plc	\$4.53	81	70	14.85	0.89	0.45	1.02	
VRAR-US	Glimpse Group, Inc.	\$2.79	57	50		3.95	1.61	4.66	
	<b>AVERAGE</b>				<u>30.19</u>	<u>7.29</u>	<u>7.95</u>	<u>7.47</u>	<u>29.02</u>
MLVIR-FR	Virtualware 2007 SA	\$8.40	39	39	46.67	6.04	32.71	6.08	
<b>MLVIR Discount to peers:</b>					<b>55%</b>	<b>-17%</b>	<b>312%</b>	<b>-19%</b>	<b>NA</b>

Source: Litchfield Hills Research LLC and FactSet

## Financial Projections and Guidance

The company does not provide guidance. We have sought to make our estimates conservative, but it is hard to model a rapidly changing market as the company continues to execute its expansion plans into new markets and with new customers. We assume there will be some share growth though share compensation, and we expect there will be demand for working capital as the company grows and we have factored that into our balance sheet and cash flow calculations.

Figure 5 – Virtualware – Income Statement EUR €

	H1A	H2A	FY2022A	H1A	H2A	FY2023A	H1P	H2E	FY2024E	H1E	H2E	FY2025E
Business Total Revenue	\$1,484,378	\$1,734,997	\$3,219,375	\$2,148,018	\$2,403,990	\$4,552,008	\$2,034,124	\$2,300,000	\$4,334,124	\$2,450,000	\$2,700,000	\$5,150,000
Changes in inventories of finished goods and WIP	(28,243)	(151,089)	(179,332)	181,698	(175,300)	6,398	69,807	5,000	74,807	10,000	10,000	20,000
Work carried out by the company for its assets	313,984	324,922	638,906	241,174	286,434	527,608	269,544	225,000	494,544	275,000	275,000	550,000
Costs of Goods Sold	(422,299)	(346,243)	(768,542)	(452,601)	(731,524)	(1,184,125)	(340,435)	(460,000)	(800,435)	(588,000)	(648,000)	(1,236,000)
<b>Gross Profit</b>	<b>1,347,820</b>	<b>1,562,587</b>	<b>2,910,407</b>	<b>2,118,289</b>	<b>1,783,600</b>	<b>3,901,889</b>	<b>2,033,040</b>	<b>2,070,000</b>	<b>4,103,040</b>	<b>2,147,000</b>	<b>2,337,000</b>	<b>4,484,000</b>
<i>Unadjusted Gross Profit Margin %</i>	<i>75%</i>	<i>76%</i>	<i>75%</i>	<i>89%</i>	<i>66%</i>	<i>77%</i>	<i>88%</i>	<i>82%</i>	<i>85%</i>	<i>79%</i>	<i>79%</i>	<i>79%</i>
Other Operating Revenues	153,202	388,635	541,837	181,220	234,038	415,258	85,069	310,000	395,069	380,000	420,000	800,000
