

MedApp S.A.

Price target: PLN 1.20

Initiating Coverage

Rating: n.a.

MedApp (MDA) is a Polish provider of digital health solutions, which has grown revenues at a CAGR of 597.7% since 2018 and since 2019 has also been profitable. The company's two main CE-certified Software as a Medical Device (SaMD) products are CarnaLife System, a cloud-based software platform, which allows to collect and analyze data from various third-party mobile telehealth devices (e.g. wearables, handheld devices, body sensors) remotely; and CarnaLife Holo, an augmented/virtual reality solution that allows to improve preoperative diagnostic work-up before surgical procedures. Through its partners such as Microsoft and Insight Direct, MedApp targets its solutions at clinicians, medical facilities and academic institutions and has already gained clients in Poland, Austria, Germany and the US. With help of the experienced US-based CRO Parexel International, the company plans to file a 510(k) FDA registration of CarnaLife Holo next year after completion of the planned capital raise worth PLN 29.5m. Based on a DCF, we have valued MedApp's shares at PLN 1.20, which implies an upside of 20.5%. The company's current valuation implies an EV/Sales 2023E of 6.5x vs. 8.6x for its main peer Teladoc Health Inc. While we have received positive feedback from MedApp's international partners on its technology, we consider the shares, which still cannot be traded (c. 84% of all), a risk.

In the last years, MedApp has certified CarnaLife System and CarnaLife Holo in Europe and signed contracts with medical distributors in Poland, France and Luxemburg, Brazil and the UK. Its solutions are already used by >30 medical facilities in Poland and abroad. Also, the company has established a wide network of co-operation partners e.g. Microsoft, Google, Parexel International, GE Healthcare and Johnson & Johnson. For 9M/21, MedApp reported sales of PLN 9.2m (+659.4% y-o-y) and net profit of PLN 3.2m (9M/20: PLN -1.1m). It is currently the fastest-growing digital health company on the Warsaw Stock Exchange and one of the few ones which are profitable.

Given a rapidly growing Digital Health market (CAGR 20-28E = 15.1%), we believe that our sales forecasts for MedApp of PLN 12.7m (+110.3% y-o-y) in 2021E and PLN 18.5m (+45.9%) in 2022E are conservative. We expect that over the same period MedApp will generate a net profit of PLN 3.3m (+71%) and PLN 1.4m, despite US expansion.

in PLNm	2019	2020	2021E	2022E	2023E	2024E
Net sales	3.23	6.02	12.67	18.48	38.17	58.87
EBITDA	1.27	2.93	5.44	3.54	10.70	20.10
EBIT	0.55	2.12	3.59	1.50	8.47	17.64
Net income	0.67	1.92	3.28	1.39	8.01	16.74
EPS	0.00	0.01	0.01	0.00	0.03	0.06
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Dividend yield	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RoE	6.13%	10.41%	14.76%	3.23%	12.12%	21.33%
Net gearing	-0.42%	-3.79%	22.86%	-53.53%	-44.75%	-45.75%
EV/Sales	76.54x	40.98x	19.49x	13.36x	6.47x	4.19x
EV/EBITDA	194.76x	84.16x	45.38x	69.81x	23.07x	12.29x
P/E	367.18x	129.05x	75.45x	207.03x	35.88x	17.18x

Company profile

MedApp S.A. is a digital health company, which offers scalable software solutions that support the work of medical professionals in various areas. Apart from Poland, its shares can also be traded on the Frankfurt Stock Exchange.

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Website	www.medapp.pl
Sector	Digital Health
Country	Poland
ISIN	PLYLWHT00012
Reuters	MDAP.WA
Bloomberg	MDA.PW

Share information

Last price	1.00
Number of shares (m)	247.16
Market cap. (PLNm)	247.16
Market cap. (EURm)	53.25
52-weeks range	PLN 1.44 / PLN 0.84
Average volume	72,848

Performance

4-weeks	6.72%
13-weeks	3.31%
26-weeks	-0.40%
52-weeks	0.00%
YTD	0.50%

Shareholder structure

Amida Capital Sp. z.o.o S.K.A	38.56%
Omegia S.A.	8.87%
Blue Ring Sp. z.o.o	7.40%
Free float	45.17%

Financial calendar

Annual Report 2021 (exp.)	March 22, 2022
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Investment Case

- MedApp is a Polish digital health company, which is already profitable and generates revenues on international markets. Its two main Software as a Medical Device (SaMD) products that are already registered for sale in Europe – CarnaLife System and CarnaLife Holo – are being used at >30 medical facilities in Poland, Austria and Germany, and verified during the medical procedures c. 200 times (CarnaLife Holo). Together with Parexel International, MedApp plans to file for 510(k) FDA approval of CarnaLife Holo in H2/22E and start US sales in 2023E. Regarding international sales, the company works together with international distributors and its partner Microsoft (MSFT), which allows MDA to present its solutions during MSFT's international conferences and trade shows. Other international partners, with whom MedApp conducts research projects in certain areas, include GE Healthcare, Google, Johnson & Johnson, and Medcover.
- As a software company, which does not produce physical devices, MedApp has a scalable business model with a high operating leverage. Its solutions can work with various third-party mobile equipment e.g. wearables, sensors, and handheld medical devices. They are monetized either through a one-off fee or monthly subscription. While the sales split is currently c. 80%:20%, MDA wants to increase the share of recurring fees in the future as it is better for its cash flow.
- According to Grand View Research, the global market for Digital Health is expected to grow from USD 96.5bn in 2020 at a CAGR of 15.1% to USD 295.4bn by 2028E. As reasons, the consultancy mentions among others a high prevalence of chronic diseases, which puts significant economic burden on hospitals and clinics; a growing trend of preventive healthcare and need for remote patient monitoring services. While the US, where according to McKinsey the adoption of telehealth services by consumers has skyrocketed from 11.0% in 2019 to 46.0% in 2020 due to the coronavirus pandemic, has the largest 38.8% share in the market, Asia-Pacific is expected to be the fastest-growing region.
- In 2018-2020, MedApp increased its revenues at a CAGR of 597.7% to PLN 6m and its net income from PLN -2.4m to PLN 1.9m. For 9M/21, the company reported sales of PLN 9.2m (+659.4% y-o-y), EBIT of PLN 3.4m (9M/20: PLN -1.1m; 37.1% margin) and net income of PLN 3.2m (PLN -1.1m; 35.4% margin). Due to existing distribution partnerships in Poland, UK, Brazil and France/Luxemburg and a buoyant digital health market, whose growth has been accelerated by the coronavirus pandemic, we expect that in 2021E the company's sales will reach PLN 12.7m (+110.3%), EBIT PLN 3.6m (+69.7%) and net income PLN 3.3m (+71%). By 2029E, we expect a revenue CAGR of 48.6% and target EBIT margin of c. 41%, which given the scalable business model and global potential of digital health are conservative assumptions in our view.
- We initiate coverage of MedApp with a 12-months DCF-based PT of PLN 1.20. We like the fact that MedApp already generates revenues and profits not just in Poland but also internationally. As negatives, we regard the company's low free float structure and the fact that only c. 16% of all shares outstanding can be traded. We emphasize that MedApp expects to conduct the planned PLN 29.5m SPO in 2022E.

