

Celltick

Pre-IPO report

Delivering growth in mobile engagement

Celltick is an established provider of mobile engagement software services, predominately in emerging markets. For additional growth, the company has been investing in Start, a customisable android interface, and a complementary publishing business that has seen rapid growth during 2017. Our base case forecasts look for a 34% CAGR in revenues and a doubling of EBITDA margins underpinned by the roll-out of these newer services. Our base case equity valuation for the group is \$109m/NIS388m.

| Year end | Revenue (\$m) | EBITDA (\$m) | Adjusted EBIT (\$m) | PBT* (\$m) | Net debt (\$m) |
|----------|---------------|--------------|---------------------|------------|----------------|
| 12/16 | 24.7 | 0.0 | 0.0 | (1.6) | (4.0) |
| 12/17 | 28.9 | 2.4 | 1.9 | (1.4) | (5.9) |
| 12/18e | 39.9 | 4.8 | 3.9 | 2.9 | (6.5) |
| 12/19e | 51.7 | 7.5 | 6.2 | 5.3 | (2.7) |

Note: *PBT is normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

Preloaded software at the centre of mobile ecosystem

Celltick's LiveScreen business is a mass-market, real-time, location-based notifications system. The technology is embedded on a SIM card and can be used across all types of phone, making it especially relevant for feature phone users in emerging markets where it has c 45m MAUs. It has also been adapted for use in its Mass Alert service as a public warning system. Since 2013, the group has also been investing in a customisable android interface, Start, and a personalised magazine. These smartphone-oriented services are pre-loaded onto phones or embedded into apps via Celltick's relationships within the mobile ecosystem and saw rapid growth during 2017; one year from launch, Start's revenues account for 23% of the total.

Growth geared to roll-out of newer services

Most of LiveScreen's revenues are recurring and provide a visible base of earnings. However, the growth opportunity hinges on the prospects for the more nascent Start services and scaling Mass Alert. We believe Celltick's embedded relationships with mobile operators and manufacturers around the world leave it well positioned to launch and scale its newer services. Start is being rolled out by over 50 partners, providing a visible trajectory for user growth, and Start Magazine is in beta testing with some of the world's largest app developers, which could extend its addressable market even further. For Mass Alert, management has a \$12m pipeline that it expects to start to convert in 2018. In our base case, we forecast an acceleration in revenue growth to a three-year CAGR of 34%, with EBITDA margins expanding from 8% to 18% by 2020 as these newer services move into profitability.

Valuation: \$109m base case equity value

Assuming delivery to our base financial scenario, our DCF indicates an equity value of \$109m (pre-fund raise). This equates to EV/revenue multiple of 2.2x in FY19. This is a discount to peers (2.7x), although investment in Start means that on an EV/EBITDA multiple, Celltick would be at a premium to peers until these services move to breakeven. We forecast this by 2019 for Start and 2020 for the magazine.

Telecoms

6 May 2018

| | |
|------------------------------------|------------|
| | \$/NIS3.56 |
| Net debt (\$m) at 31 December 2017 | 5.9 |
| Primary exchange | TASE |
| Secondary exchange | N/A |

Business description

Celltick's software is used by mobile carriers, OEMs, app developers and governments to support the mobile engagement of their customers. Its technology is integrated on mobile SIM cards or pre-loaded on mobile phones. The group was founded in 2000, is headquartered in Israel and has operations in 18 markets around the world, with the majority of its revenues derived in emerging markets, notably India, Sri Lanka and Mexico. The group plans a listing of approximately 15% of its existing share capital as a Tech-Elite company on TASE exchange in Israel.

Next events

| | |
|-----|----------|
| IPO | May 2018 |
|-----|----------|

Analysts

| | |
|----------------|---------------------|
| Bridie Barrett | +44 (0)20 3077 5700 |
| Victoria Pease | +44 (0)20 3077 5700 |
| Alasdair Young | 44 (0)20 3077 5700 |

tech@edisongroup.com

Executive summary: Scaling newer services

Established cash-generative core business

Founded in 2000, Celltick is an established provider of value-added services to emerging market mobile phone users. Via its partnerships with 22 mobile operators, its LiveScreen mass market notification system is used by c 45m mobile phone users on a monthly basis (monthly active user, MAU) across 18 markets, predominately in India, Sri Lanka, Russia and other emerging markets. A product that is based on the same broadcast technology is also sold to governments as an emergency notification system (Mass Alert). These products are cash-generative and provide a visible base of earnings. Despite investing approximately \$5m in new products (Start) in 2017, the group still reported EBITDA profits of \$2.4m in 2017, on revenues of \$28.9m. The Start products are a new set of smartphone-oriented services, including an innovative Android user start screen and a multilingual, personalised mobile in-app magazine that aggregates and distributes third-party content from around the world.

