

# Corero Network Security plc



19th July 2023

## ARR driven cyber growth

Corero is a cyber software business that is overlooked by the market, in our view. Huge progress has been made over the last three years bringing the business to operational maturity. The company is predominantly now a recurring revenue business, but this does not seem to be recognised in the current valuation. Corero's technology has been validated with major market leading customers and go-to-market partners. Back in 2019 the stock was trading around 5x EV/sales. On just 2x FY22A EV/sales the shares now, the shares look materially undervalued. We will be initiating coverage with forecasts in due course.

### Cyber defence solutions

Corero is a cyber software company that has developed a market leading solution which protects against a specific type of network threat called **Distributed Denial of Service (DDoS)** attacks. Its **SmartWall** solution provides high performance, automated real-time protection against DDoS attacks for a global customer base. This customer base of internet service and hosting providers and SaaS enterprises rely on high availability of internet networks to conduct customer business.

### Big market and identifiable drivers

The intensity of network attacks such as DDoS has only been growing with time and the current geopolitical situation is only exacerbating the threat environment. Additionally, customers need to expand their protection as their own underlying data volumes grow. This means that Corero has **two material growth drivers**: the need for cyber protection and increasing data volumes over time. The direct addressable market for DDoS solutions was estimated to be worth \$2.9bn in 2022 and is expected to grow at an average annual compound growth rate of 14% to 2030.

### Recurring revenue model

Corero has transitioned to a predominantly annual recurring revenue model. 'As-a-Service' revenues have grown to form almost a quarter of total revenue in FY22A. When recurring support and maintenance revenues are included, total recurring revenues rise to 60% of total revenue. Annualised recurring revenues (ARR) stand at \$15.3m as of 30th June 2023.

### c20% compound growth in recent years

Group revenues have grown c20% compound between 2018-22A, enabling the business to fully recover its total cost base and report positive EBITDA since FY21A. Corero has repaid all outstanding debt and is now unleveraged. The recent trading update for H1E has **confirmed strong trading** with revenues growing 20% YoY to \$10.6m and net cash on the balance sheet of \$6.2m.

#### Company Data

EPIC	CNS
Price (last close)	6.9p
52 weeks Hi/Lo	11.9p/5.6p
Market cap	£34m

#### Share Price, p



Source: ADVFN

#### Description

Corero Network Security provides cyber defence solutions which help protect its global enterprise customers against DDoS attacks.

#### Financials & Ratios

Y/E Dec, \$m	2019A	2020A	2021A	2022A
Group revenue	9.7	16.9	20.9	20.1
EBITDA	-3.2	-1.4	3.3	2.6
PBT	-6.6	-4.0	1.4	0.4
Adjusted EPS (p)	-1.6	-0.8	0.3	0.1
DPS (p)	1.0	2.0	3.0	4.0
EV/sales (x)	4.1	2.4	1.9	2.0
EV/EBITDA (x)	nm	nm	12.0	15.2

Company Data

#### Simon Strong (Analyst)

0207 065 2690  
[simon.strong@equitydevelopment.co.uk](mailto:simon.strong@equitydevelopment.co.uk)

