

## The future is bright, the future is 'CZT'

28 June, 2017

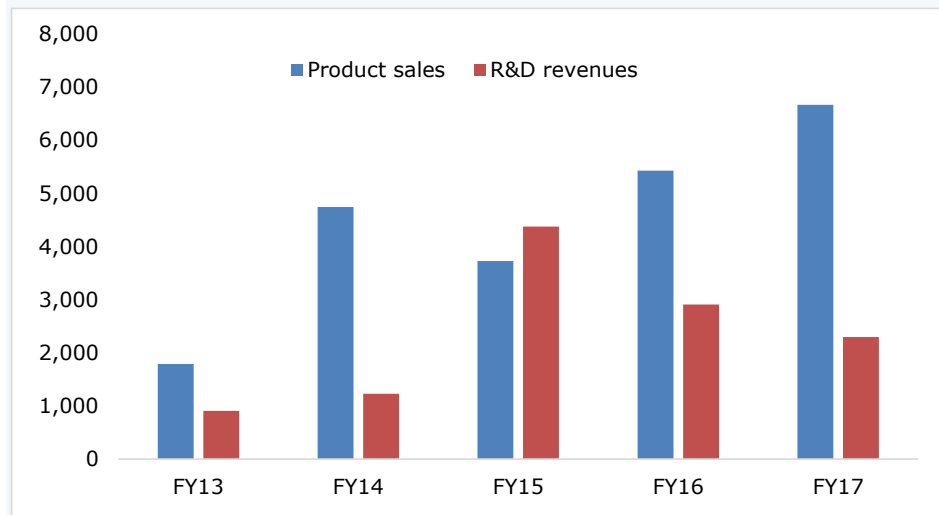
Graphene may grab all the headlines, but there is another **'wonder material'** being championed by perhaps Britain's most unassuming tech-rich University spinout, Kromek. The miracle substance is 'Cadmium Zinc Telluride', or CZT for short, which is gaining real traction in the multi-\$billion healthcare (eg CT), homeland security and nuclear detection markets.

What makes it so special is **its ability to generate much sharper images than existing X-rays and, importantly, at far lower radiation doses and in double quick time.** A huge benefit for doctors who need to treat notoriously difficult to diagnose diseases like cancer, Alzheimer's, Parkinson's and osteoporosis. Indeed with regards to efficacy, this scientific break-through is a bit like moving from the old Black & White tellies to ultra-HD OLED screens in one fell swoop. So superior is the step-change in picture quality that we think CZT will leap from 'cottage industry' to ultimately dominate its target therapeutic areas.

### From drawing board to everyday use

Better still, this now seems to be happening with Kromek's FY17 product revenues climbing 23% (see below) to £6.7m, representing 74% (65% LY) of the total (£9.0m).

#### Strong growth in products sales



Source : Equity Development

### Widespread healthcare adoption looks likely

Tellingly, healthcare giant GE has also launched its own range of CZT based SPECT (single-photon emission computed tomography) scanners, which should help further educate end-users, build broader market acceptance and expedite the development programs of the other 3 large imaging OEMs (Toshiba, Siemens and Philips).

**Potentially creating a tidal-wave of demand for cutting-edge detectors, like those supplied by Kromek.**

#### Company Data

EPIC	<b>AIM:KMK</b>
Price	33p
52 week Hi/Lo	37p/19p
Market cap	£86m
ED valuation/share	37p

#### Share Price, p



Source: DigitalLook

#### Description

Kromek is pioneering digital colour imaging for x- and gamma rays, using cadmium zinc telluride crystals. Key markets include medical imaging, homeland security and nuclear detection.

Headquartered in Sedgefield (UK), Kromek has c.109 employees, of which 88 are in R&D, with a 3 further sites in California, Pennsylvania and Germany. The firm has filed/registered >265 patents.