SWOT Analysis

Strengths

- MedApp's software solutions help medical professionals to collect and analyze patient' data and conduct surgeries more effectively; areas of application include e.g. cardiology, angioplasties, dietetics, chronic illnesses and elderly care
- MedApp is a software company, not a hardware manufacturer; instead, its software is able to work together with various devices of third-party manufacturers
- MDA already generates revenues and is profitable on EBIT and net income level. Clients include e.g. the largest diagnostic chain in PL Diagnostika, NEO Hospital and three hospitals in the German cities of Neuss, Düsseldorf and Cologne
- Cooperation with renowned research facilities (Jagiellonian University, AGH, Medical University in Warsaw) and well-known international companies such as Microsoft, GE, Parexel and Johnson & Johnson. Since January 2021, MedApp has been Silver Partner in Microsoft Mixed Reality (MRPP) and as such has access to extensive tools and support for Microsoft HoloLens (is used in CarnaLife Holo) and Azure cloud (MDA stores all its software and client' data there)
- Experienced team with complementary skills ranging from sales & marketing, IT, development of telehealth devices and healthcare
- We believe that key people (own c. 14m of MDA's shares) will have a lock-up of 12 months and the main shareholders of 24 months after the planned SPO
- MDA's shares can also be traded on the Frankfurt Stock Exchange

Opportunities

- CE certificate allows MDA to sell in Europe, but also makes the registration in the Middle East and Asia easy
- The planned FDA approval in H2/22E will allow MDA to sell its solutions in the largest healthcare market worldwide, the US
- Acquisitions in the area of Artificial Intelligence, 3D modelling and Big Data analysis, on which MDA wants to spend c. PLN 5m
- Introduction of reimbursement schemes for telehealth solutions such as the one in Germany and France in more countries
- Introduction of new software products such as HoloComm (for healthcare-related courses e.g. at universities)
- The planned change to the Main Market of the Warsaw Stock Exchange will make it much easier for MDA to attract institutional investors from Poland and abroad
- According to Grand View Research, the Digital Health market is set to grow at a CAGR 20-28E of 15.1% to USD 295.4bn; The number of connected wearable devices is set to reach 1.1bn by 2022E
- Takeover by a large Healthcare or Tech company

Weaknesses

- No IP protection of algorithms. The company only has brand protection of CarnaLife in Europe and MedApp in Poland
- Small size and financial capacity compared to global players
- So far, MedApp has been forced to use Polish Accounting Standards, which are not comparable to IFRS
- While there are many Polish scientists and capital market experts, the Advisory Board does not include foreign experts
- Only 38.1m shares (16.4% of 247.2m outstanding) can currently be traded
- Shareholder structure is intransparent
- No institutional investor so far
- In 2017, MDA already filed for FDA approval of CarnaLife System and CarnaLife Holo and its application was rejected. However, this time the company is working with a renowned international consultancy

Threats

- Problems with raising the necessary financing for further software development and international roll-out
- Issues with FDA approval
- Issues with different data privacy laws
- Loss of key employees and problems to find qualified staff
- Increasing competition by much larger and financially stronger players
- Termination of co-operation with Microsoft, which is a key supplier for MDA (cloud services, HoloLens)

Valuation

Due to the company's early-stage character we have decided to value MedApp by using a DCF approach only, whereby we have used a WACC of 15% to account for higher-than-average risk. This results in a fair value per share of PLN 1.20.

DCF model

in PLNm	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E				
Net sales	12.67	18.48	38.17	58.87	82.41	110.72	136.75	180.17	213.15				
(y-o-y change)	110.3%	45.9%	106.6%	54.2%	40.0%	34.4%	23.5%	31.8%	18.3%				
EBIT	3.59	1.50	8.47	17.64	28.51	43.80	54.87	74.74	87.19				
(operating margin)	28.3%	8.1%	22.2%	30.0%	34.6%	39.6%	40.1%	41.5%	40.9%				
NOPLAT	3.32	1.43	8.04	16.76	23.09	35.47	44.44	60.54	70.62				
+ Depreciation & amortisation	1.85	2.04	2.24	2.46	2.71	2.98	3.28	3.61	3.97				
= Net operating cash flow	5.17	3.46	10.28	19.22	25.80	38.45	47.72	64.14	74.59				
- Total investments (Capex and WC)	-11.95	-1.60	-12.11	-10.83	-10.02	-9.32	-5.48	-6.78	-1.92				
Capital expenditure	-4.81	-8.04	-3.64	-3.86	-4.11	-4.38	-4.68	-5.01	-5.37				
Working capital	-7.14	6.43	-8.47	-6.97	-5.91	-4.94	-0.80	-1.77	3.45				
= Free cash flow (FCF)	-6.78	1.86	-1.83	8.39	15.78	29.13	42.24	57.37	72.67				
PV of FCF's	-6.66	1.59	-1.36	5.41	8.85	14.21	17.90	21.14	23.28				
PV of FCFs in explicit period	84.36												
PV of FCFs in terminal period	174.14												
Enterprise value (EV)	258.50												
+ Net cash / - net debt (30 September 2021)	0.23												
+ investments / - minorities	0.00												
Shareholder value	258.73												
Number of shares outstanding (m)	247.16												
						Terminal EBIT margin							
WACC	15.0%					37.9%	38.9%	39.9%	40.9%	41.9%	42.9%	43.9%	
Cost of equity	15.0%					11.0%	1.94	1.98	2.02	2.06	2.10	2.14	2.18
Pre-tax cost of debt	4.0%					12.0%	1.68	1.71	1.74	1.78	1.81	1.84	1.87
Normal tax rate	5.0%					13.0%	1.47	1.49	1.52	1.55	1.57	1.60	1.63
After-tax cost of debt	3.8%					14.0%	1.29	1.31	1.34	1.36	1.38	1.41	1.43
Share of equity	100.0%					15.0%	1.14	1.16	1.18	1.20	1.22	1.24	1.26
Share of debt	0.0%					16.0%	1.02	1.04	1.06	1.07	1.09	1.11	1.13
Fair value per share in PLN (today)	1.05					17.0%	0.92	0.93	0.95	0.96	0.98	0.99	1.01
Fair value per share in PLN (in 12 months)	1.20												

Source: East Value Research GmbH

Peer Group

Our peer group comprises two Polish telehealth companies, which already generate significant sales, and seven international ones that are either listed or privately held.

Telehealth/digital health companies, which are listed in Poland and already generate revenues:

- (1) *Medicalgorithmics S.A.*: Medicalgorithmics (MDG), which is based in Warsaw/Poland, is a manufacturer and supplier of innovative technologies in the area of cardio-diagnostics. The company focuses on distant monitoring and analysis of the heart function based on a proprietary technology called PocketECG. Apart from cardiac telemetry, the system is also used in clinical trials on drugs relating to cardiac safety as well as research projects. Medicalgorithmics, which generates most of its revenues in the US, is listed on the Warsaw Stock Exchange and has a market cap of PLN 89.6m. In fiscal-year 2020, it generated sales of PLN 111.7m and an EBIT of PLN -37.5m. Its current EV/Sales 2021E is 0.9x.

