

Substantial airborne Covid detector opportunity

13th January 2021

As a nation, we love knocking ourselves. However in truth, we're actually a pretty pioneering bunch. For instance, the experts at Oxford University & AstraZeneca have developed one of the world's 3 most important vaccines in double quick time. Plus, many other British firms are creating similar breakthrough Covid inventions, such as Kromek.

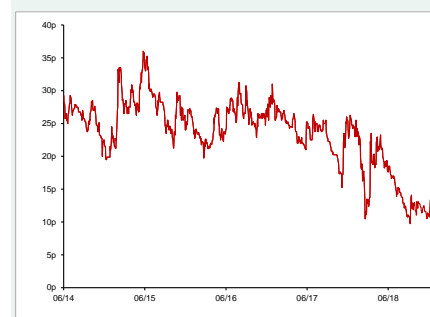
Here regardless of mass inoculations, 'herd immunity' won't solve everything. Why? Because given the fast mutating nature of this awful disease, countries will also require an early warning system to constantly monitor, respond (eg adjust HVAC controls, decontaminate) & analyse (using DNA sequencing) any new strains that might compromise a vaccine's efficacy. Thus enabling both outbreaks to be stopped in their tracks, and scientists time to reformulate existing treatments &/or fashion new ones.

Clearly regular antigen testing will be crucial. Yet, this won't be sufficient either in isolation. **The world needs a coronavirus alarm in real-time**, rather than having to wait until people fall ill. Kromek's '1st-of-its-kind' Biothreat detector could be the answer (see below). The concept was first conceived in Dec'18 for DARPA (part of the US Dept of Defence) & aimed at protecting against biological warfare.

Company Data

EPIC	AIM:KMK
Price	13.0p
52 weeks Hi/Lo	27p/8p
Market cap	£44.8m
Share count	344.8m
Net debt Oct'20	£1.8m
Daily volume	1.5m

Share Price, p



Source: Share Cast

100s of possible uses for Kromek's airborne Covid/Biothreat detectors



Source: Kromek

Two years on, and **this revolutionary project is also applicable for all forms of airborne pathogens**. With current technology delivering **outstanding 'sensitivity & specifically' rates**. Next steps are to run a few pilots (say 3 months duration), before full commercial launch in FY22.

The beauty being that this equipment can be deployed in most public places - eg airports, railways stations, concert halls, theatres, schools, hospitals, hotels, shopping centres, sports arenas, theme parks, government buildings, offices, cruise-ships & so forth. And by being networked together, can further offer blanket regional/national coverage – which alongside IPR, 1st mover advantage & customer relationships - should build **significant barriers to entry**.

How big could this become?

Not surprisingly, **this is a huge untapped market**. Indeed hypothetically if these devices were priced at just £10k each. Then ultimately the **TAM might be worth >£500m pa**, including high margin, recurring revenues relating to daily sampling.

Description

Kromek is a radiation detection company operating globally in 4 high-value markets – Medical Imaging (eg BMD, SPECT), Nuclear Detection (D3S), Security Screening (Airport baggage/bottles) & Bio-threat surveillance - primarily using cadmium zinc telluride (CZT) crystals.

Headquartered in Sedgefield (UK), Kromek has c.139 employees, of which approx. 116 are in R&D, with 2 further sites in California & Pittsburgh. The firm has filed/registered >280 patents.