IPO proceeds to accelerate growth in new services

Celltick has raised \$45m to date (from 2000 to 2013) and the targeted \$15m IPO proceeds will be used to further accelerate growth of the Start services and scale Mass Alert. Management's vision is to become one of the largest mobile content distributors in the world, by aggregating content from leading publishers and distributing it via its own and third-party applications to drive user retention, engagement and revenues. Celltick's technology has been enabled on more than 3bn SIM cards and c 200m handsets, putting it at the heart of the mobile ecosystem. Given this privileged position and the strong sales momentum from Start during 2017 and Q118, with a roll-out pipeline underpinned by its contracted relationships with leading telecoms operators in Latin America, Europe and the US, we believe Celltick is well placed to scale newer services and deliver rapid growth over the forecast period.

Product summary: Monetising mobile engagement

Across its three main product lines, Celltick's strategy is to assist telecom operators, OEMs and app developers with the interaction with, and monetisation of, their end users:

- **LiveScreen (77% FY17 revenues)** is a mass-market, real-time, location-based interactive notification system for all generations of mobile phones and networks. It operates similarly to a screensaver, with the ability to display a variety of content, including news alerts and weather updates. Using this patented technology, network operators are able to transmit content-based products and services at virtually no cost to hundreds of millions of subscribers on a real-time basis – distinct from SMS messaging, which would tie up considerable network resources. Within LiveScreen, the Mass Alert product is gaining traction with emerging market governments as an emergency notification system; Celltick is in discussions with 20 governments and mobile operators around the world. In India, where it already has relationships with a key government systems integrator, it is at a fairly advanced stage of negotiations with several states and management believes this underpins a pipeline of \$12m new high-margin business in 2018.
- **Start (23% FY17 revenues)** enables Android mobile users to organise and design their start screen according to their personal preferences, improving both graphics and usability by providing quick access to frequently used apps that are made available as soon as the phone is out of sleep mode. Start was launched by its first partner América Móvil in 2016 and has gained rapid traction in North America and Mexico. Via its relationships with operators, it is already preinstalled on more than 100m phones and one year from launch has c 20m MAUs

and c 11.5m daily active users (DAUs). Celltick has a detailed roll-out plan in place with its existing partners, which in itself would support a very rapid increase in its user base. For example, it recently contracted with a large operator in North America, which has a subscriber base of 25m and is planning to launch during 2018.

- **Start Magazine for third-party app developers:** the publishing division of the business, Start Magazine, is a global news and content aggregation service available in 70 languages. The integration of this service in the Start screen has underpinned a fourfold increase in revenues in 2017 and management is now beta testing the service with a number of third-party app developers including browser services outside China for Tencent, Alibaba and Xiaomi. In doing so, the group aims to extend the addressable market for the magazine service to the c 5m apps around the world. Commercial launch of the service is planned following the recruitment of a dedicated sales team later in 2018. First revenues are being generated from Q118 and management expects the service to contribute materially to revenues from 2019.

Forecasts: Growth geared to roll-out of Start and Mass Alert

Over the last few years, revenue and EBITDA performance has been affected by the depreciation of the dollar against Celltick's trading currencies, notably the Russian rouble, and the investments made into the Start services. However, currency tailwinds in 2017 and the strong performance of Start returned the group to overall revenue growth of 17.3% to \$28.9m in 2017 and EBITDA profitability of \$2.4m (FY16, \$44k loss) despite \$5.1m of investment in Start. In 2018, management expects revenue growth to accelerate further. Excluding any upside from the sale of licences for Mass Alert, it expects to deliver group revenue growth of c 25%, with Start growing by approximately 60%. This compares to our 28% group revenue growth forecast as discussed below.

Celltick's LiveScreen service is mature and cash generative, with recurring revenues derived on a managed-service basis, providing good visibility. While we expect the core LiveScreen service to remain stable, there is a significantly higher degree of forecast uncertainty regarding the pace of roll-out of the nascent Start services, as well as the timing of conversion of the pipeline for Mass Alert. As such, in addition to our base case forecasts, we present a further two scenarios to demonstrate the potential impact on forecasts if we flex key assumptions (DAUs within Start and speed of pipeline conversion for Mass Alert) for these newer services (Exhibit 1).