- (2) *Telemedycyna Polska S.A.*: Telemedycyna Polska, which is headquartered in Katowice/Poland, is a Polish leader in the area of telesurveillance of cardiology patients. The company owns a Center for Monitoring of the Heart with experienced doctors from the area of non-invasive cardiology diagnostics. Telemedycyna Polska specializes in 24/7 cardiology treatment and ECG exams online and by phone. In 2020, the company, whose largest shareholder is the Polish pharma group Neuca, had revenues of PLN 5m and an EBIT margin of 7.5%. Telemedycyna Polska has a market cap of PLN 12.3m and its EV/Sales 2020 is 1.2x. There are no broker estimates available for this company.

International providers of cloud-based health software:

- (3) *Teladoc Health Inc.*: Teladoc Health, which is headquartered in Purchase/US, delivers, enables, and empowers virtual care services that span every state in a person's health journey - from wellness and prevention to acute care to complex healthcare needs. With >10m completed virtual visits in 2020, it serves health employers, hospitals, health systems, insurances and financial service companies. The company offers its products and services under the Teladoc, Livongo, Advance Medical, Best Doctors, BetterHelp, and HealthiestYou brands. In Q4/20, Teladoc Health acquired the US provider of software platforms for managing chronic conditions Livongo Health for USD 18.5bn, which in our view implied an EV/Sales 2020 of 30x-35x. Teladoc, which currently has a market capitalization of USD 21.8bn, is valued at an EV/Sales 2021E of 11x, according to CapitalIQ.
- (4) *DexCom Inc.*: DexCom, which is based in San Diego/US, designs, develops, and commercializes continuous glucose monitoring (CGM) systems worldwide that are targeted at people with diabetes and healthcare providers. DexCom, which has a market cap of USD 62.7bn, is currently valued at an EV/Sales 2021E of 25.3x (Source: CapitalIQ).
- (5) *Novarad Corporation*: Novarad, which is based in American Fork/US, develops radiology software and streamlined workflow solutions for radiologists. It offers NovaPACS, a picture archiving and communication system (PACS) for customizable radiology viewing; and NovaRIS, a radiology information system (RIS) for scheduling, tracking, and reporting of patient exams and workflow efficiency. Other products include for example NovaDose, a radiation dose monitoring solution; Novarad MobileRad, an iPad/mobile device diagnostic viewer for radiologists and specialists; NovaCardio, a cardiology solution; NovaOrtho, an orthopedic image viewing system; and NovaDash, a dashboard that provides executives and radiology managers with visual business intelligence to improve decision making and increase efficiency.
- (6) *MedM*: MedM, which is based in Sunnyvale/US, offers a comprehensive software platform for rapid deployment of Remote Patient Monitoring and mHealth services, which allows to collect data from 400+ Health IoT devices, sensors and wearables. Its offering is complemented by mobile apps and a web portal for personal and family health tracking.

- (7) *Raziel Health Inc.*: Raziel Health, which is headquartered in Winter Park/US, offers a AI/ML-powered software platform that provides fully connected services in the comfort of patients' homes incl. remote patient monitoring, digital intelligent care. The platform can be integrated with all major electronic medical records and supports various third-party devices.
- (8) *FRUCT Oy*: Fruct, which is based in Helsinki/Finland, has developed the FRUCT MD cloud-based platform that enables hospitals and private practices to organize continuous monitoring of patients' health and proactively define dynamics of various health parameters. The platform can be integrated with medical information systems and comes with several mobile applications, which support interactions with medical professionals and, when connected to third-party devices or sensors, personal monitoring of health.

Recent results

Revenues and Profitability

In 9M/21, MedApp generated revenues of PLN 9.2m compared to just PLN 1.2m in Jan-Sep 2020. This increase mostly stemmed from sales of CarnaLife Holo as well as 23 existing contracts for CarnaLife Systems.

in PLNm	9M/21	9M/20	change y-o-y
Net sales	9.15	1.20	659.4%
EBITDA	4.84	-0.54	n.a
<i>EBITDA margin</i>	<i>53.0%</i>	<i>n.a</i>	
EBIT	3.39	-1.10	n.a
<i>EBIT margin</i>	<i>37.1%</i>	<i>n.a</i>	
Net income	3.24	-1.12	n.a
<i>Net margin</i>	<i>35.4%</i>	<i>n.a</i>	

Source: Company information, East Value Research GmbH

Between January and September 2021, EBIT reached PLN 3.4m (9M/20: PLN -1.1m) and net income PLN 3.2m (PLN -1.1m). The largest cost position was administrative expenses of PLN 5.4m (PLN 1.9m).

Balance sheet and Cash flow

As of 30 September 2021, MedApp had equity of PLN 23.8m, which corresponds to a share of 86.3% in the balance sheet total. While fixed assets were very small (PLN 25k) as the company outsources most of work, intangibles (software, patents, licenses) equaled PLN 5m and goodwill PLN 4.5m (it stems from the takeover of MedApp Sp. z o.o. by Yellow Hat S.A., MDA's predecessor, in 2015). We estimate the working capital at PLN 13.5m. The prepaid expenses of PLN 6.9m related to R&D work on products/solutions, which were still not generating revenues. According to Polish Accounting Standards, they will be moved to intangible assets and amortized after generating first sales.

Between January and September 2021, MedApp generated an operating cash flow of PLN -448k compared to PLN -1.6m in the previous year. Cash flow from investing and financing equaled PLN -134k (PLN -27k) and PLN 35k (PLN 3.1m) respectively. In 9M/21, the company's cash position declined by PLN 548k to PLN 232k. At the end of September 2021, MedApp's interest-bearing debt was negligible.

Financial forecasts

Revenues and Profitability

MedApp is a software company and as such only focuses on further development of its platform, which can work with mobile devices from various manufacturers.

Based on discussions with management, we have based our revenue model of the company on two Software as a Medical Device (SaMD) products, which already contribute to its sales: (1) cloud-based CarnaLife System, and (2) CarnaLife Holo. They are sold to medical facilities, physicians, and scientific institutions. As target markets, MedApp has defined Europe, the US, South America, South Africa and the Middle East, where it wants to co-operate with external distributors (so far, the company has signed distribution agreements with WG Logistics for Poland, Insight Direct for the UK and potentially for 21 other countries, FP Business SAS for France & Luxemburg and MyTech Ware for Brazil). While the CE mark allows the company to sell its products in Europe and makes the registration in the Middle East and Asia easy, for the US it needs the FDA approval. For CarnaLife Holo, it plans to file the application in H2/22E, whereby it is supported by the well-known and experienced US-based Clinical Research Organization (CRO) Parexel International. According to our research, Parexel only supports projects, where it sees a high probability that the FDA approval will be granted.

We would like to emphasize that since September 2021, MedApp has been allowed to use the Polish IP.BOX tax relief, which is why it is able to tax earnings from own software at 5% instead of the usual 19% corporate tax rate.