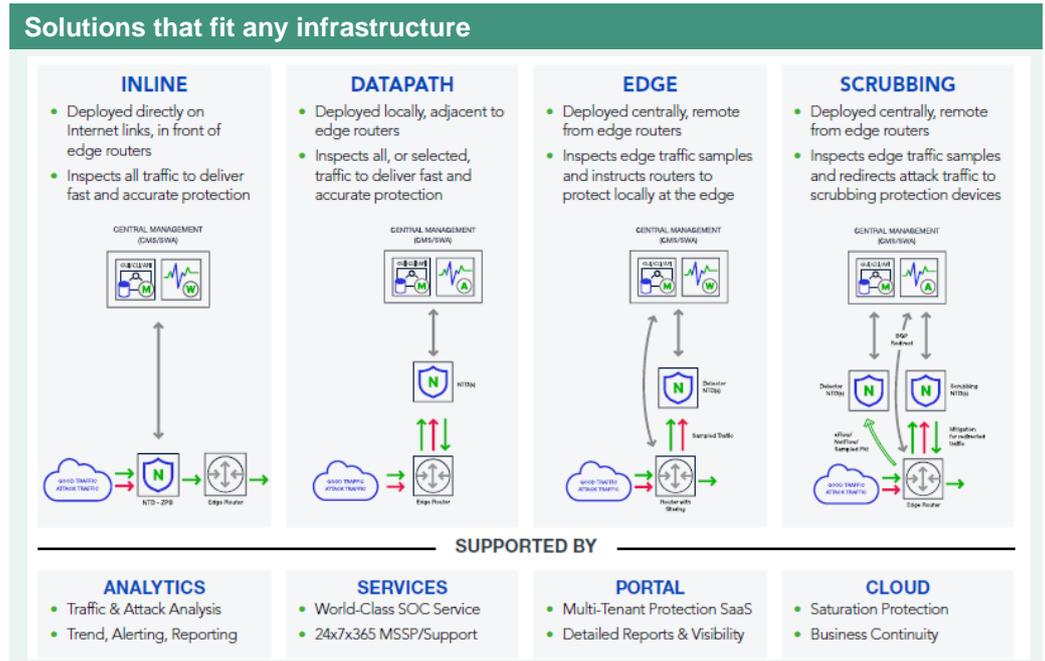
#### Hannah Crowe

0207 065 2692  
[hannah@equitydevelopment.co.uk](mailto:hannah@equitydevelopment.co.uk)

## Specialist cyber protection

Corero Network Solutions (LON: CNS) is a specialist cyber software business listed in London on AIM. The majority of its revenues are derived from the Americas (73% in FY22A) with the US market being its dominant territory. The Corero product set, named SmartWall, prevents against a specific type of cyber security threat called a Distributed Denial of Service (DDoS) attack.

These attacks can arise in core networks, in cloud-based environments, network edges or at application levels. Corero provides a pre-emptive solution to counter such attacks in real-time, together with a reporting and analytics functionality to ensure continuing network availability.



Company Accounts

## Distributed Denial of Service (DDoS)

Businesses across the globe are dependent on stable internet and network connectivity to conduct their day-to-day operations. There are malicious actors who wish to disrupt and profit from breaches in network security around the world. Cybersecurity threats vary in type and include DDoS, hacking, breaches, phishing, fraud, ransomware, data theft and exfiltration. Businesses must protect against these threats or risk loss or business failure. The need for protection against these risks has created a global market for cybersecurity products.

Fortune Business estimates the value of the total cybersecurity product market at \$172bn in 2023 and this is expected to grow at c14% per annum through to 2030. Verified Market Research valued the DDoS subset of this market, which is the focus for Corero, at \$2.9bn in 2022. It is forecast to grow at a compound rate of 14% out to 2030 to then be worth \$7.5bn per annum.

## Complexity of attacks

As computing architectures have become more complex with advances such as the advent of cloud computing, the potential severity of cyber attacks has increased. Emerging architectures such as 5G networks and edge computing further intensify these risks as the proliferation of end points compounds potential attack vectors.

## Real-time protection

**Corero provides real-time, automatic DDoS protection to a global enterprise customer base.**

Its customers include major corporate entities, network service providers and hosting providers. DDoS is one of the most prevalent and profitable forms of internet network hacking attacks and is responsible for many high-profile internet outages.

A single, well-known example of this is the attack on **AWS. Amazon Web Services (AWS)** cloud computing services came under attack in February 2020 with overwhelming traffic volumes measuring 2.3 terabits per second (Tbps) coming into its servers. The hackers hijacked user directories on Connection-less Lightweight Directory Access Protocol (CLDAP) servers to attack AWS' servers with immense amounts of data. DDoS attacks use this technique as a way of compromising security protocols.

## How DDoS attacks work

### Material disruption

Distributed Denial of Service (DDoS) attacks attempt to disrupt websites or services by overwhelming a network with massive flows of false requests so that it becomes unserviceable. DDoS attacks can be initiated by single users on a single device, or more frequently multiple devices or 'bots' can be deployed to significantly amplify attacks.