Personnel Expenses	(1,164,799)	(1,281,117)	(2,445,916)	(1,445,304)	(1,616,359)	(3,061,663)	(1,260,282)	(1,350,000)	(2,610,282)	(1,500,000)	(1,650,000)	(3,150,000)
Other Operating Expenses	(375,240)	(344,912)	(720,152)	(508,479)	(365,630)	(874,109)	(577,514)	(500,000)	(1,077,514)	(500,000)	(500,000)	(1,000,000)
Fixed Assets Depreciation and Amortization	(144,173)	(155,027)	(299,200)	(126,852)	(144,754)	(271,606)	(116,123)	(116,123)	(232,246)	(140,000)	(140,000)	(280,000)
Grants to non-financial assets and others allocation	59,533	0	59,533	21,605	21,605	43,210	70,905	0	70,905	0	0	0
Impairment gains/losses on disposal of NCA	0	0	0	(19,079)	(22,746)	(41,825)	(19,073)	0	(19,073)	0	0	0
Other Results	0	(18,324)	(18,324)	0	42,492	42,492	12,395	0	12,395	0	0	0
<b>Operating Income</b>	<b>(123,657)</b>	<b>151,842</b>	<b>28,185</b>	<b>221,400</b>	<b>(67,754)</b>	<b>153,646</b>	<b>228,417</b>	<b>413,877</b>	<b>642,294</b>	<b>387,000</b>	<b>467,000</b>	<b>854,000</b>
<i>Operating Margin %</i>	<i>-8.3%</i>	<i>8.8%</i>	<i>0.9%</i>	<i>10.3%</i>	<i>-2.8%</i>	<i>3.4%</i>	<i>11.2%</i>	<i>18.0%</i>	<i>14.8%</i>	<i>15.8%</i>	<i>17.3%</i>	<i>16.6%</i>
Financial revenues/(expenses)	(83,082)	(32,916)	(115,998)	(24,386)	(75,237)	(99,623)	(29,252)	(75,000)	(104,252)	(75,000)	(75,000)	(150,000)
<b>Income Before Tax</b>	<b>(206,739)</b>	<b>118,926</b>	<b>(87,813)</b>	<b>197,014</b>	<b>(142,991)</b>	<b>54,023</b>	<b>199,165</b>	<b>338,877</b>	<b>538,042</b>	<b>312,000</b>	<b>392,000</b>	<b>704,000</b>
Income Tax	0	525,933	525,933	0	(34,828)	(34,828)	(39,833)	(67,775)	(107,608)	(62,400)	(78,400)	(140,800)
<b>Net Income</b>	<b>(\$206,739)</b>	<b>\$644,859</b>	<b>\$438,120</b>	<b>\$197,014</b>	<b>(\$177,818)</b>	<b>\$19,196</b>	<b>\$159,332</b>	<b>\$271,102</b>	<b>\$430,434</b>	<b>\$249,600</b>	<b>\$313,600</b>	<b>\$563,200</b>
<i>Net Margin %</i>	<i>-13.93%</i>	<i>37.17%</i>	<i>13.61%</i>	<i>9.17%</i>	<i>-7.40%</i>	<i>0.42%</i>	<i>7.83%</i>	<i>11.79%</i>	<i>9.93%</i>	<i>10.19%</i>	<i>11.61%</i>	<i>10.94%</i>
EPS	(€ 0.05)	€ 0.14	€ 0.10	€ 0.04	€ (0.04)	€ 0.00	€ 0.03	€ 0.06	€ 0.09	€ 0.05	€ 0.07	€ 0.12
Number of shares	4,542,000	4,542,000	4,542,000	4,542,000	4,542,000	4,542,000	4,600,000	4,700,000	4,700,000	4,800,000	4,800,000	4,800,000