Exhibit 1: Summary forecast scenarios

| KPI | Conservative scenario | | | | | Base case scenario | | | | | Blue sky scenario | | | | |
|--------------------------|-----------------------|---------------|---------------|---------------|------------|--------------------|---------------|---------------|---------------|------------|-------------------|---------------|---------------|---------------|------------|
| | 2017 | 2018 | 2019 | 2020 | CAGR | 2017 | 2018 | 2019 | 2020 | CAGR | 2017 | 2018 | 2019 | 2020 | CAGR |
| ADAU Start (m) | 7.9 | 11.7 | 16.0 | 21.0 | | 7.9 | 14.1 | 22.2 | 35.2 | | 7.9 | 15.0 | 20.2 | 52.1 | |
| Mass Alert licences/year | N/A | \$2m | \$2m | \$2m | | N/A | \$4m | \$4m | \$4m | | N/A | \$8m | \$8m | \$8m | |
| Revenues (\$m) | | | | | | | | | | | | | | | |
| Start | 6,796 | 11,645 | 18,106 | 27,251 | 59% | 6,796 | 14,107 | 24,678 | 41,916 | 83% | 6,796 | 14,928 | 32,173 | 58,441 | 105% |
| LiveScreen | 22,141 | 23,810 | 24,765 | 25,747 | 5% | 22,141 | 25,810 | 27,065 | 28,356 | 9% | 22,141 | 29,810 | 31,665 | 33,574 | 15% |
| Total revenues | 28,937 | 35,456 | 42,871 | 52,999 | 22% | 28,937 | 39,917 | 51,743 | 70,272 | 34% | 28,937 | 44,738 | 63,837 | 92,015 | 47% |
| EBITDA (\$m) | | | | | | | | | | | | | | | |
| LiveScreen | 7,498 | 7,914 | 8,234 | 8,564 | 5% | 7,498 | 8,954 | 9,355 | 9,769 | 9% | 7,498 | 11,034 | 11,597 | 12,178 | 18% |
| Start | (5,096) | (5,179) | (1,994) | 536 | N/A | (5,096) | (4,145) | (1,852) | 2,605 | N/A | (5,096) | (3,800) | (814) | 6,370 | N/A |
| Total EBITDA | 2,402 | 2,735 | 6,240 | 9,101 | 56% | 2,402 | 4,809 | 7,504 | 12,374 | 73% | 2,402 | 7,234 | 10,784 | 18,548 | 98% |
| EBITDA margin | 8.3% | 7.6% | 14.6% | 17.2% | | 8.3% | 12.0% | 14.5% | 17.6% | | 8.3% | 16.2% | 16.9% | 20.2% | |

Source: Edison Investment Research

For our base case, we assume a 3% trend growth rate for the LiveScreen service but look for a significant acceleration in group revenue growth in 2018, driven by the conversion of one \$4m Mass Alert contract a year, the roll-out of the Start app across its contracted partner base, and the successful launch of the magazine to third-party app partners so that total average DAUs for the Start products increase from 11.5m in April to 14m in 2018, 22m in 2019 and 35m by 2020. These assumptions underpin a 34% CAGR in revenues to 2020. In this scenario we expect Start to reach

profitability by 2019 with Start Magazine moving EBITDA positive by 2020. This underpins our assumption that group EBITDA margins increase rapidly to 12% in 2018 and 18% by 2020.

Valuation: Delivery to base case \$109m equity value

Our base case DCF valuation indicates an equity value of \$109m (pre-money) and an EV of \$114m. This would suggest an EV/revenue multiple of 2.9x in 2018, decreasing to 2.2x in 2019, a discount to its peer group (2.7x FY19). Investment into Start means that on an FY18 EV/EBITDA multiple of 23.8x it would be at a significant premium until these services break even. We believe this premium is justified by the growth opportunity; stripping out this investment implies an FY18 EV/EBITDA of 12.8x, a modest discount to peers at 14.4x.

Given the different business models and stages of development of each of the divisions, we have performed a DCF analysis on each division individually, which we then aggregate. We use a higher cost of capital for the more nascent Start services than for LiveScreen to capture the higher degree of forecast risk. Overall, our blended WACC is 12.5%. A 1pp higher or lower WACC would give a valuation range of \$124m to \$96m. Applying the same 12.5% discount rate to the blue sky and conservative scenario returns a valuation range of \$160m and \$80m, respectively.