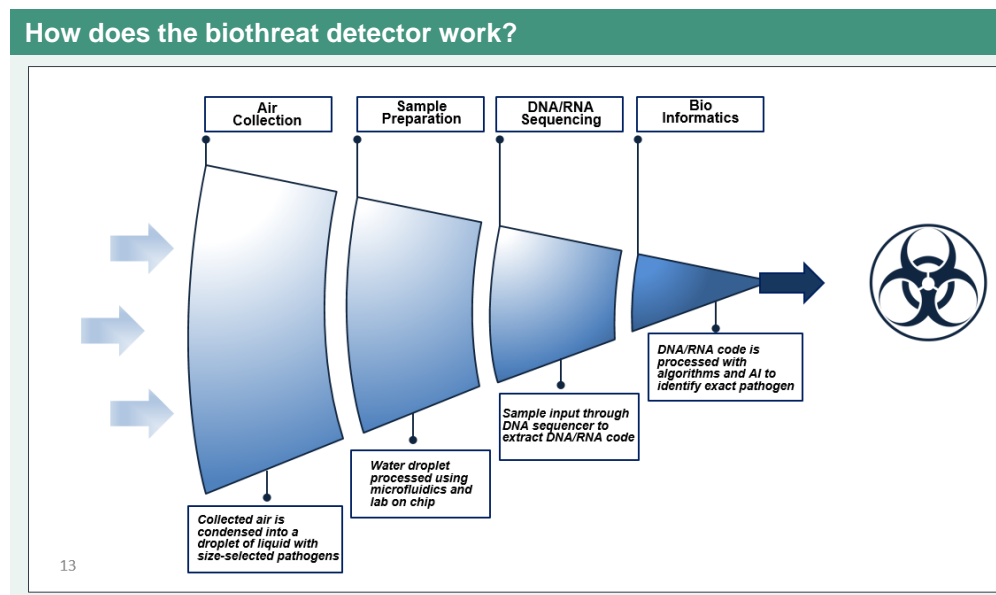
Next news: Pre close update May 2021

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Obviously not all of this would go one player. But assuming Kromek captured 20%, this would represent a £100m pa opportunity, probably generating 25% drop through rates to boot. Which in valuation terms, using 3x sales &/or 12x EBIT multiples – might **lift the market cap by £300m** (or 86p/share) vs £45m today. Granted of course the supply chain would have to be scaled too.



Source: Kromek

Fresh blood, fresh ideas

Nevertheless, let's not get in front of our skis. After a few painful setbacks over the past couple of years, has management got the necessary bandwidth to successfully commercialise this & other important products, competing for the same limited resource?

Absolutely, albeit staying focused will be key. Plus, having recently emerged from the pandemic, we sense the Board (including a new Chairman, COO & CFO) now has a renewed spring in its step, and will be carefully juggling all these short & long term priorities.

So, what about today's H1'21 results (see below)? Well in our view, they were mostly academic. Including a full 6 months' impact from the pandemic - hitting elective surgeries/operations, airports and social gatherings hard.

Equally though, the numbers weren't too bad, with **turnover only falling -14.2% LFL to £4.6m** (£5.3m LY), **gross margins flattish at 54.5%** (58.0%) and EBITDA (pre SBPs) coming in at -£873k (-£611k). **Net debt closed Oct'20 at -£1.8m** vs £3.8m Apr'20, reflecting £2.7m of capitalised R&D (£1.3m amortisation), capex and lower creditors, partly offset by tight cost/cash management.

Interims			
£'000s	Act H1'20	Act H1'21	% Change
Turnover	5,333	4,576	-14.2%
<i>LFL % growth</i>	44.7%	-14.2%	
Gross Profit	3,093	2,493	-19.4%
<i>% Margin</i>	58.0%	54.5%	
Overheads (ex SBPs)	-3,704	-3,366	-9.1%
Adjusted EBITDA (pre SBPs)	-611	-873	42.9%
Share based payments	-100	-120	
Adjusted EBITDA (post SBPs)	-711	-993	39.7%
Depreciation & Amortisation	-1,631	-2,100	28.8%
Adjusted EBIT	-2,342	-3,093	32.1%
<i>Margin</i>	-43.9%	-67.6%	
Net interest	-311	-306	
Adjusted PBT	-2,653	-3,399	28.1%
Net cash / (debt)	7,674	-1,772	-123.1%
Sharecount (Ks)	344,642	344,751	

Source: Kromek

Fine, but does Kromek need any more money?