**Next news:** AGM

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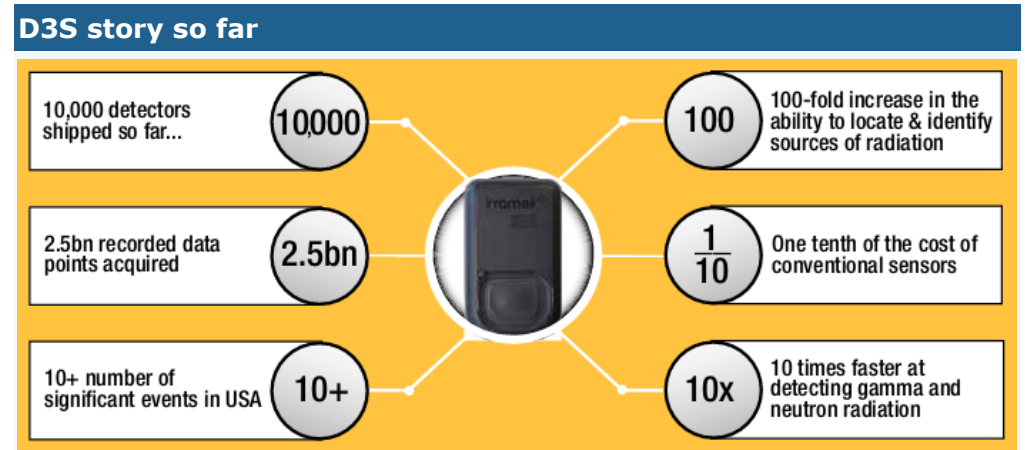
## OK, but how good is Kromek’s technology really?

The easiest way to answer this is to simply look at what customers are doing. Here, **the company has won \$40m of orders over the past 2 years**, spearheaded by a 5 year \$12.6m contract for Bone Mineral Densitometry (BDM) with 1 of the 4 major OEMs, allied to a possibly much larger deal (worth up to \$159m over 7 years) with a Chinese manufacturer for SPECT modules.

## D3S could generate >£100m of sales over next decade

Elsewhere, there is strong interest for the firm’s award winning airport bottle/baggage scanners, whilst its **state-of-the-art D3S hand-based ‘dirty-bomb’ detector continues to rise the ‘innovation hit parade’**, after being recently deployed in Brussels to protect President Donald Trump. To date, **>\$11m worth of contracts have been secured** with 10,000 units shipped to the US Department of Defense (DoD) alone.

Following successful field trials in Washington DC and being currently deployed by New Jersey Port Authority, we believe there is an good chance of supplying literally 100ks more D3S over the coming years – where the DoD is seriously considering deploying this system across up to 23 US cities (\$10m-\$15m each). Of course, with such a **ringing endorsement from perhaps one of the worlds’ most discerning customers**, then the probability of follow-on business from the likes of Britain, France, continental Europe and plenty of other countries would increase markedly, especially in light of the increasing threat from terrorist attacks on civilian locations.