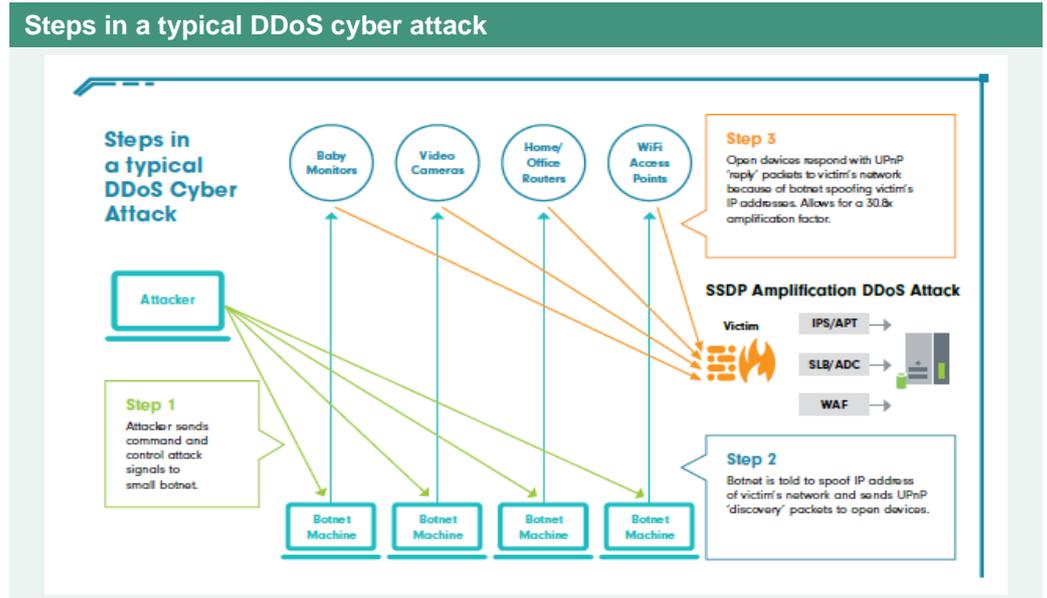
DDoS incidents affect all types of businesses, normally for malicious purposes such as harming a competing business, extorting money, compromising data or to gain an advantage for hacktivism purposes.

There are three types of attack:

- volume-based attacks – large volumes of data packets are sent to weigh down a server's bandwidth and cause it to collapse
- Layer 3, or protocol attacks – continuous requests by hackers in the form of pings or fragmented packets are sent to exhaust network infrastructure resources like servers or firewalls
- Layer 7, or application attacks – network machines or 'bots' are used to request resources from a server which causes it to crash.

All three types of attacks ultimately facilitate hackers' ability to access private networks so they can conduct malicious activities. The network downtime and onward consequences of DDoS attacks can cost millions of dollars in terms of inoperable systems, stolen data, and potential regulatory fines. Attacks on critical network infrastructure happen multiple times per day and the potential cost of not having protection is potentially huge.

**The current geopolitical environment makes protection from malign state actors even more important.**



Company Accounts

## Protection against DDoS attacks

Corero's DDoS protection products guard against network attacks and subsequent down time by using Deep Packet Inspection to remove attack traffic before it reaches critical infrastructure. The ability to achieve this 'in-line' without having a detrimental impact on network traffic latency or backhauling traffic for mitigation at very high speeds is one of the key selling points of its SmartWall product. Corero has also developed a monitoring platform known as SecureWatch to provide visibility and reporting data pre, during and post event attacks.

The ability to protect against attacks in real time is a significant competitive advantage for Corero, and for its customers. Corero's real-time protection is up to 20x faster than competing products and can mitigate against 98% of attacks. Alternative options in the absence of adequate protection include redirecting traffic into a Remotely Triggered Black Hole (RTBH) which nullifies all traffic be it legitimate or otherwise. Other competing products, such as principal competitors A10 Networks and Arbor Networks, owned by NetScout Systems (Nasdaq: NTCT), make use of flow sampling and scrubbing centres reliant on manual intervention to identify attacks and mitigate them.

While scrubbing centres are suitable for low level attacks, they are costly, slow and cannot offer the real-time prevention against highly sophisticated attacks that Corero is able to offer.

The modular nature of Corero's products means that protection can be scaled to provide the required data throughput protection. This gives underlying customers' operations the knowledge that their activities which are reliant on stable infrastructure are fully protected from DDoS attacks. This enables Corero's partners and customers to win business with the certainty that their network infrastructure has real-time, always-on protection which creates a competitive advantage for them.