In short no, with the **Board confirming there are sufficient funds for the next 12 months**, under almost all scenarios. Cash on hand **closed Oct'20 at £5.8m**, compared to £6.1m of bank borrowings (HSBC), a £0.8m PPP loan (US government) & a £0.7m property mortgage.

Moreover, **conditions are steadily improving** in Medical Imaging (elective procedures), Homeland Security (lockdowns) & Airport Screening (passenger flights). While liquidity is expected to further benefit from some working capital give-back in H2, as inventory levels normalise (£6.6m vs £4m LY) and R&D tax credits.

That said, strategically **it doesn't make any sense to 'short-change' the group's innovation & growth prospects**, simply due to a lack of expansion capital. Consequently, ahead of the Apr'22 maturity of bank facilities, we suspect the Board will sound out various funding options. Something which should be healthily supported - particularly if the Biothreat detector trials prove successful &/or momentum continues to build.

Is there anything else to discuss?

Yes, masses, which is obviously why project prioritisation is vital.

In November, the **UK government announced that it would spend £329m over the next 5 years to beef up its nuclear detection capability**. This budget is being allocated for border and inland security (city & critical infrastructure) – from which Kromek, as a British business post Brexit, is likely to receive its fair share together with ongoing D3S trials.

Next the biggest medical imaging customer (\$58.1m, 7 year SPECT contract) has begun installing its scanners in multiple countries, with the rollout expected to accelerate from now onwards. Meaning that with other bits & pieces – eg baggage/bottle screening, repeat business & development projects - **H2 turnover is anticipated to be "significantly" above H1.**

All the same due to the broader economic uncertainty, the **Board has chosen not to issue specific forward guidance**, and so we've similarly held our forecasts. Although with the intention of publishing new estimates in May to coincide with the y/e trading update.

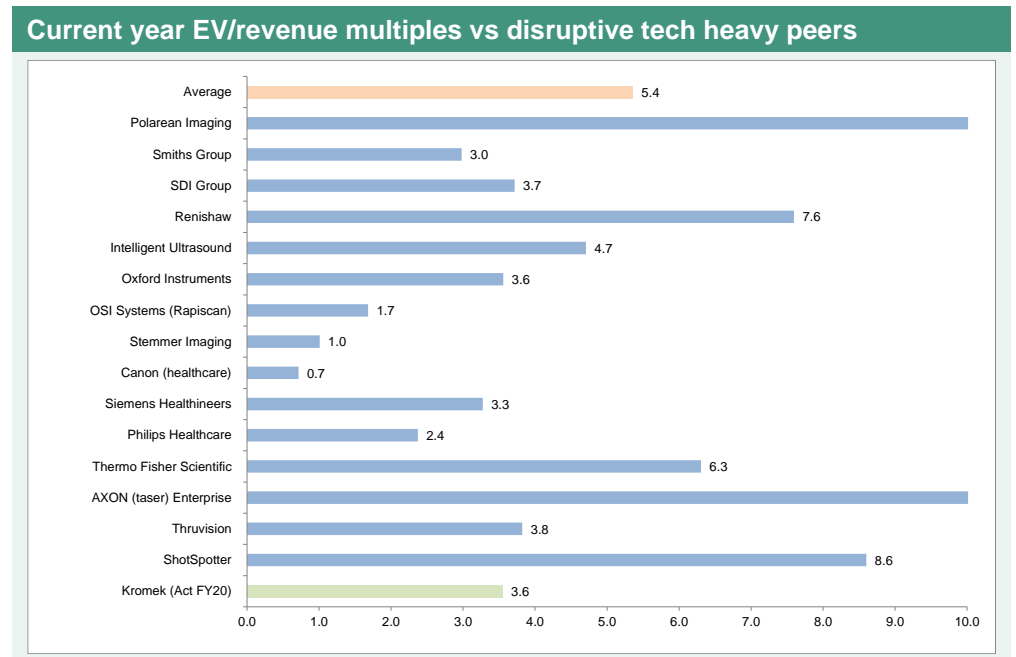
CEO Arnab Basu adding: *“I am pleased to report we finished H1'21 in a stronger position than we entered, resulting from a **considerable uptick in trading in the last 2 months of the period**. We are starting to see a return to some normality in business patterns, as our customers recommence their commercial activities.*