Source: Company reports and Litchfield Hills Research LLC

Figure 6 – Virtualware – Balance Sheet EUR €

	<b>FY2025E</b>	<b>FY2024E</b>	<b>FY2023A</b>	<b>FY2022A</b>
Cash and Equivalents	1,089,217	259,217	301,082	172,164
Accruals	2,000	2,000	5,586	1,815
Short-term financial investments	400,000	400,000	310,293	398,726
Short-term investments in group companies and associat	-	-	-	-
Account Receivables and others	1,400,000	2,500,000	2,985,406	1,203,148
Inventories	150,000	150,000	99,414	136,780
<b>Current Assets</b>	<b>3,041,217</b>	<b>3,311,217</b>	<b>3,701,782</b>	<b>1,912,633</b>
Deferred tax assets	870,000	2,000,000	2,088,204	2,120,730
Long-term financial investments	60,000	60,000	38,623	64,367
Long-term investments in group companies and associat	108,575	108,575	108,575	35,297
Property, plant and equipment	170,208	170,208	170,208	92,621
Intangible Assets	2,000,000	1,600,000	1,745,986	1,410,187
<b>Non-Current Assets</b>	<b>3,208,783</b>	<b>3,938,783</b>	<b>4,151,596</b>	<b>3,723,202</b>
<b>Total Assets</b>	<b>6,250,000</b>	<b>7,250,000</b>	<b>7,853,377</b>	<b>5,635,835</b>
Short Term Accruals	700,000	1,000,000	1,220,851	508,181
Account Payables and others	1,600,000	1,400,000	1,159,099	1,392,269
Short Term Debt	1,000,000	2,000,000	1,149,605	1,040,207
<b>Current Liabilities</b>	<b>3,300,000</b>	<b>4,400,000</b>	<b>3,529,556</b>	<b>2,940,657</b>
Long Term Accruals	650,000	650,000	1,799,512	664,201
Deferred tax liabilities	-	-	8,639	8,639
Long Term Debt	1,000,000	1,000,000	957,324	1,196,719
<b>Non Current Liabilities</b>	<b>1,650,000</b>	<b>1,650,000</b>	<b>2,765,475</b>	<b>1,869,559</b>
Share Capital	1,300,000	1,200,000	1,144,840	799,625
Capital	158,970	158,970	158,970	158,970
Reserves and Retained earnings	1,300,000	1,200,000	1,174,082	640,655
Grants, donations and legacies received	-	-	342,980	35,227
External partners	-	-	70,527	(9,233)
Dividend Distributed -				
<b>Equity</b>	<b>1,300,000</b>	<b>1,200,000</b>	<b>1,558,347</b>	<b>825,619</b>
<b>Total Equity And Liabilities</b>	<b>6,250,000</b>	<b>7,250,000</b>	<b>7,853,377</b>	<b>5,635,835</b>

Source: Company reports and Litchfield Hills Research LLC

*Figure 7 – Virtualware – Cash Flow EUR €*

	<u>FY2025E</u>	<u>FY2024E</u>	<u>FY2023A</u>	<u>FY2022A</u>
Net income/(loss)	704,000	538,042	19,196	438,120
Accruals	-	3,586	(3,771)	763
Short-term financial investments	-	(89,707)	88,433	(115,292)
Short-term investments in group companies and associates	-	-	-	21,610
Account Receivables and others	1,100,000	485,406	(1,782,258)	1,553,878
Inventories	-	(50,586)	37,366	73,461
Deferred tax assets	(88,204)	(1,130,000)	1,250,730	(528,096)
Long-term financial investments	-	(21,377)	25,744	66,500
Long-term investments in group companies and associates	-	-	(73,278)	(35,297)
Property, plant and equipment	-	-	(77,587)	(3,607)
Intangible Assets	(400,000)	145,986	(335,799)	(420,953)
Short Term Accruals	(300,000)	(220,851)	712,670	508,181
Account Payables and others	200,000	240,901	(233,170)	(1,458,142)
Short Term Debt	(1,000,000)	850,395	109,398	(462,411)
Long Term Accruals	-	(1,149,512)	1,135,311	664,201
Deferred tax liabilities	-	(8,639)	(0)	(8,006)
Long Term Debt	-	42,676	(239,395)	(523,985)
Capital	-	-	-	-
Reserves	(604,000)	(512,124)	514,232	(47,897)
Grants, donations and legacies received	-	(342,980)	307,753	(32,027)
External partners	-	(70,527)	79,760	(20,981)
Adjustment	1,218,204	1,247,446	(1,406,416)	-
<b>Total Cash Flow</b>	<b>830,000</b>	<b>(41,864)</b>	<b>128,918</b>	<b>(329,980)</b>

Source: Litchfield Hills Research LLC

**Disclosures:**

**Analyst Certification**

We, the Litchfield Hills Research Department, hereby certify that the views expressed in this research report accurately reflect our personal views about the subject company and the underlying securities.

**FINRA Compliant Research Report**

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