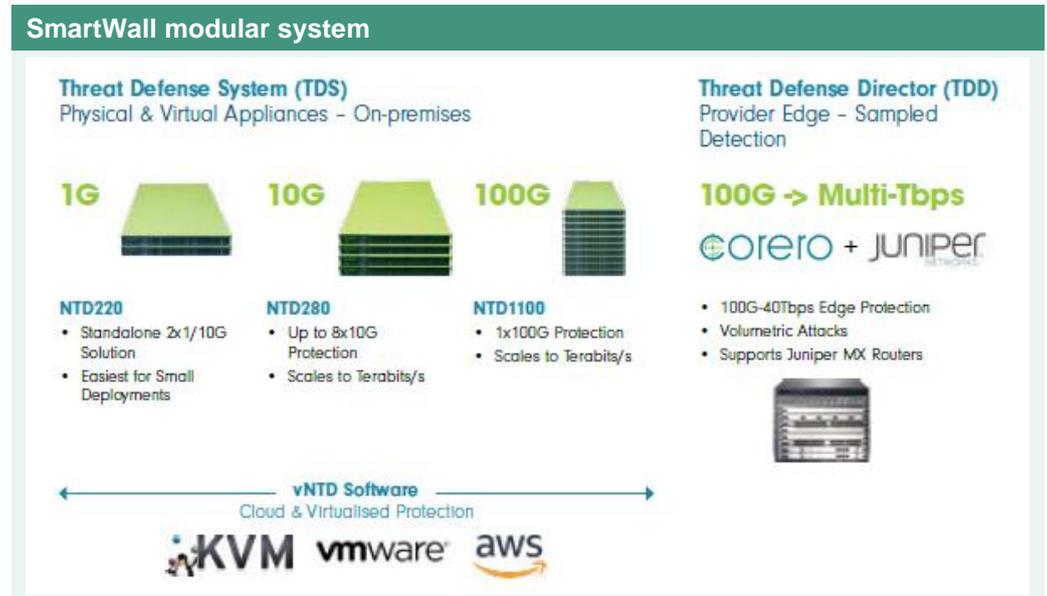
Corero's Smartwall technology is the result of significant investment (c\$35m over last few years) and is deployed in many business-critical and important network infrastructure environments. In our opinion, the technology proposition is validated by **Juniper Networks** holding a 10% shareholding in Corero and it sells the technology to enable DDoS protection for its router architectures.

## Deployments

The Corero SmartWall product suite can be deployed on-premise, in the cloud, or as-a-service. It has a comprehensive visibility and reporting functionality through its SecureWatch platform.

## Product suite

- SmartWall Threat Defense System (TDS) – core DDoS protection available in physical and virtual environments with 1G, 10G, 100G and cloud variants
- SmartWall Threat Defense Director (TDD) – edge protection against volumetric attacks, with Juniper PTX & MX router support
- SmartWall Threat Defense Cloud (TDC) – cloud based protection
- SmartWall Edge Threat Defense (ETD) – network edge protection
- SecureWatch – monitoring and support product built on a Splunk platform for customised analytics, visualisation and dashboards.



Company Accounts

## Growth

Data volume growth is a major and readily identifiable technology trend and Corero is able to capitalise on this trend to grow with its customers as their data demands increase. Higher data volumes may inevitably mean that an initial installation of 10Gb of DDoS protection will need to be upgraded to 40Gb or 100Gb over time. This represents a **material upsell opportunity** to Corero from its installed base of existing customers. We can therefore summarise Corero's growth trajectory as follows:

- Expand into overseas markets
- Leverage existing partnerships
- Grow into existing Tier 1 customers
- Broadening the functionality and worth of existing products
- Grow channel (distributor and reseller) relationships

## Financials

### Near 20% compound growth in Group revenues

Corero has generated 19.2% compound growth in Group revenues since 2018A. The fastest growing service lines has been DPaaS:

Revenue analysis					
Y/E Dec, \$k	2018A	2019A	2020A	2021A	2022A
Software Licence and Appliance Revenue	4,866	3,821	8,446	10,337	8,107
DDoS Protection as a Service	819	1,287	2,876	4,025	4,854
Maintenance & Support Services revenue	4,266	4,606	5,555	6,533	7,160
<b>Total revenue</b>	<b>9,951</b>	<b>9,714</b>	<b>16,877</b>	<b>20,895</b>	<b>20,121</b>
Point in Time Delivery	4,866	3,821	8,446	10,337	8,107
Over Time	5,085	5,893	8,431	10,558	12,014
<b>Total</b>	<b>9,951</b>	<b>9,714</b>	<b>16,877</b>	<b>20,895</b>	<b>20,121</b>