Key investment considerations

Celltick's growth outlook and investment opportunity hinges on the prospects for its new businesses, Start and Start Magazine, as well as conversion of its pipeline of customers for its Mass Alert public warning system service. In addition to the valuation, investors should consider:

- **Vast, growing global addressable market of mobile users:** Celltick's mobile engagement product set is relevant for both feature-phone and smartphone users globally. As the Start products are initially targeting different geographies to the LiveScreen ones, we do not see cannibalisation risk. In time, the services could become complementary to each other.
- **Stable recurring revenue and cash flow from existing business:** the LiveScreen service is cash generative, providing a significant working capital cushion to the group as it scales its newer services. Despite investment in Start, the group should remain cash-flow positive.
- **Significant barriers to entry for core business:** strong embedded relationships with telecom providers, chip manufacturers and OEMs provide a significant barrier to entry.
- **Pre-load advantage:** app discoverability and retention is one of the most significant challenges faced by app developers. The fact that Celltick's apps are pre-loaded via its operator and OEM partners conveys a significant advantage launching its newer services. It also provides a gateway to cross-promote additional services in development, which have not been explicitly factored into our estimates.
- **Contracted pipeline of opportunities, good start to the year:** for both LiveScreen and Start, Celltick has a roll-out plan in 2018 that is largely based on pre-contracted agreements. The year has started well for these newer services, with Start doubling its revenues y-o-y in Q1.

Sensitivities: FX, early-stage risks, customer concentration

Given the early stage of the Start and Start Magazine businesses, together with the limited historical financials for these divisions, there is a higher than average degree of forecast sensitivity. This particularly relates to cost per thousand impressions (CPM), engagement levels and total users. Other risks include the failure to convert the Mass Alert pipeline. Furthermore, a decision by a major customer to reduce value-added services would negatively affect the LiveScreen business, which generates 18% of revenues from two customers. Celltick is also heavily exposed to FX swings, which we have not forecast. If the Start Magazine and Start businesses do not turn to profit in the anticipated time frame, Celltick may require further funding.

Background: Established emerging market mobile value-added service provider

Celltick was founded by its CEO Ronen Daniel in 2000. It is headquartered in Israel and employs c 150 staff in 18 countries. To date, its main product has been LiveScreen, a mobile notification service based on cell broadcast technology. Its customers include more than 20 mobile operators and device manufacturers, equating to 45m MAUs globally. This same core technology is now also being used as a public warning system (Mass Alert). More recently, it has launched a customisable android interface (Start), which has c 20m MAUs, and the publishing division of the business (Start Magazine) which has 21m MAUs and is beginning to deliver revenues this year. We estimate that across the group approximately 40% of 2017 revenues were derived from India, with other major markets including Sri Lanka, Russia and Mexico.

Key customers include América Móvil in South America across 16 markets (which has c 300m users), most of the cellular operators in India including Vodafone, Airtel Idea and BSNL (c 700m), a large operator in the US (c 25m), Deutsche Telecom in Europe, Beeline in Russia and two large Chinese OEMs.

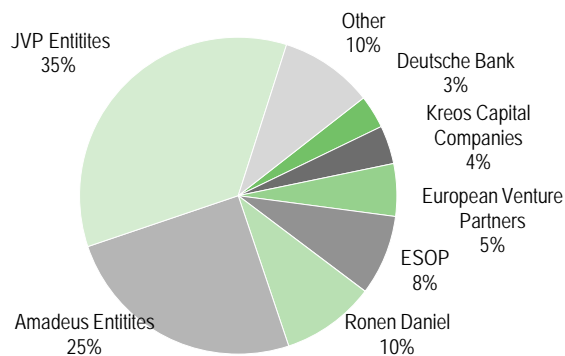
Reasons for IPO

Over the past five years, Celltick has been reinvesting the cash from its profitable LiveScreen business into the Start products, as well as enhancing the Mass Alert product. Targeted IPO proceeds of \$15m (NIS53.5m) will be used for further investment into these divisions and to launch the Start Magazine to third-party app publishers. With \$5.9m net debt at FY17, the targeted IPO funds – for c 15% of the equity – via a listing as part of the TASE Tech Elite Index would also provide a meaningful cash cushion.