*“We have also made substantial progress in the development – for DARPA and other national governments – of an automated bio-detection system capable of detecting airborne pathogens. **In situ trials are expected to commence during H2'21, and we believe this new market segment will be a significant contributor to revenues in the short- to medium-term.***

*“Looking ahead, the **positive momentum seen in the last 2 months of H1 has continued into H2 with detector shipments increasing**. As a result, **we expect to see significant growth in H2 revenue compared with H1'21** and the Board continues to look to the future with confidence and optimism.*

Shares appear attractively priced

Finally, the stock at 13p trades on a 3.6x trailing EV/sales multiple vs >5x for 'disruptive' IPR rich tech peers (see below). Plus thanks to the increasing momentum, we suspect this discount will either close in due course. Or if not, Kromek might eventually attract 1 or more opportunistic buyers at current down-trodden levels.



Source: Equity Development

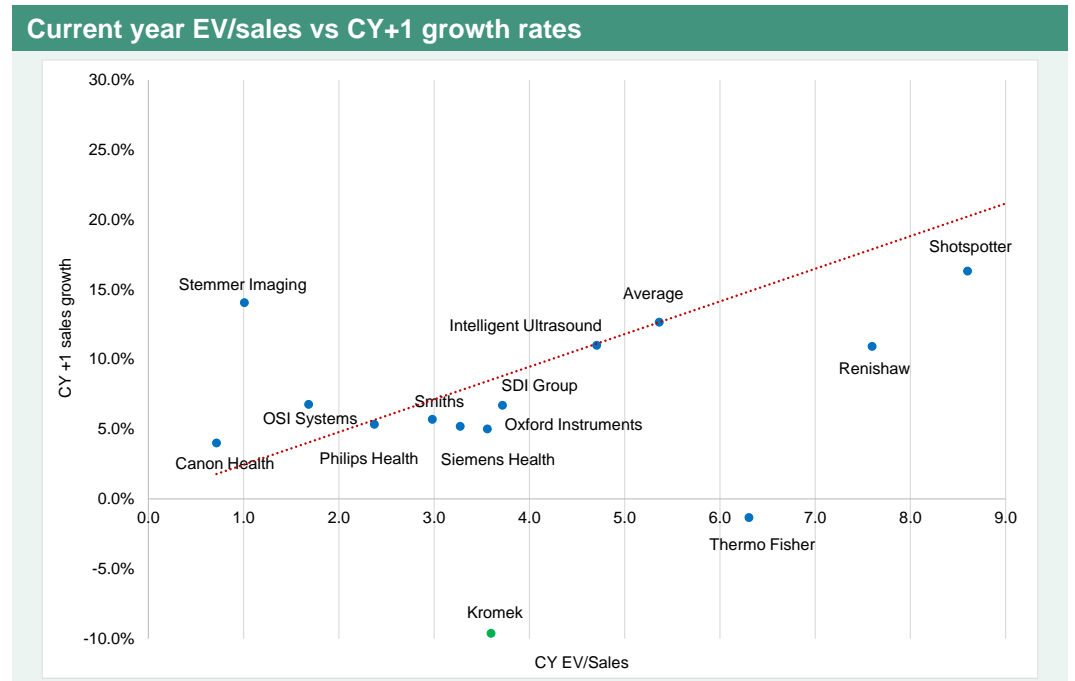
Key risks

- Although Kromek is presently commercialising its leading technology, there is no absolute certainty that anticipated revenues or growth can be achieved. Plus the adoption of new break-through science can take longer and cost more than originally thought.
- Covid19 related effects endure longer than expected, thus impacting Kromek's major image scanning markets.
- Orders tend to be lumpy in nature, and therefore by their nature difficult to forecast.
- The company is executing on many fronts, and therefore it is important there is sufficient management resource to facilitate the growth.
- Scaling up production and aftermarket support to satisfy substantially higher volumes could cause teething problems.