*Company Data*

### DPaaS is the fastest growing service line at 58% CAGR

Corero segments its revenues between three service lines:

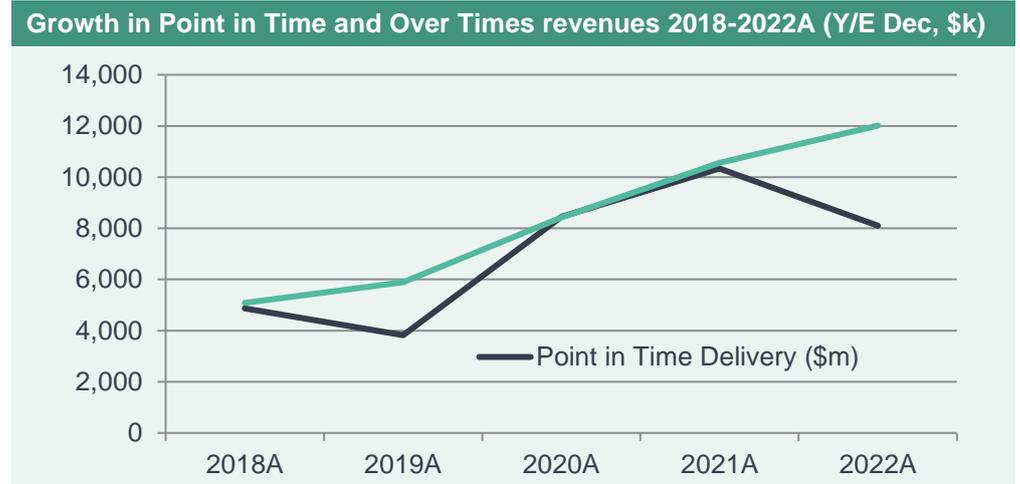
- Software licence and appliance revenues (40% of FY22A sales): this revenue line reports the units that are physically shipped in hardware form to customers with the software-only term sales (typically three years) currently forming a small proportion of this income. Appliance units are sold on a perpetual licence basis with revenues recognised upfront. Support and maintenance services are charged as a percentage of contract value (typically 20% per annum).
- DDoS-Protection-as-a-Service (24% of FY22A sales): DPaaS contracts are typically sold on a three-year term with revenues recognised on a straight line basis through the contract period.
- Maintenance and Support Services (36% of FY22A sales): maintenance and support revenues are typically sold on a three-year basis too and recognised on a straight-line basis over the life of a contract.

### Building 'Over Time' revenues

DPaaS and Maintenance/support revenues are aggregated in the accounts to show the split between 'Point in Time' revenues (i.e. appliance and software sales) and recurring 'Over Time' revenues (i.e. DPaaS/support activities).

This latter category of 'Over Time' revenues forms the basis of the stated Annualised Recurring Revenues (ARR) with 'Over Time' revenues being the product of twelve months of cumulative sales. ARR in contrast is the value of all contracts as at a balance sheet date on an annualised basis.

**It is ARR which is the most valuable part of the revenue model** in our opinion because of its predictability. The predictability of these revenues is underlined with a stated contract renewals rate of 98% in FY22A, a level which we regard as high and very healthy. ARR revenues have grown quickly and have formed the majority of total income from FY21A onwards:



Company Data

### Current trading

Corero released a positive trading update in early July in relation to the 6-month period to June 2023. In summary:

- +20% YoY revenue growth expected (to \$10.6m), assisted by its focus on regional ISPs SaaS and hosting providers customers,
- ARR +13% YoY to \$15.3m (+6.3% sequentially),
- strong contract momentum with order intake in H1 of \$13.0m (vs \$10.9m in H1 2022A). The company reported 10 significant customer orders in Q2 totalling \$6.0m with an average order value of \$597k,
- positive adjusted EBITDA of \$0.2m in H1,
- outstanding bank debt of \$1.2m repaid in full.

Q2 saw particularly strong order intake partly driven, we believe, from some of the orders that were deferred from Q4A last year. Net cash balances ended H1E at \$6.2m (+40% sequentially) with natural cash generation completely deleveraging the balance sheet.

**In a market environment where financing needs weigh heavily on share prices, this is a major milestone for the Group.**

## Summary

### Investment play on data volume growth

We believe that the strength of Corero's business lies in its ability to generate economic value from the major growth themes of both cyber security needs and data volume growth. These factors underwrite a continued growth path for the business.