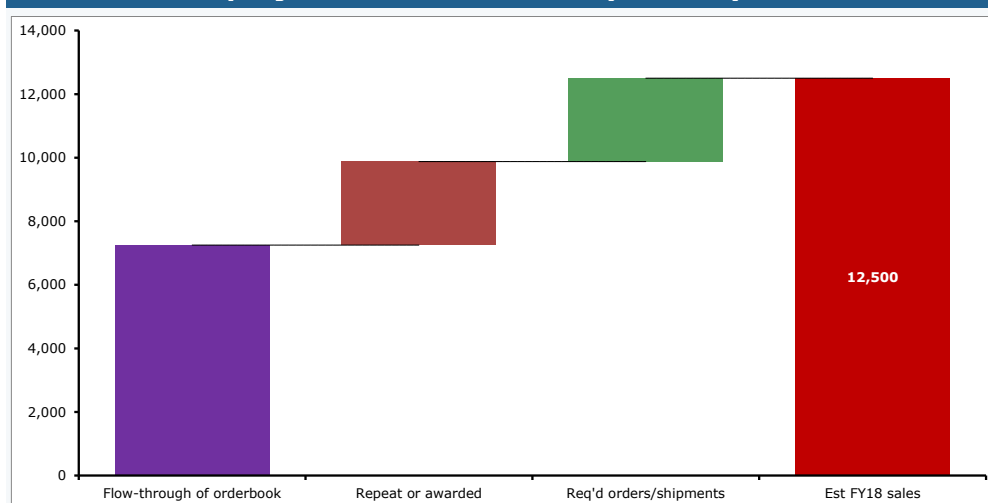
Source: Company

## So, what does this mean for the financials?

Well, we reckon **Kromek has reached a tipping point**. New orders are coming in thick and fast, revenue cover is improving and crucially the **group is set to reach EBITDA breakeven for the 1<sup>st</sup> time in its history this year**. Supported by **visibility over 75%+** of our **FY18 £12.5m revenue estimate** (see below) – with further upside possible given favourable forex tailwinds, alongside possible new D3S orders that hopefully will be signed.

What’s more, due to its largely fixed cost base, we calculate underlying EBITDA drop through rates are circa 40%, which going forward should provide **positive operating leverage** as the business scales.

### Breakdown of projected FY18 turnover (£12.5m)



Source: Equity Development

### Fortress-like balance sheet

Furthermore, even in the unlikely event that new contracts were to be pushed to the right, then after raising £21m (gross, £19.8m net) in February at 20p/share, then the group possesses the necessary financial ballast to ride out any short term storms, sporting **net cash of £17.3m** (worth 6.6p/share) as at the end of April 2017.

### Financial forecasts

Kromek (April year end)	2014 Act £'000s	2015 Act £'000s	2016 Act £'000s	2017 Act £'000s	2018 Est £'000s	2019 Est £'000s
<b>Turnover</b>	<b>5,972</b>	<b>8,101</b>	<b>8,342</b>	<b>8,968</b>	<b>12,500</b>	<b>16,000</b>
% growth	121.9%	35.6%	3.0%	7.5%	39.4%	28.0%
<b>Gross margin</b>	<b>3,871</b>	<b>5,626</b>	<b>4,429</b>	<b>5,117</b>	<b>7,313</b>	<b>9,600</b>
% Margin	64.8%	69.4%	53.1%	57.1%	58.5%	60.0%
<b>Adjusted EBITDA (pre SBP)</b>	<b>-3,007</b>	<b>-1,557</b>	<b>-2,376</b>	<b>-1,461</b>	<b>0</b>	<b>1,400</b>
% Margin	-50.4%	-19.2%	-28.5%	-16.3%	0.0%	8.7%
<b>Adjusted EBIT (post SBP)</b>	<b>-4,429</b>	<b>-3,122</b>	<b>-4,079</b>	<b>-3,739</b>	<b>-3,112</b>	<b>-2,120</b>
% Margin	-74.2%	-38.5%	-48.9%	-41.7%	-24.9%	-13.2%
Underlying Interest charge	-515	-71	-83	-40	0	0
<b>Adj. Profit before Tax</b>	<b>-4,944</b>	<b>-3,135</b>	<b>-4,162</b>	<b>-3,779</b>	<b>-3,112</b>	<b>-2,120</b>
<b>Adj. Basic EPS (p)</b>	<b>-8.0</b>	<b>-2.9</b>	<b>-2.9</b>	<b>-2.2</b>	<b>-1.2</b>	<b>-0.8</b>
EPS growth rate			-1.3%	26.5%	44.5%	31.9%
<b>Valuation benchmarks</b>						
P/E ratio						
EV/Sales	11.4	8.4	8.2	7.6	5.5	4.3
EV/EBITDA						48.7
EV/EBIT						
PEG ratio						
% EBITDA drop-through rate					41.4%	40.0%
Dividend yield					0.0%	0.0%
<b>Net cash/(debt)</b>	<b>6,563</b>	<b>151</b>	<b>3,857</b>	<b>17,343</b>	<b>14,043</b>	<b>12,043</b>
Reported sharecount	61,871	107,818	141,337	174,573	259,176	259,176
Sharecount diluted	66,951	114,042	147,586	178,137	262,740	262,740
<b>Shareprice (p)</b>	<b>33.0</b>					