Celltick raised \$45m of equity between 2000 and 2013, with JVP as original investors in 2000, and the listing is likely to provide an exit vehicle for early venture capital investors. Management, which holds approximately 18%, has stated it is not selling shares at this stage. Logicom has entered into a pre-IPO agreement to subscribe to \$0.4m of shares in the company at a 5% discount to the IPO price.

In 2017, the share capital base and debt was restructured, converting previous preference shares to ordinary shares ahead of the proposed listing. The group has 517,577 ordinary shares and 172,611 warrants outstanding.

Exhibit 2: Celltick's shareholders



Source: Celltick

Management

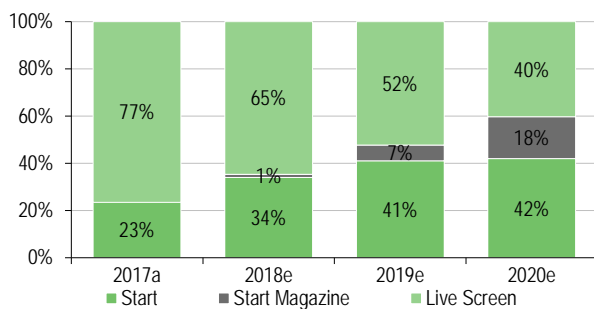
Celltick was founded by CEO Ronen Daniel in 2000.

- **CEO:** Ronen Daniel has over 25 years of experience in the high-tech industry, particularly in mobile technologies and media. Before founding Celltick, Ronen was an avionics expert at Israel Aircraft Industries. He is also the inventor of several patents including Celltick's main patent.
- **CFO:** Shlomi Hagai joined Celltick in 2007 and was previously corporate COO and CFO at MTS. Before that, Shlomi served as audit team manager at Ernst & Young's professional department, where he supervised privately held and public companies in the technology, industrial, services and infrastructure sectors.
- **Chairman:** Kobi Rozengarten is a general partner of JVP, one of the major initial investors in Celltick. Kobi has over 25 years of experience in senior management positions at global companies and serves as a board member in a number of companies such as Altair, Infinite Memories and XtremIO.
- **Other board members:** Other board directors include Uri Adoni, a partner at JVP, Richard Anton of Amadeus Capital Partners, and Yossi Wellingstein, CEO of Sedona Systems. Mike Kelly was appointed in April 2018. He is the co-founder and CEO of digital media investment and advisory firm KNV, having previously held various executive positions at AOL and The Weather Channel Companies.

Divisional overview

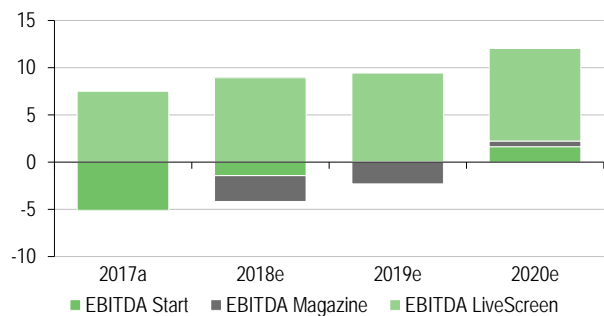
In FY17, 77% of \$29m revenues and the majority of the \$2.4m EBITDA was generated by LiveScreen, with 23% of revenues from Start (up from 7% in FY16). As shown in Exhibits 3 and 4 and discussed in the forecast section below, we expect the mix of revenues and EBITDA to shift rapidly towards Start as these services are rolled out.

Exhibit 3: Segmental revenue share forecasts



Source: Celltick (historical), Edison Investment Research (base case scenario)

Exhibit 4: Divisional EBITDA forecasts (\$m)



Source: Celltick (historical), Edison Investment Research (base case scenario)

LiveScreen: 77 % FY17 revenues

Celltick's most established product, LiveScreen, was created in 2000 and achieved revenues of \$22.1m in 2017, with an EBITDA margin of 33.8%. Within the division, Celltick has two main products: LiveScreen (managed services) and Mass Alert (licences and maintenance), both of which are based on the group's cell broadcast (CB) technology.

LiveScreen: CB technology for mobile engagement

LiveScreen is a mass-market, real-time, location-based interactive notifications system for all types of mobile phone and network (4G/3G/2G). It operates in a similar way to a screensaver, with the ability to display a variety of content, including news alerts and weather updates. These messages are displayed for a brief period of time on the home screen of the device when it is not in active use and invite the user to interact with the platform, or purchase content.