### Materially de-risked

**Corero is in the most robust position it has been since listing.**

Its growth profile has allowed it to now escape a cycle of regular equity financing rounds which have arguably held back its share price. The last equity raise was in November 2019 when £3.25m was raised in a placing and subscription at 3.5p. Subsequent investment has facilitated double digit ARR growth and facilitated natural cash generation to de-lever the balance sheet. Now the Group has a robust net cash position of over \$6m and bordering on free cash flow positive, it has been materially de-risked.

### Hugely investable

Corero services large identifiable markets in growth phase and it has a scalable, self-sustaining business model. There is over \$35m of R&D invested in its intellectual property to date giving the company its competitive advantage and a very defensible economic moat. A renewals rate of 98% provides great insight into the value of SmartWall perceived by its customers. Despite all the progress bringing the business towards a mature operating state and de-risking it financially, the share price is at a three-year low.

**Without doubt, the tangible progress made should support a higher valuation.**

### De-equitised market presents opportunities

Back in 2019, before the significant progress in maturing its business model, the stock was trading on over 5x historic EV/sales. This rating contrasts significantly with current levels (FY22A EV/Sales: 2.0x). The current lows for liquidity should mark a cyclical bottom, or at least something close to it.

This appears to provide investors with an opportunity to capitalise on IP-backed, recurring revenue cyber security businesses such as Corero at depressed valuations.

<b>Income Statement</b>				
<b>Y/E Dec, \$k</b>	<b>2019A</b>	<b>2020A</b>	<b>2021A</b>	<b>2022A</b>
Consolidated Revenue	9,714	16,877	20,895	20,121
Growth yoy	-	73.7%	23.8%	-3.7%
Cost of sales	-1,842	-3,832	-3,112	-2,576
Gross profit	7,872	13,045	17,783	17,545
Gross margin (%)	81.0	77.3	85.1	87.2
R&D	-1,423	-1,562	-1,546	-1,743
Operating expenses	-9,609	-12,911	-12,904	-13,183
EBITDA	-3,160	-1,428	3,333	2,619
EBITDA margin (%)	-32.5	-8.5	16.0	13.0
Depreciation (ex.DPaaS)	-515	-633	-697	-579
Amortisation of intangibles	-2,526	-1,684	-1,495	-1,364
EBIT	-6,201	-3,745	1,141	676
Other income	0	0	637	0
Net interest	-360	-285	-405	-272
Profit before tax	-6,561	-4,030	1,373	404
Tax charge	0	246	149	150
Profit after tax	-6,561	-3,784	1,522	554
Basic EPS (p)	-1.6	-0.8	0.3	0.1
Average shares (m)	406.57	494.85	494.85	495.90

*Company Data*

**Cash Flow statement**

<b>Y/E Dec, \$k</b>	<b>2019A</b>	<b>2020A</b>	<b>2021A</b>	<b>2022A</b>
EBIT	-6,201	-3,745	1,141	676
Depreciation	515	633	697	579
Amortisation of acquired intangibles	13	6	5	2
Amortisation of capitalised development	2,638	1,933	1,872	1,732
Working capital	2,219	5,710	-1,601	-5,254
Share based payments	265	359	522	386
Other including exceptional costs	0	0	0	0
Operating Cash Flow	-551	4,896	2,636	-1,879
Net Interest	-281	-190	-237	-151
Tax	0	246	149	150
Cash flow pre-capex and investment	-832	4,952	2,548	-1,880
Investment in intangible assets	-6	-8	0	0
Capitalised development expenditure	-1,360	-1,410	-1,754	-1,704
Net capex	-579	-1,015	-421	-420
Acquisitions/disposals	0	0	0	0
Financing/other	3,028	-686	842	-1,240
Dividends	0	0	0	0
FX & other	44	-14	-154	-311
Net Cash Flow	295	1,819	1,061	-5,555
Closing Net Cash/(Debt) pre-IFRS 16	5,384	7,662	8,424	4,438