Some facts about MedApp's target markets

Country	Population	Number of physicians	Number of physicians per 1k inhabitants	Number of hospitals
Poland	38,185,913	90,284	2.4	1,276
Germany	79,903,481	357,401	4.2	3,042
Austria	8,884,864	46,337	5.2	264
Switzerland	8,453,550	36,940	4.3	281
UK	66,052,076	188,783	2.8	1,910
USA	334,998,398	851,641	2.6	6,210
South Africa	56,978,635	27,432	0.9	600
Kuwait	3,032,065	3,413	2.6	44
Oman	3,694,755	8,622	2.0	59
United Arab Emirates	9,856,612	23,107	2.5	104
Saudi Arabia	34,783,757	113,000	2.6	470
Bahrain	1,526,929	610	0.9	29
Qatar	2,479,995	8,970	2.5	15

Source: CIA World Fact Book, Worldbank, WHO, OECD Health Data, Web search

Below are our detailed assumptions regarding MedApp's sales:

CarnaLife System: According to our research, currently c. 23 clients use CarnaLife System. They pay an average monthly subscription fee of EUR 950, which allows them to use all functionalities of the cloud-based platform.

In 2021E, we expect that the number of clients will increase to 30 and by 2029E to 1,000 at a CAGR of 55%. In our model, we have also assumed that the monthly fee will remain at EUR 950 and the PLN-EUR FX rate will go down from 4.62 currently to 4.35 on average. In the long run, we expect that CarnaLife System will generate gross margins of up to 70%.

CarnaLife Holo: CarnaLife Holo is based on the CarnaLife platform and includes two Microsoft HoloLens glasses. It allows 3D/4D visualizations of anatomical structures and is used by surgeons and diagnostic staff. From its currently c. 21 clients, who usually sign up for 5 years, MedApp charges a one-off fee of EUR 100,000 on average.

In our model, we have assumed that in 2021E the number of clients of CarnaLife Holo will increase to 24 and by 2029E to 376 (CAGR of 41%). In our view, this is a conservative assumption given the large market potential, especially in the US. Regarding the PLN-EUR FX rate, we estimate that it will go down from 4.62 currently to 4.35 in the long run.

in PLNm	2021E	2022E	2023E	2024E
CarnaLife System	1.58	3.11	8.12	15.37
<i>Share in total sales</i>	12.5%	16.8%	21.3%	26.1%
Gross margin	56.0%	66.0%	67.0%	68.0%
Number of clients	30	60	160	310
Monthly fee (in EUR)	950	950	950	950
PLN-EUR	4.62	4.55	4.45	4.35
CarnaLife HoLo	11.09	15.37	30.06	43.50
<i>Share in total sales</i>	87.5%	83.2%	78.7%	73.9%
Gross margin	56.0%	66.0%	67.0%	68.0%
Number of clients	24	34	68	100
Fixed fee (in EUR)	100,000	100,000	100,000	100,000
PLN-EUR	4.62	4.52	4.42	4.35
Total sales	12.67	18.48	38.17	58.87
change y-o-y	110.3%	45.9%	106.6%	54.2%

Source: East Value Research GmbH

in PLNm	2021E	2022E	2023E	2024E
Net sales	12.67	18.48	38.17	58.87
EBITDA	5.44	3.54	10.70	20.10
<i>EBITDA margin</i>	43.0%	19.1%	28.0%	34.1%
EBIT	3.59	1.50	8.47	17.64
<i>EBIT margin</i>	28.3%	8.1%	22.2%	30.0%
Net income	3.28	1.39	8.01	16.74
<i>Net margin</i>	25.9%	7.5%	21.0%	28.4%

Source: East Value Research GmbH

in PLNm	Q1/19	Q2/19	Q3/19	Q4/19	2019	Q1/20	Q2/20	Q3/20	Q4/20	2020
Net sales	0.00	0.00	0.07	3.15	3.23	0.02	0.24	0.95	4.82	6.02
<i>change y-o-y</i>	-83.3%	-80.0%	15.9%	10841.7%	2506.7%	700.0%	5876.3%	1200.1%	53.2%	86.8%
EBITDA	-1.22	-0.78	-0.54	3.82	1.27	-0.45	-0.69	0.04	4.03	2.93
<i>EBITDA margin</i>	-61200.0%	-19569.5%	-746.3%	121.4%	39.3%	-2837.5%	-287.5%	4.7%	83.6%	48.7%
EBIT	-1.22	-0.78	-0.54	3.10	0.55	-0.45	-0.69	0.04	3.21	2.12
<i>EBIT margin</i>	-61200.0%	-19569.5%	-746.3%	98.5%	17.0%	-2837.5%	-287.5%	4.7%	66.6%	35.1%
Net income	-1.02	-0.79	-0.55	3.04	0.67	-0.26	-0.90	0.05	3.03	1.92
<i>Net margin</i>	-51050.0%	-19825.4%	-758.6%	96.6%	20.9%	-1625.0%	-376.5%	4.7%	62.9%	31.8%

in PLNm	Q1/21	Q2/21	Q3/21	Q4/21E	2021E
Net sales	1.94	3.53	3.67	3.52	12.67
<i>change y-o-y</i>	12051.7%	1375.9%	287.0%	-26.9%	110.3%
EBITDA	0.91	2.26	1.67	0.60	5.44
<i>EBITDA margin</i>	46.6%	64.2%	45.5%	17.0%	43.0%
EBIT	0.44	1.78	1.17	0.20	3.59
<i>EBIT margin</i>	22.7%	50.4%	31.9%	5.7%	28.3%
Net income	0.38	1.46	1.40	0.04	3.28
<i>Net margin</i>	19.4%	41.4%	38.1%	1.1%	25.9%

Source: Company information, East Value Research GmbH

CAPEX and Working capital

In our model, we have assumed gross CAPEX of PLN 16.5m in 2021E-2023E, which in our view will increase intangibles as all R&D work that is not completed yet will have to be booked under intangibles after the change to IFRS, which is compulsory for companies that are listed in the Main Market of the Warsaw Stock Exchange.

For working capital, we have assumed that its share in total revenues will decline from 126.4% in 2020 to <20% in the long run. In our view, the cash conversion cycle will equal 60 days in the future.

Business description

MedApp S.A., which is based in Krakow, has developed the health platform CarnaLife, which it targets at medical professionals, health facilities and scientific institutions. Currently, there are the following modules available of the CE-certified solution: (1) CarnaLife System – a cloud-based AI-powered online healthcare platform for physicians that allows remote collection, Big Data analysis and graphical visualization of patients' health data, (2) CarnaLife Holo – a diagnostic imaging platform that with Microsoft 3D/4D HoloLens glasses supports surgeons in their work. All software and patient' data is stored in Microsoft's Azure cloud, which according to ZDNet is the second most popular cloud service worldwide. MedApp has been listed in the NewConnect segment of the Warsaw Stock Exchange since 2015 and currently has 41 employees (thereof: 15 R&D staff, 15 CarnaLife software engineers, 8 sales/marketing staff and 3 people for foreign expansion). We estimate that only a small single percentage of employees leaves the company every year.

Company history

2015: After the acquisition by the predecessor company of Amida Capital Sp. z o.o S.K.A, Yellow Hat, which itself has been listed since 2011, starts developing own mHealth applications.

Takeover of MedApp Sp. z o.o. by Yellow Hat S.A. for PLN 5.5m. At the date of announcement, MedApp had negative equity of PLN 369k and total assets of PLN 167k.