The interactive cell broadcast technology (ICB) technology that the group has developed is based on a combination of CB technology and a SIM toolkit (STK) applet embedded in the SIM card as part of the manufacturing process. The STK applet allows the interaction, segmentation and personalisation capabilities of the LiveScreen platform. This functionality is patent protected, with any interactive widget that appears on a screensaver deemed as an infringement. Importantly for its largely feature phone customer base, it is configured to interact with mobiles without a data package (ie 2G and/or smartphones with only voice packages). Cell broadcast messages need to go through a cell broadcast centre (CBC), which Celltick offers as part of its LiveScreen platform. The CBC connects to the radio part of the operator's network, and delivers the CB messages to the STK applet for further processing. Celltick has agreements with the major cellular and SIM manufacturers to install its software and has had its software embedded on over 3bn SIMs.

It is an efficient and low-cost method of pushing interactive and real-time notifications to users. As CB is a location-based technology, the LiveScreen notifications may also be targeted to the desired locations. Via LiveScreen, network operators are able to transmit content-based products and services at virtually no cost to hundreds of millions of subscribers on a real-time basis – distinct from SMS messaging, which would tie up considerable network resources.

With its emerging market focus, the majority of revenues are derived from feature phone users. However, with the penetration of smartphones in emerging markets increasing in recent years, Celltick has also gained a large number of smartphone users, which now account for c 30% of its LiveScreen customer base. Given the increasing demand for more individual promotion to customers as well as richer content (non-textual), Celltick has introduced P2P promotion (point to point) which now accounts for c 25% of LiveScreen revenues and is also introducing other SIM-based services including higher-value, more targeted content such as app recommendations and performance-based advertising. It has also recently launched an advance warning application for smartphones (which is being implemented by America Movil) and an analytics service for MVNOs to provide information about the quality of the physical network they are using, as well as other subscriber related data. Marketing for this service began in early 2018 and with more than c 1,100 MVNOs globally, management believes this has potential to drive a significant increase in Celltick's customer base.

In total, 85% of LiveScreen's revenues are derived from subscription packages, with the remainder on a performance basis (eg pay per click). We highlight some of the uses for the LiveScreen product in Exhibit 5.

Exhibit 5: LiveScreen content

| Content | Description |
|---------------------|--|
| Packages | Subscription-based packages based on personal preferences, whether for a daily SMS on a selected topic, subscription to a premium broadcast channel or subscription services for games or social media. |
| On demand content | Pay-per-view content (news, trivia games, weather reports). Active users receive promotions for free and only pay once they click on, or interact with the service. An active message on the mobile home screen could be a 'flash' broadcast, which remains on the screen for 60 seconds, enabling users to click and buy a service. |
| Playground platform | LiveScreen's games include Alphabet Soup, Trivia, Analyze Me and Hang Man. Subscribers either pay per game or pay a subscription fee for unlimited play. |
| Coupons | Distributing coupons to consumers (eg free coffee) and creating savings in return for a small service fee. Often used for last-minute sales, promotions and delivering localised information. |
| m-learning | Selected courses, with interactive lessons and weekly tests. |
| Social interaction | The chat service offers messaging and group discussions for users without data packages. |
| Surveys | LiveScreen enables companies to run surveys on a variety of topics (TV shows, brands, market research) and receive detailed results, including geographic analysis. |
| Mobile money | Mobile money enables users to insert details for a money transfer and send it to a third-party mobile money service with one click. The service is based on server-to-server integration between LiveScreen and the operator's existing mobile money service. |

Source: Celltick

Exhibit 6: Example of the LiveScreen feature phone messaging system



Source: Celltick

Mass Alert: Public warning system

An adaptation of the CB technology is the Mass Alert offering, a mobile public warning system. While it uses the same CB technology, it does not require any installation on the SIM cards, which means it can reach all targeted mobile users, even when the network is jammed, to send alerts regarding natural disasters or terror attacks. Mass Alert is complementary to other warning systems including sirens, radio broadcasts, etc. Key features include:

- **Reach millions by location:** the emergency mobile alert system offers a tailor-made solution for government agencies to send interactive messages in real time to hundreds of millions of users within a specified geographical area (city, country, region or state wide).
- **Operates even when networks are heavily congested:** government agencies and mobile operators can broadcast messages on their own channels with little or negligible network load. Messages can therefore be broadcast on different communication channels, even when the network is heavily congested, allowing real-time co-ordination with multiple government agencies and the public during emergencies. Mass Alert has full redundancy and complies with all emergency standards. There is no risk of jamming networks and the solution does not require a database of mobile phone numbers in the targeted areas.
- **Additional commercial services:** beyond alerts, the Mass Alert system can be used as a commercial notification system and can be combined with LiveScreen managed services.