- Protection of intellectual property, especially from patent challenges.
- Competitive pressures – yet given Kromek's leading position in CZT, then this looks a less immediate threat.
- Customer concentration (largest client generated sales of £2.2m in FY20), and regulatory changes which may impact the introduction of CZT based products.
- Foreign exchange fluctuations and unwind of the working capital position, particularly relating to a large Asian OEM.
- The firm is loss making. In the event more funding is required, then it is not certain that future capital would be available at commercial rates.

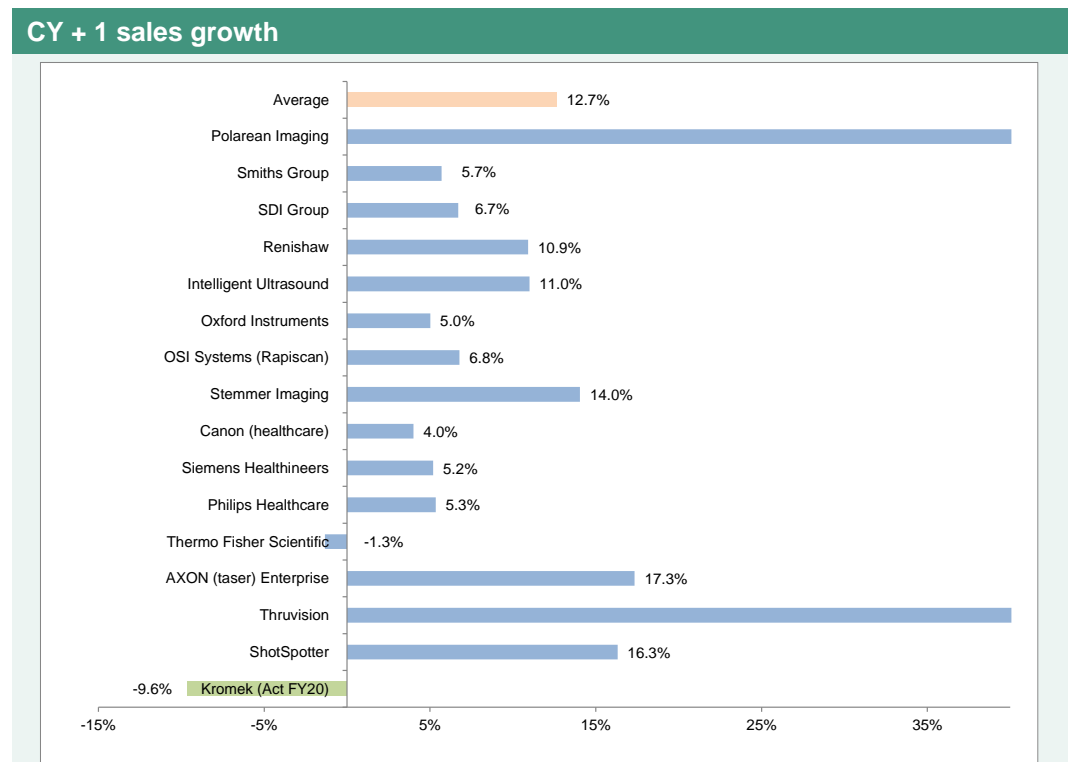
Summary financials (£'000s)			
Kromek (April year end)	2018 Act £'000s	2019 Act £'000s	2020 Act £'000s
Product	9,611	12,060	10,314
Other	2,234	2,457	2,806
Turnover	11,845	14,517	13,120
<i>% growth</i>	32.1%	22.6%	-9.6%
Gross margin	6,684	8,309	6,208
<i>% Margin</i>	56.4%	57.2%	47.3%
Adjusted EBITDA (pre SBP)	482	1,974	-441
<i>% Margin</i>	4.1%	13.6%	-3.4%
Depreciation	-785	-879	-1,185
Amortisation of capitalised R&D	-1,907	-1,806	-2,142
Share based payments	-131	-195	-225
Adjusted EBIT (post SBP)	-2,341	-906	-3,993
<i>% Margin</i>	-19.8%	-6.2%	-30.4%
Underlying Interest charge	-192	-364	-544
Adj. Profit before Tax (post SBPs)	-2,533	-1,270	-4,537
Adj. Basic EPS (p)	-0.4	-0.1	-0.8
<i>EPS growth rate</i>	76.0%	75.8%	-670.5%
<u>Valuation benchmarks</u>			
<i>P/E ratio</i>			
<i>EV/Sales</i>	3.9	3.2	3.6
<i>EV/EBITDA (pre SBPs)</i>		23.6	
<i>EV/EBIT</i>			
<i>Effective tax rate</i>	0.0%	0.0%	0.0%
<i>PEG ratio</i>			0.0
<i>% EBITDA drop-through rate</i>	67.5%	55.8%	172.9%
<i>Dividend yield</i>	0.0%	0.0%	0.0%
Net cash/(debt) - pre IFRS16	7,738	16,420	3,838
Reported sharecount	260,162	275,073	344,644
Sharecount diluted	262,768	277,655	345,729
Shareprice (p)	13.0		