2016: MedApp presents its EKG MHEALTH SOFTWARE platform during several conferences and trade shows e.g. Mobile World Congress 2016 in Barcelona, Microsoft EU Health Innovation in Brussels, HIMSS 2016 (Healthcare Information and Management Systems Society) in Las Vegas and Telemedicine & Telehealth Service Provider Showcase in Phoenix.

Integration of the company's software with other medical devices e.g. spirometers, pulse oximeters, glucometers, scales.

2017: Approval of the CE certificate by TUV NORD, which allows the company to sell its mHealth products in Europe and makes the registration e.g. in the Middle East much easier.

Registration of the CarnaLife brand in Poland and Europe.

CarnaLife is now able to present data in mixed 3D/4D reality and can also support clinicians, who focus on cardiology, diabetology, and other chronic diseases.

Participation in the following international trade shows among others: HIMSS 2017 (Healthcare Information and Management Systems Society) in Orlando, Hannover Messe 2017, GITEX 2017 in Dubai, Health Innovation Week 2017 in Dublin, VR Tech Summit / Gremi Park 2017 ECardiology and EHealth in Berlin.

Execution of the first virtual 3D surgery during the Microsoft Innovation Summit in Brussels and the first ever surgery relating to dilatation of lung arteries with CarnaLife Holo and digital 3D printing.

Signing of the first larger contract for CarnaLife System with the clinic operators InterCard and CarintArt in Poland.

2018: Execution of several cardio and orthopedic surgeries with CarnaLife Holo.

Participation in the CIS Focus Workshop Imaging in Frankfurt and ESC (European Society of Cardiology) in Munich.

2019: Participation in the cardiologic trade fairs ESC in Paris, MICCAI in Shanghai, Medica in Düsseldorf and ICI in Israel.

Start of a pilot with Johnson & Johnson regarding the use of CarnaLife System in the area of verification of ECG exams towards atrial fibrillation. Co-operation with GE relating to the development of CarnaLife Holo towards the preparation of holographic 3D pictures of ECG exams in real-time.

Change of management. Krzysztof Medrala, a former manager from the financial services industry with extensive experience in Poland and abroad, becomes MedApp's CEO.

MedApp becomes NATO Commercial and Government Entity (NCAGE), which allows it to offer its products in 29 NATO countries and to participate in tenders that are organized by the 15 largest IT suppliers of the US Army.

First sales of CarnaLife Holo worth PLN 3m to several research institutions in the US.

Signing of the first international distribution contract for the CarnaLife platform with the Lithuanian company T Optimus, which covers Baltic countries. However, to date the contract has not generated any revenues for MedApp.

2020: Distribution agreement with the Polish distributor WLOG Solutions Sp. z.o.o, who also has contacts abroad. New contracts for CarnaLife System with NEO Hospital Sp. z.o.o and Diabdis Sp. z.o.o (Neuca Group) in Poland.

CarnaLife System and Holo receive the CE IIB certificate.

Contract with Parexel International for support relating to FDA registration of CarnaLife Holo. MedApp estimates the total costs of consulting and FDA filing at ca. PLN 1m.

2021: Distribution agreements with Insight Direct Ltd. (UK + 21 other countries incl. US) for CarnaLife Holo and FP Business SAS (France & Luxemburg) for CarnaLife Holo and CarnaLife System. According to the sales plan, MedApp expects to earn through FP Business PLN 9.5m of revenues in the next three years.

Contract for the use of CarnaLife System with Diagnostyka Sp. z.o.o in Poland.

Signing of a 3-year distribution agreement for CarnaLife Holo and related hardware with Polish Medical Idea Sp. z.o.o. MedApp expects to generate average yearly revenues of EUR 2m from this distribution agreement.

MedApp and the second largest provider of private healthcare services in Poland, Swedish Medcover, start a pilot during which MDA's CarnaLife System will be implemented in selected medical facilities in Warsaw.

Signing of a contract with a representative and medical distributor MyTech Ware for Brazil.

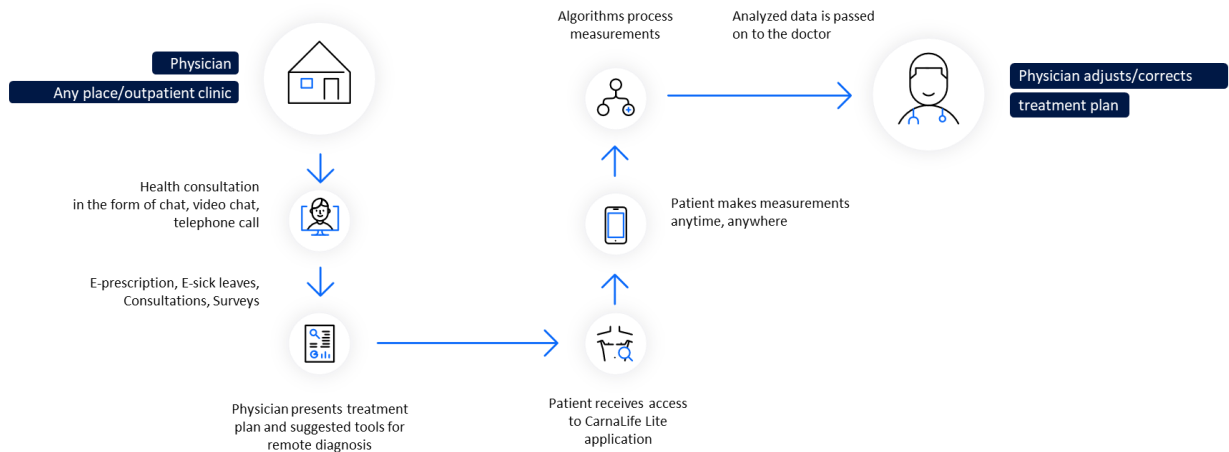
According to Google, MedApp is one of the 15 most innovative MedTech startups in Europe. The US tech giant chooses the company for its startup accelerator program.

Below is an overview of MedApp's products, which were all developed by the company's own software developers:

CarnaLife System

CarnaLife is MedApp's proprietary AI-powered cloud-based telehealth platform for remote patient monitoring, collection of medical data, analysis of Big Data volumes from all facilities that are connected to the system and graphical presentation of results. The online platform, which is modular, also offers the possibility to conduct a chat or video consultation, schedule a meeting or issue an e-prescription. It is available in Polish, English and German as well as for desktop computers and the mobile operating systems iOS and Android. The system, which comprises >20 intelligent algorithms that have a hit ratio of 95% and allow real-time exam interpretation, can be used with mobile equipment (e.g. medical devices, biosensors, wearables) of different manufacturers and in various medical areas including cardiology, diabetology, dietetics, other chronic diseases and elderly care. Both the software platform and patient data are stored in the Microsoft Azure cloud, which is the second most popular cloud service worldwide. Thereby, the different software components and patient data are stored on different servers and encoded, which guarantees the highest possible security.

Simplified graph how the CarnaLife System works



WWW.MEDAPP.PL

Source: Company information, East Value Research GmbH

CarnaLife System, which is targeted at hospitals, outpatient care centers, individual physicians and scientific facilities, can easily be integrated with Hospital Information Systems (HIS) and has so far sold 23 licenses, thereof 9 in 2020. In Q1/21, MedApp also signed the agreement with the largest Polish diagnostics chain Diagnostyka Sp. z o.o. as a client.