Distribution: Mobile operators with an emerging market focus

LiveScreen's customers include more than 30 mobile operators, with approximately 110m phones enabled and 45 million MAUs. Celltick's software has been embedded on over 3bn SIM cards (including old ones) and the company is adding c 50m per month. Since 2002, LiveScreen's largest market has been India, where it has partnered with all the major mobile operators equating to more than 1bn mobile users. The company estimates that 90% of Indian SIM cards are preloaded with LiveScreen and we understand that it comprised c 50% of LiveScreen's revenues in 2017. Other major markets include Sri Lanka and Russia.

There are several other companies offering similar services such as Bercut (Russia), AI (Russia), OnMobile (India) and TeleDNA (India). However, given the patent portfolio, coupled with entrenched relationships with the telecom providers and companion agreements with the SIM manufacturers, barriers to entry are extremely high. While growth in the user base may be limited due to the increasing penetration of high-end smartphones, Celltick believes there is scope to add new geographies. For instance, in 2018 it has put in place new contracts to launch with operators in Bangladesh (c 35m subscribers), a large operator in South East Asia (c 65m subscribers), and has also extended its service agreement with Idea in India (replacing OnMobile and expanding to all 23 circuits from its current four). Furthermore, there is scope to increase user engagement by adding content (particularly for smartphone users).

In parallel, management believes there are opportunities to open new markets by providing multiple SIM-based services. With the current trend of subscribers buying unlocked devices, the SIM is becoming an even more important asset for the network operators in its battle with the other over-the-top (OTT) players.

Market opportunity geared to converting Mass Alert pipeline

Mass Alert is geared towards both network operators (CBC) and government agencies (Alert Aggregator). Celltick tends to partner with local system integrators for distribution and implementation. The product is already used in five countries (Taiwan, the Philippines, Chile, Lithuania and Mongolia).

We understand that Mass Alert represented less than 10% of divisional revenues in 2017. However, common standards introduced in the US and Europe in recent years, together with the perceived increase in terror and climate threats, has resulted in an increase in interest from governments around the world for this kind of technology. Celltick estimates the addressable market to be in the region of \$150m by 2025 and sees a considerable growth opportunity for this product.

Nokia, Ericsson and its partner one2many (Netherlands), Opencode (Bulgaria) and Huawei also have the capability to offer this service, although we understand from management that Celltick is the only one offering the higher standard in network redundancy (ie, an active-active back-up system) and that it has the largest deployment of the technology.

To date, Celltick has focused its efforts on telecom operators but it is now targeting governments (which often control the largest telecom operators), beginning with regional governments in India.

Celltick is in discussions with national and local governments across 20 markets. In India, it is in a particularly strong position to execute; the government cellular operator, BSNL, is one of its customers for LiveScreen and acts as its distribution partner for its contracts with the state authorities – as BSNL is a government entity, it is not necessary to hold tenders as both parties are government entities. Given that operators can only be connected to one CBC at a time, barriers to entry are high.

While sales cycles are very long, management believes it has a \$12m pipeline in 2018 with individual deal sizes of around \$3m to \$4m (licence fees).

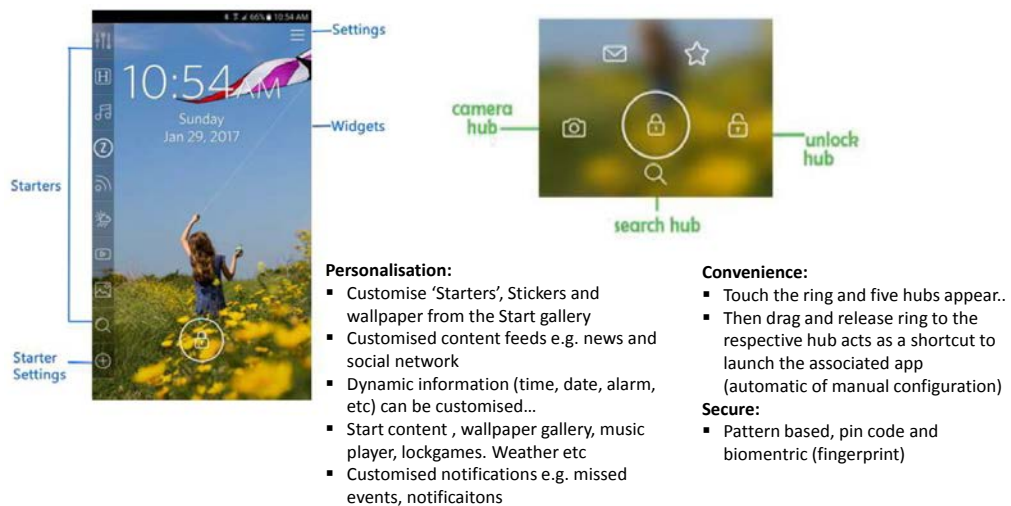
Start (23% revenues): Creating a global publisher of scale