Source: Equity Development

Appendices - sector valuation metrics and KPIs

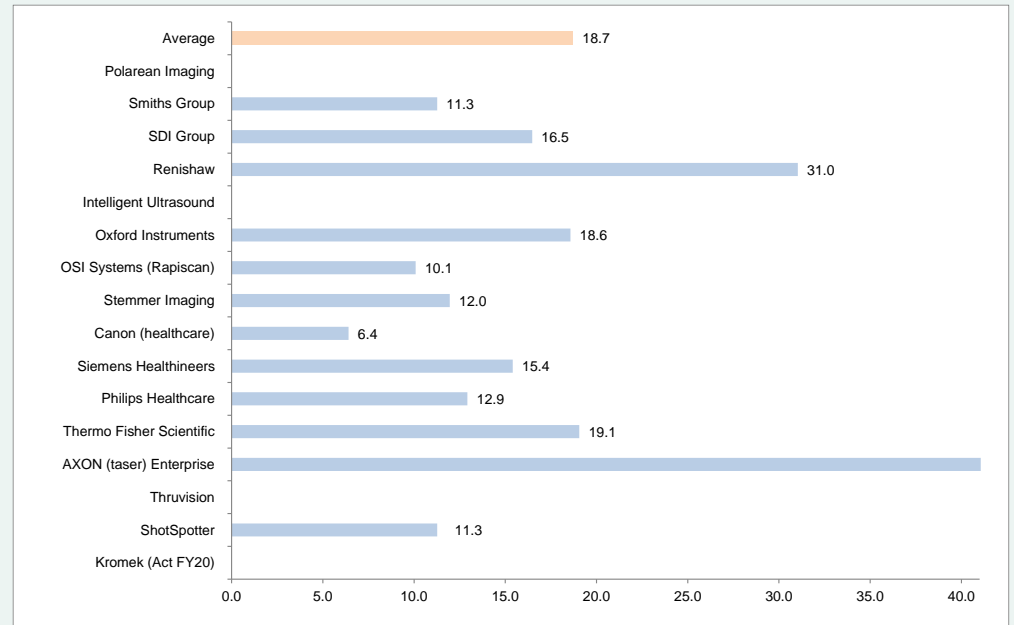


Source: Equity Development. Kromek FY'20 figures



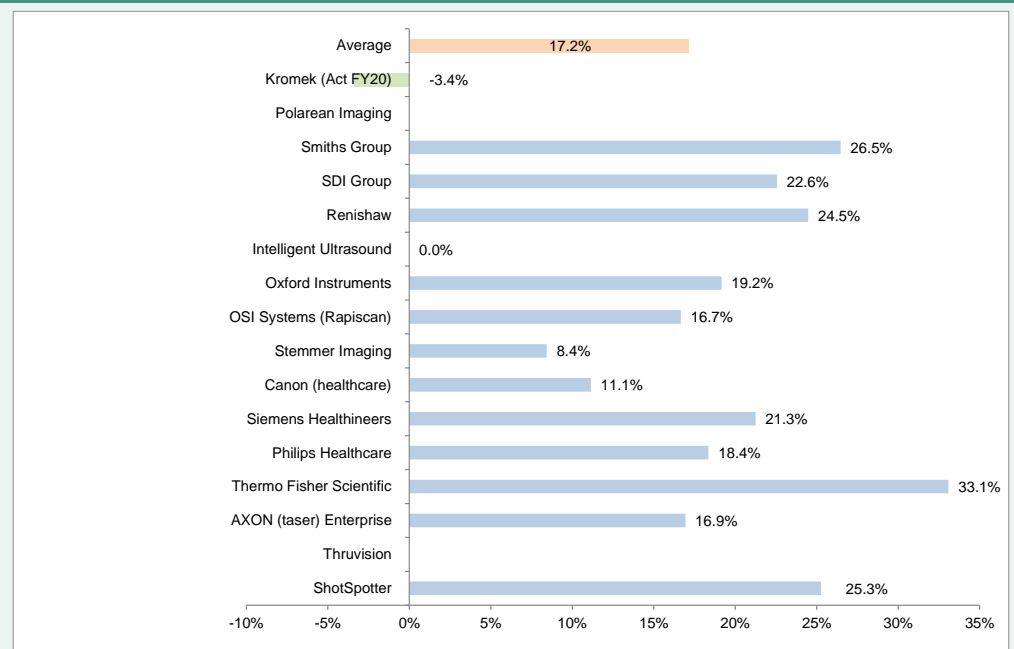
Source: Equity Development

Current Year (CY) EV / EBITDA vs peers



Source: Equity Development

CY EBITDA margins (%) vs peers



Source: Equity Development.

Market capitalisation of peers

	Shareprice	Mrk Cap (Millions)	CY net cash / (debt) Millions	Enterprise Value (Millions)
ShotSpotter	\$43.0	\$490	\$0	\$490
Thruvision	£25.0	£36.4	£5.8	£30.6
AXON (taser) Enterprise	\$124.0	\$7,874	\$350	\$7,524
Thermo Fisher Scientific	\$510.0	\$203,490	-\$12,616	\$216,106
Philips Healthcare	€ 44.50	€ 40,050	-€ 4,600	€ 44,650
Siemens Healthineers	€ 43.50	€ 46,763	-€ 1,600	€ 48,363
Canon (healthcare)	¥2,000	¥2,100,000	-¥207,305	¥2,307,305
Stemmer Imaging	€ 22.00	€ 143.00	€ 21.00	€ 122.00
OSI Systems (Rapiscan)	\$94.0	\$1,692	-\$195	\$1,887
Oxford Instruments	\$1,960.0	\$1,125	\$61	\$1,064
Intelligent Ultrasound	14.5p	£39.1	£8.0	£31.1
Renishaw	£57.50	£4,186	£152	£4,034
SDI Group	£1.20	£118	-£4	£122
Smiths Group	£15.20	\$6,065	-\$1,099	\$7,164
Polarean Imaging	\$0.65	\$105.3	\$9.9	\$95.4
Kromek (Act FY20)	13.0p	£44.8	-£1.8	£46.6

Source: Equity Development

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