MedApp charges a monthly fee for each license and the contracts have a duration of five years. The software platform received the CE registration for Europe in 2017 (in 2019, it was re-certified as a class IIb medical product). We would like to emphasize that the CE mark also makes the registration in other regions e.g. the Middle East, China much easier.

How CarnaLife System looks like in the desktop and mobile version



Source: Company information, East Value Research GmbH

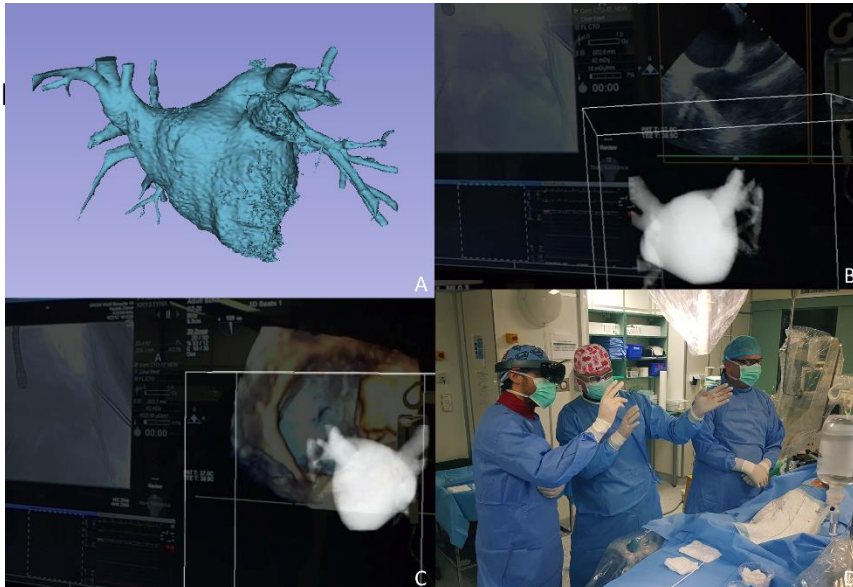
CarnaLife Holo

CarnaLife Holo, which currently is only available in English, is a 3D imaging Software as a Medical Device (SaMD) system for data visualization obtained through MRIs, CTs, angiographs, echocardiography. It offers the potential to enhance precision, comfort and safety of medical procedures. Like CarnaLife System, it is a module of the analytical telehealth platform CarnaLife and is certified as class IIb medical device for use in Europe. With Microsoft's leading HoloLens or HoloLens 2 glasses with special sensors and displays, the doctor can see a 3D hologram reflecting the structure of the imaged anatomical area and can interact with it using gestures and voice commands e.g. rotate it, scale it, move it around, or even look inside the anatomical structures. The glasses can be used everywhere in the operating room at any time during the procedure. They also allow a Multi Planar Reconstruction (MPR) 3D visualisation and sending of pictures to Hospital Information Systems (PACS module).

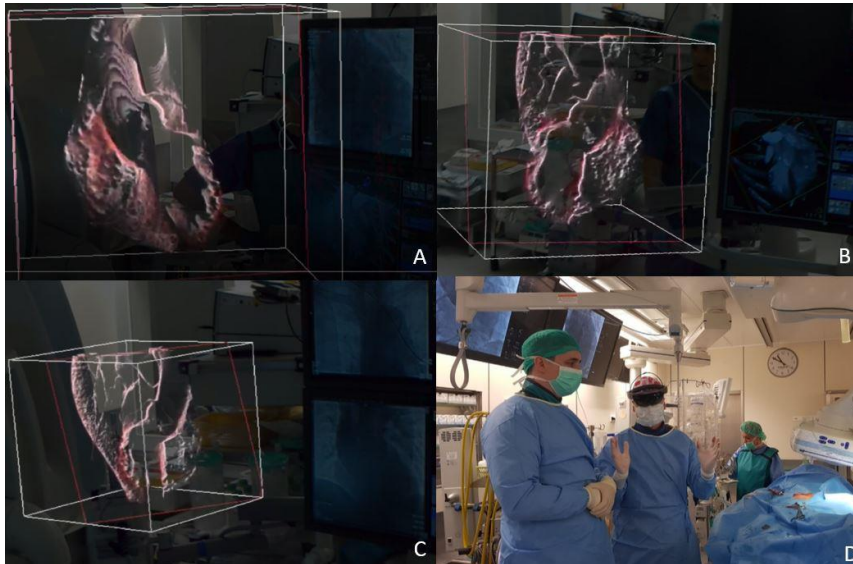
Until the end of 2020, CarnaLife Holo sold 16 licenses to clients in Poland, the US, Austria and Germany. MedApp buys the HoloLens glasses from Microsoft first and re-sells them afterwards to its clients. Clients purchase a license + 2 HoloLens for a one-off fee of EUR 100,000 on average and a period of min. 5 years. So far, CarnaLife Holo has been used c. 200 times during pilot treatments at public hospitals and private companies e.g. GE, hospitals in Vienna, Krakow, Sofia, Warsaw and Gdansk.

The main advantages of CarnaLife Holo are the following: (1) more precise diagnostics process and analysis of internal organs before the surgery (2) easier recognition of changes during the surgery or treatment, and (3) potentially lower risk of complications.

Augmented reality with CarnaLife Holo in interventional cardiology



(A) 3D reconstruction of the left atrium. (B) & (C) Holographic images seen by the operator during the procedure. (D) View of the operating room with team members wearing a CarnaLife Holo headset.



(A-C). Holographic images seen by the operator during the procedure with simultaneous overview of operating room.
(D) View of the operating room with the first operator wearing a CarnaLife Holo

Source: Company information, East Value Research GmbH

As Microsoft's MRPP (Mixed Reality Program Partner) Silver Partner, MedApp has preferred access to the software giant's support and service staff. It is also allowed to present CarnaLife Holo and its other solutions during Microsoft's international conferences.

A new module, HoloComm, which has been on the market since April 2021, complements CarnaLife Holo and allows the training and education of medical students, both in one location and remotely. It can also be used in other areas e.g. for product presentations or maintenance of machines. Thus, it allows to significantly lower costs, standardise and digitalize both trainings and presentations.

Sales & marketing strategy

In the last years, MedApp has built the brand recognition of MedApp and CarnaLife through participation in numerous trade fairs and conferences in Europe, the US, the Middle East and Asia, including those of its partners Microsoft, GE and Johnson & Johnson. Since 2019, the company has also signed contracts with several distributors: WLOG Solutions Sp. z o.o., Medical Idea Sp. z o.o (both Poland), Insight Direct (UK), FP Business SAS (France & Luxemburg) and MyWave (Brazil). In addition to strengthening its own sales team, MedApp plans to sign contracts with international distributors in other markets, especially the US, South Africa and the Middle East as well as establish subsidiaries in the US and Germany (serving DACH area) where it is necessary to have a local presence. According to our research, references by international medical professionals are crucial for successful sales and MedApp's advantage is that it already has many satisfied clients both in Poland and abroad.