Source: Equity Development

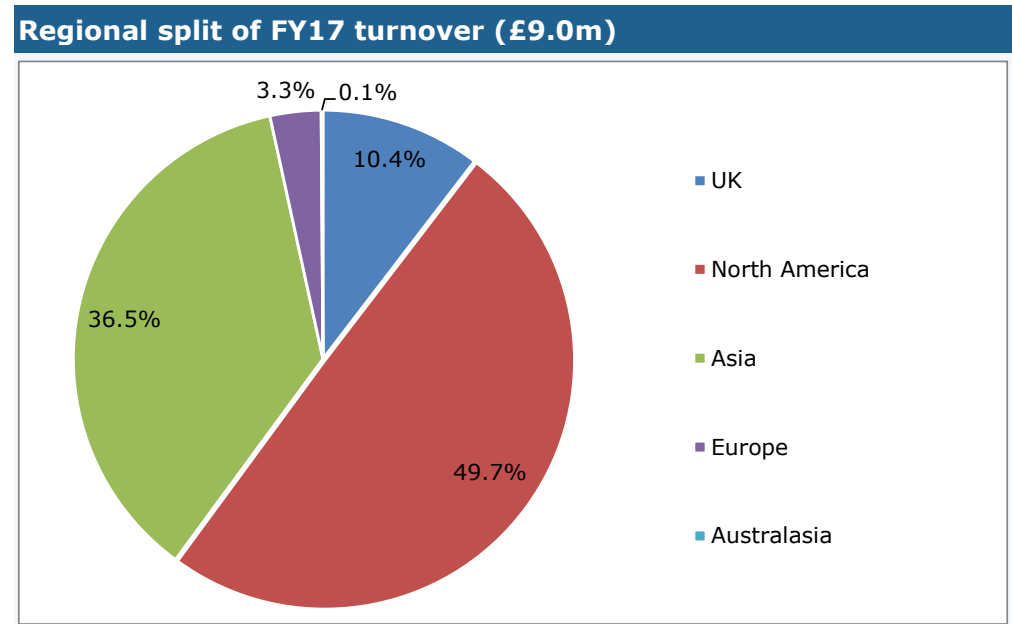
## FY17 results were broadly in line

In terms of this morning’s prelims, **FY17 turnover and adjusted EBITDA** (pre share-based payments) **came in slightly up on our estimates** at £9.0m (vs ED £8.9m and £8.3m LY) and -£1.5m (-£1.85m ED and -£2.4m LY) respectively. Albeit net cash was lower at £17.3m (vs ED £20.0m), reflecting £3.1m of up-front development expenses (shown in WIP) incurred on the potentially huge Chinese agreement that will be recovered as product shipments are made.

This arrangement is standard practise and, although there’s an initial working capital build, the cash outflow should unwind in due course, and was one of the reasons behind the recent fund raise. Elsewhere, **underlying inventory levels, debtors (41 days) and costs remain tightly controlled**, with little noticeable change YoY despite the higher top line and production/R&D activity. Headcount actually declined marginally from 111 to 109.

## Solid cash management

Therefore, overall, after absorbing £4.2m of capitalised R&D (vs £1.4m amortisation) and £3.1m of customer specific WIP, FY17 cash-burn was still relatively modest at -£4.7m (vs -£3.6m LY), helped by the receipt of £0.9m in R&D tax credits. Geographically, most of the turnover is being driven from North America, UK and China, where the D3S and CZT healthcare detectors are literally going down a treat.