*Company Data*

<b>Balance Sheets</b>				
<b>Y/E Dec, \$k</b>	<b>2019A</b>	<b>2020A</b>	<b>2021A</b>	<b>2022A</b>
<b>Fixed Assets</b>				
Goodwill	8,991	8,991	8,991	8,991
Acquired intangible assets	7	9	4	2
Capitalised development expenditure	5,169	4,646	4,528	4,500
Tangible assets	652	1,099	796	604
Leased right of use assets	357	237	145	62
Trade & other receivables	307	694	859	1,571
<b>Total Fixed Assets</b>	<b>15,483</b>	<b>15,676</b>	<b>15,323</b>	<b>15,730</b>
<b>Current assets</b>				
Inventories	63	98	57	164
Trade and other receivables	2,572	3,714	3,206	5,294
Cash	8,321	10,140	11,201	5,646
<b>Total Current Assets</b>	<b>10,956</b>	<b>13,952</b>	<b>14,464</b>	<b>11,104</b>
<b>Current liabilities</b>				
Trade payables	-2,008	-6,461	-4,068	-3,956
Lease liabilities	-112	-86	-94	-78
Deferred income	-2,800	-3,444	-4,677	-3,323
Borrowings	-1,149	-2,073	-1,421	-971
<b>Total Current Liabilities</b>	<b>-6,069</b>	<b>-12,064</b>	<b>-10,260</b>	<b>-8,328</b>
<b>Net Current assets</b>	<b>4,887</b>	<b>1,888</b>	<b>4,204</b>	<b>2,776</b>
<b>Long term liabilities</b>				
Trade & other payables	-139	-402	-143	-100
Lease liabilities	-257	-171	-78	0
Deferred income	-1,096	-2,705	-2,147	-2,285
Borrowing facility	-1,788	-405	-1,356	-237
<b>Total Long Term Liabilities</b>	<b>-3,280</b>	<b>-3,683</b>	<b>-3,724</b>	<b>-2,622</b>
<b>Net Assets</b>	<b>17,090</b>	<b>13,881</b>	<b>15,803</b>	<b>15,884</b>

*Company Data*



## Contacts

### Andy Edmond

Direct: 020 7065 2691

Tel: 020 7065 2690

[andy@equitydevelopment.co.uk](mailto:andy@equitydevelopment.co.uk)

### Hannah Crowe

Direct: 0207 065 2692

Tel: 0207 065 2690

[hannah@equitydevelopment.co.uk](mailto:hannah@equitydevelopment.co.uk)

**Equity Development Limited is regulated by the Financial Conduct Authority**

## Disclaimer

Equity Development Limited ('ED') is retained to act as financial adviser for its corporate clients, some or all of whom may now or in the future have an interest in the contents of this document. ED produces and distributes research for these corporate clients to persons who are not clients of ED. In the preparation of this report ED has taken professional efforts to ensure that the facts stated herein are clear, fair and not misleading, but makes no guarantee as to the accuracy or completeness of the information or opinions contained herein.

This document has not been approved for the purposes of Section 21(2) of the Financial Services & Markets Act 2000 of the United Kingdom ('FSMA'). Any reader of this research should not act or rely on this document or any of its contents. This report is being provided by ED to provide background information about the subject of the research to relevant persons, as defined by the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005. This document does not constitute, nor form part of, and should not be construed as, any offer for sale or purchase of (or solicitation of, or invitation to make any offer to buy or sell) any Securities (which may rise and fall in value). Nor shall it, or any part of it, form the basis of, or be relied on in connection with, any contract or commitment whatsoever.

Research produced and distributed by ED on its client companies is normally commissioned and paid for by those companies themselves ('issuer financed research') and as such is not deemed to be independent as defined by the FCA but is 'objective' in that the authors are stating their own opinions. This document is prepared for clients under UK law. In the UK, companies quoted on AIM are subject to lighter due diligence than shares quoted on the main market and are therefore more likely to carry a higher degree of risk than main market companies.

ED may in the future provide, or may have in the past provided, investment banking services to the subject of this report. ED, its Directors or persons connected may at some time in the future have, or have had in the past, a material investment in the Company. ED, its affiliates, officers, directors and employees, will not be liable for any loss or damage arising from any use of this document to the maximum extent that the law permits.

More information is available on our website [www.equitydevelopment.co.uk](http://www.equitydevelopment.co.uk)

Equity Development, 2nd Floor, Park House, 16-18 Finsbury Circus, London EC2M 7EB

Contact: [info@equitydevelopment.co.uk](mailto:info@equitydevelopment.co.uk) | 020 7065 2690