Key staff and advisors

Krzysztof Medrala (CEO): Krzysztof Medrala has been MedApp's CEO since 2019. Previously, he worked as a Country Head Romania for the Polish financial institutions Getin Holding and Idea Bank, Member of the Board at Alfa Bank Ukraine, and as a CEO at the Polish asset management firm Origin TFI. Krzysztof Medrala graduated with an Engineer's degree from the University of Science & Technology (AGH) in Krakow, holds post-graduate degrees in Management & Marketing from the University of Economics in Krakow; Human Resource Management from AGH, MBA from the University of Warsaw/University of Illinois; and post-MBA in Leadership Psychology from the Warsaw University of Technology.

Prof. Andrzej Skalski, PhD (Director CarnaLife Holo and Holocomm): Prof. Skalski is in charge of the product lines related to imaging and mixed reality. He heads the MedApp R&D team. Prof. Skalski is author and co-author of more than 90 scientific publications. He is also the co-author of 1 patent and 2 patent applications. He has received several international and domestic awards e.g. from Elsevier and Computers in Biology and Medicine: "Certificate of Outstanding Contribution in Reviewing - in recognition of the review made to the quality of the journal" and for his scientific work by the Head of the University of Science & Technology (AGH) in Krakow.

Michał Adamczyk (Head of Projects): Michał Adamczyk is a Head of Regulatory Affairs and Telehealth & AI development at MedApp. He completed a training at Secure Care in the US regarding the integration of monitoring systems. Michał Adamczyk graduated from the Medical University in Warsaw with specialisation in Electroradiology. He also studied Biomedical Engineering at the Technical University in Warsaw.

Prof. Dariusz Dudek, PhD (Member of the Advisory Board): Since 2014, he has been Professor at Collegium Medicum of the Jagiellonian University of Krakow and specialises in cardiology. He is Member of the Polish and European Associations of Cardiologists and is Member of the Board of the European Bifurcation Club. Prof. Dudek has been quoted more than 1,000 times in both Polish and foreign scientific papers. Also, he has received the award of the Polish Association of Cardiologists for his scientific work, the award for the best scientist of the Collegium Medicum and the Gloria Medicinae of the Polish Association of Doctors.

Market environment

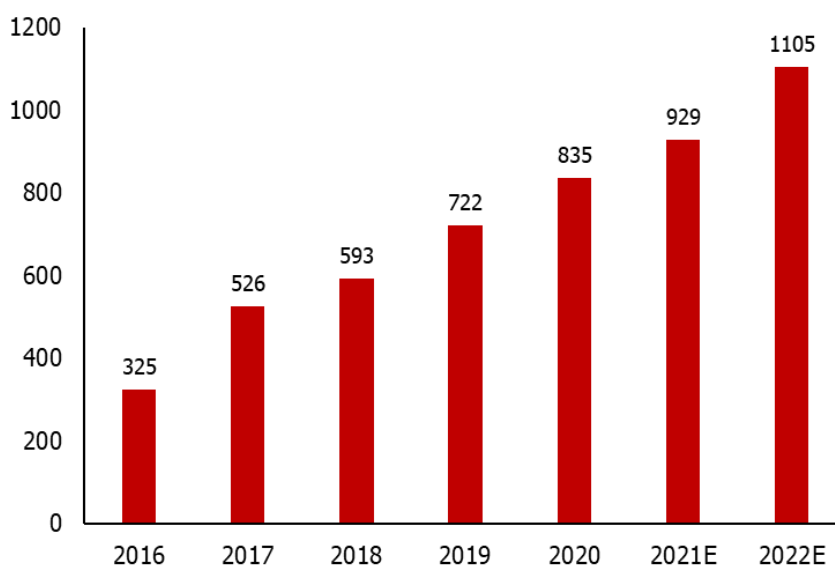
The global market for Digital Health

According to Grand View Research, the global Digital Health market was worth USD 96.5bn in 2020, thereof the mHealth segment made up 47%. The North American region accounted for the largest market share of 38.8% as according to McKinsey the COVID-19 pandemic instigated an increase in the adoption and usage of telehealth from 11% in 2019 to 46%. By 2028E, the Digital Health market is expected to grow at a CAGR of 15.1%, with the Asia-Pacific region and the Healthcare Analytics segment exhibiting the highest growth. As main growth drivers, Grand View Research regards 1. rising healthcare costs, especially due to high prevalence of chronic diseases (WHO: in 2020, chronic diseases accounted for 57% of all deaths worldwide) 2. increasing adoption of smart wearable devices and remote patient monitoring, which eliminates the need for in-person appointments and thus increases the safety of both patients and doctors, and 3. a surge in demand for Electronic Medical Records (EMR) and Electronic Healthcare Records (HER). Especially in Poland, other factors, which will support the growth of Digital Health in the future, are in our view 1. the number of doctors per 1,000 inhabitants, which is the lowest in the EU according to e.g. pulsmedycyny.pl, and 2. the very high share of doctors and nurses at the age of 65+.

The Medical Wearables market

According to Fortune Business Insights, the global medical wearables market was worth USD 29.8bn in 2019 (thereof: USD 11.7bn in North America) and is expected to grow by 2027E at a CAGR of 26.4% to USD 195.6bn. Medical wearables are meant to monitor and collect data on a user's health and fitness. We believe that especially since 2020 their adoption has significantly grown as the outbreak of the COVID-19 pandemic brought a sharp focus on the need to prioritise health.

Number of connected wearable devices worldwide (in millions)



Source: Statista.de, East Value Research GmbH

The global market for Augmented & Virtual Reality and 3D visualisation in medicine

According to Research and Markets, the global market for Augmented Reality in medicine was worth USD 620m in 2018 and is expected to grow at a CAGR of 33.4% to USD 3.5bn by 2024E. Global Market Insights estimated the value of the global market for holographic 3D visualisations in medicine in 2017 at USD 331m and its average yearly growth at 34%. In 2024E, the market is expected to reach a value of USD 2.5bn, whereby its growth is supposed to be driven by R&D activity in developed countries.