Source : Equity Development

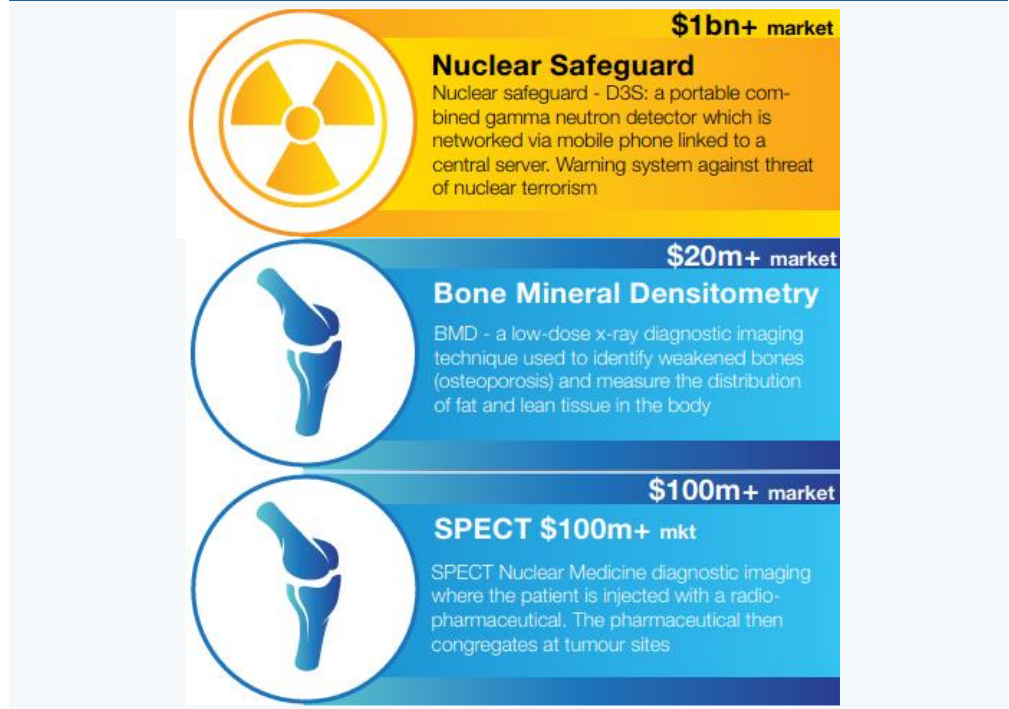
## No change to FY18 outlook, with new FY19 forecasts

Looking ahead, we make no change to our FY18 projections, but for the first time introduce FY19 estimates, mirroring the **improved visibility and management’s rising confidence**. Interestingly for FY19, no large-scale D3S US city roll-out has been factored into the £16m turnover figure, meaning that there is obviously upside, if such a landmark deal was secured (as we suspect it might), say towards the back end of this fiscal year.

## Multiple market opportunities

Accordingly, **we have nudged up our valuation from 34p to 37p per share**, but once again reiterate that this is conservative, assuming Kromek can successfully commercialise its leading position in several fast-growing multi-\$billion markets (see below). Importantly from an investment perspective, the company is not a 'one trick D3S pony' either, even though this device is **rightly receiving incredible interest from all corners of the global**.

### Huge opportunities over next 2-3 years driving growth



Source: Company

CEO Dr Arnab Basu concluding **"Kromek is experiencing a step change in the growth across all its business segments and expects to report revenue growth for 2017/18 of approximately 40% in line with market expectations.** This expectation is underpinned by the good visibility of revenues as the Group continues delivery on over \$40m of contracts signed over the last 24 months.

The Group also continues to benefit from its customers launching next-generation CZT-based products into the market. **In 2017/18, Kromek anticipates further launches of end products by customers incorporating its advanced technology prompting additional orders to be placed as sales of these end products accelerate.**

Overall, the Group's products continue to gain traction in all its business segments with Kromek winning new customers as well as strengthening its relationships with existing customers. **With a strengthened order book in place and improved revenue visibility, the Board looks to the future with confidence."**

## Key risks

- Kromek is at a relatively early stage of its commercial development, with no certainty that anticipated revenues or growth can be achieved.
- Orders tend to be lumpy in nature, and therefore by their nature difficult to forecast.
- The adoption of new break-through technology can take longer and cost more than originally thought.
- 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 - albeit given Kromek's leading position in CZT, then this looks a less immediate threat.
- Customer concentration with one client representing 33% of FY17 sales.
- Regulatory changes which may impact the introduction of CZT based products.



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