Profit and loss statement

in PLNm	2019	2020	2021E	2022E	2023E	2024E
Revenues	3.23	6.02	12.67	18.48	38.17	58.87
Cost of goods sold	-0.61	-0.56	-0.13	-6.28	-12.60	-18.84
Gross profit	2.61	5.47	12.54	12.20	25.58	40.03
Other operating income	0.02	0.00	0.00	0.00	0.00	0.00
Distribution costs	-0.33	-0.29	-0.20	-0.24	-0.41	-0.53
Administrative expenses	-0.67	-1.89	-6.60	-7.92	-13.46	-17.50
Other operating expenses	-0.36	-0.35	-0.30	-0.50	-1.00	-1.90
EBITDA	1.27	2.93	5.44	3.54	10.70	20.10
Depreciation & amortisation	-0.72	-0.82	-1.85	-2.04	-2.24	-2.46
Operating income	0.55	2.12	3.59	1.50	8.47	17.64
Net financial result	-0.08	-0.24	-0.05	-0.04	-0.03	-0.02
EBT	0.47	1.87	3.54	1.46	8.44	17.62
Income tax	0.20	0.04	-0.27	-0.07	-0.42	-0.88
Minorities	0.00	0.00	0.00	0.00	0.00	0.00
Net income	0.67	1.92	3.28	1.39	8.01	16.74
Diluted EPS	0.00	0.01	0.01	0.00	0.03	0.06
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Share in total sales						
Revenues	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Cost of goods sold	-19.00 %	-9.27 %	-1.00 %	-34.00 %	-33.00 %	-32.00 %
Gross profit	81.00 %	90.73 %	99.00 %	66.00 %	67.00 %	68.00 %
Other operating income	0.57 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Distribution costs	-10.29 %	-4.78 %	-1.58 %	-1.30 %	-1.07 %	-0.90 %
Administrative expenses	-20.69 %	-31.43 %	-52.10 %	-42.86 %	-35.27 %	-29.73 %
Other operating expenses	-11.30 %	-5.82 %	-2.37 %	-2.71 %	-2.62 %	-3.23 %
EBITDA	39.30 %	48.70 %	42.95 %	19.14 %	28.04 %	34.14 %
Depreciation & amortisation	-22.30 %	-13.58 %	-14.60 %	-11.01 %	-5.86 %	-4.18 %
Operating income	17.00 %	35.12 %	28.35 %	8.13 %	22.18 %	29.96 %
Net financial result	-2.44 %	-4.02 %	-0.39 %	-0.22 %	-0.08 %	-0.03 %
EBT	14.56 %	31.10 %	27.96 %	7.91 %	22.10 %	29.92 %
Income tax	6.30 %	0.69 %	-2.10 %	-0.40 %	-1.10 %	-1.50 %
Minorities	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Net income	20.87 %	31.79 %	25.86 %	7.52 %	20.99 %	28.43 %

Balance Sheet

in PLNm	2019	2020	2021E	2022E	2023E	2024E
Cash and equivalents	0.07	0.78	0.25	33.24	31.37	39.73
Financial assets	0.52	0.00	0.00	0.00	0.00	0.00
Inventories	0.00	0.09	0.02	1.04	2.09	3.12
Trade accounts and notes receivables	3.06	5.28	10.10	13.26	24.36	32.89
Other current assets	7.19	4.67	6.70	0.70	0.74	0.77
Current assets, total	10.83	10.82	17.07	48.24	58.56	76.52
Property, plant and equipment	0.05	0.04	0.03	0.03	0.03	0.03
Other intangible assets	1.13	6.04	9.24	15.24	16.64	18.04
Goodwill	5.01	4.70	4.47	4.47	4.47	4.47
Other assets	0.93	0.79	0.79	0.80	0.81	0.82
Deferred tax assets	0.80	0.84	0.00	0.00	0.00	0.00
Non-current assets, total	7.92	12.40	14.52	20.53	21.94	23.35
Total assets	18.76	23.22	31.59	68.77	80.50	99.86
Trade payables	0.47	0.51	0.10	4.68	8.35	10.94
Other short-term liabilities	2.04	1.92	1.95	1.99	2.03	2.07
Short-term financial debt	0.00	0.00	5.70	0.00	0.00	0.00
Pension provisions	0.00	0.15	0.00	0.00	0.00	0.00
Provisions	0.01	0.09	0.00	0.00	0.00	0.00
Current liabilities, total	2.52	2.66	7.76	6.68	10.39	13.02
Long-term financial debt	0.00	0.00	0.00	0.00	0.00	0.00
Deferred tax liabilities	0.00	0.00	0.00	0.00	0.00	0.00
Long-term liabilities, total	0.00	0.00	0.00	0.00	0.00	0.00
Total liabilities	2.52	2.66	7.76	6.68	10.39	13.02
Shareholders equity, total	16.23	20.56	23.83	62.10	70.11	86.85
Minority interests	0.00	0.00	0.00	0.00	0.00	0.00
Total equity and liabilities	18.76	23.22	31.59	68.77	80.50	99.86

Cash Flow Statement

in PLNm	2019	2020	2021E	2022E	2023E	2024E
Net income	0.67	1.92	3.28	1.39	8.01	16.74
Depreciation & amortisation	0.72	0.82	1.85	2.04	2.24	2.46
Change of working capital	-5.39	-5.03	-7.14	6.43	-8.47	-6.97
Others	0.03	0.22	-0.75	0.00	0.00	0.00
Net operating cash flow	-3.97	-2.08	-2.77	9.86	1.78	12.23
Cash flow from investing	-0.01	-0.11	-4.81	-8.04	-3.64	-3.86
Free cash flow	-3.98	-2.19	-7.58	1.82	-1.86	8.37
Cash flow from financing	4.05	2.90	7.05	31.17	-0.01	-0.01
Change of cash	0.07	0.71	-0.53	32.99	-1.86	8.36
Cash at the beginning of the period	0.00	0.07	0.78	0.25	33.24	31.37
Cash at the end of the period	0.07	0.78	0.25	33.24	31.37	39.73

Financial ratios

Fiscal year	2019	2020	2021E	2022E	2023E	2024E
Profitability and balance sheet quality						
Gross margin	81.00%	90.73%	99.00%	66.00%	67.00%	68.00%
EBITDA margin	39.30%	48.70%	42.95%	19.14%	28.04%	34.14%
EBIT margin	17.00%	35.12%	28.35%	8.13%	22.18%	29.96%
Net margin	20.87%	31.79%	25.86%	7.52%	20.99%	28.43%
Return on equity (ROE)	6.13%	10.41%	14.76%	3.23%	12.12%	21.33%
Return on assets (ROA)	4.01%	9.29%	10.53%	2.08%	9.99%	16.78%
Return on capital employed (ROCE)	4.84%	10.52%	13.94%	2.30%	11.47%	19.29%
Economic Value Added (in PLN)	-1.66	-0.93	-0.26	-7.91	-2.50	3.69
Net debt (in PLNm)	-0.07	-0.78	5.45	-33.24	-31.37	-39.73
Net gearing	-0.42%	-3.79%	22.86%	-53.53%	-44.75%	-45.75%
Equity ratio	86.54%	88.54%	75.44%	90.29%	87.10%	86.97%
Current ratio	4.29	4.07	2.20	7.23	5.64	5.88
Quick ratio	1.44	2.28	1.33	6.97	5.37	5.58
Net interest cover	6.97	8.74	71.83	37.55	282.18	881.88
Net debt/EBITDA	-0.05	-0.27	1.00	-9.40	-2.93	-1.98
Tangible BVPS	0.05	0.06	0.08	0.20	0.23	0.29
CAPEX/Sales	0.00%	89.56%	37.95%	43.48%	9.53%	6.56%
Working capital/Sales	239.88%	126.43%	116.50%	45.06%	44.00%	40.37%
Cash Conversion Cycle (in days)	65	49	50	50	51	52
Trading multiples						
EV/Sales	76.54	40.98	19.49	13.36	6.47	4.19
EV/EBITDA	194.76	84.16	45.38	69.81	23.07	12.29
EV/EBIT	450.20	116.71	68.76	164.41	29.17	14.00
P/Tangible BVPS	22.02	15.59	12.76	4.99	4.38	3.49
P/E	367.18	129.05	75.45	207.03	35.88	17.18
P/FCF	-62.03	-112.86	-32.63	135.85	-133.15	29.54

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