The Start division comprises Start, Celltick's customisable Android start screen, and Start Magazine, its white-label content aggregation and distribution service. While it is the smaller division by revenues today, it is growing rapidly; Start revenues increased fourfold in 2017 and now represent 23% of group revenues. Q118 revenues of \$1.7m are roughly twice the level of Q117, pointing to continued strong momentum in 2018 where management expects to see c 60% growth.

Start: Personalised Android start screen

Celltick's customisable android start screen, Start, enables users to organise and design their mobile user interface (UI) according to their personal preferences, improving both graphics and usability by providing quick access to frequently used apps, contacts, content and services which are made available as soon as the phone is out of sleep mode. Selected apps (eg phone, message, camera, social media apps, news etc) can be launched with a single gesture, without unlocking the phone or ploughing through different folders. Start offers the full suite of apps that a smartphone user has come to expect. Exhibit 7 presents an example of the screen.

Exhibit 7: Start – customisable Android start screen



Source: Celltick, Edison Investment Research

Most phones come with either Google's or the manufacturer's preinstalled UI, for instance Samsung's TouchWiz, and LG Optimus. There are also many alternatives available for download on Google Play: Google's own, ZUI Locker, Next Lockscreen (Microsoft), Echo Notification (Double Labs) etc. Monetisation of the UI is sometimes done by offering users a discount on their phone or monthly subscription in exchange for serving permissioning ads (eg Unlockd, Buzzvil or Wileyfox).

Start differentiates by allowing brand reinforcement, customer engagement and an integrated monetisation platform. Importantly, the integration of Start Magazine (see next section) in the app has the potential to generate material revenues for the operators.

Distribution: Growing network of pre-load partners, reaches over 11m DAUs

Start launched in 2014, after three years in development. It is available on Google Play, where it has a 4.2 out of 5 rating. However, the overwhelming majority of users are derived via Celltick's distribution partners; Start has now been adopted as the default preloaded interface by c 50 operators and OEMs globally. Given app discoverability is one of the biggest issues facing most

app developers, being preinstalled and pre-activated in most cases conveys a huge advantage versus other lockscreens.

Start enables the operators to reaffirm their brand on handsets and the interface can be used to capture user data and intelligently engage with the end-user, leading to the ability to offer customised services and targeted marketing. This can be done in any language.

Celltick signed its first major partner in 2016 with América Móvil, South America's largest mobile network operator (MNO), which is adopting Start as its default UI across 16 of its Claro entities in Central and Latin America, contributing the majority of Celltick's current users. Other notable partners include Deutsche Telekom in Europe, MTS in Russia, Cable & Wireless and a number of OEMs. Management is also building a pipeline of alternative distribution partners – notably it has signed a contract with a leading operator in the US, where roll-out is expected to start in Q318.

At April 2018, the company estimates that there were c 100m installs, growing by c 150k per day. It already has around 11.5m average DAUs or c 20m MAUs.

As well as growing distribution, a key catalyst for the increase in revenues has been the integration of Celltick's news and content aggregation feed, Start Magazine, into the interface. The increased engagement that followed has led Celltick to carve out the content layer into a separate division (Start Magazine), which it also plans to monetise across a wider network of app developers.

Start Magazine: In-app magazine technology

Start Magazine is a low-touch, AI-based, contextual in-app magazine for app developers, which works on both iPhone and Android devices. Using personalised and trending content from the world's premium media publishers, it adds value as a content-based user engagement and monetisation platform. It is an end-to-end solution that combines content with monetisation options, along with maintenance, hosting and reporting.

Users receive their news feeds tailored according to preferences; the magazine is either created to fit the user's profile and history, or users create their own feed, choosing from a wide range of genres from across the world to provide a rich and personalised reading experience. As well as news, content includes other entertainment including trivia, weather, sport scores and videos.

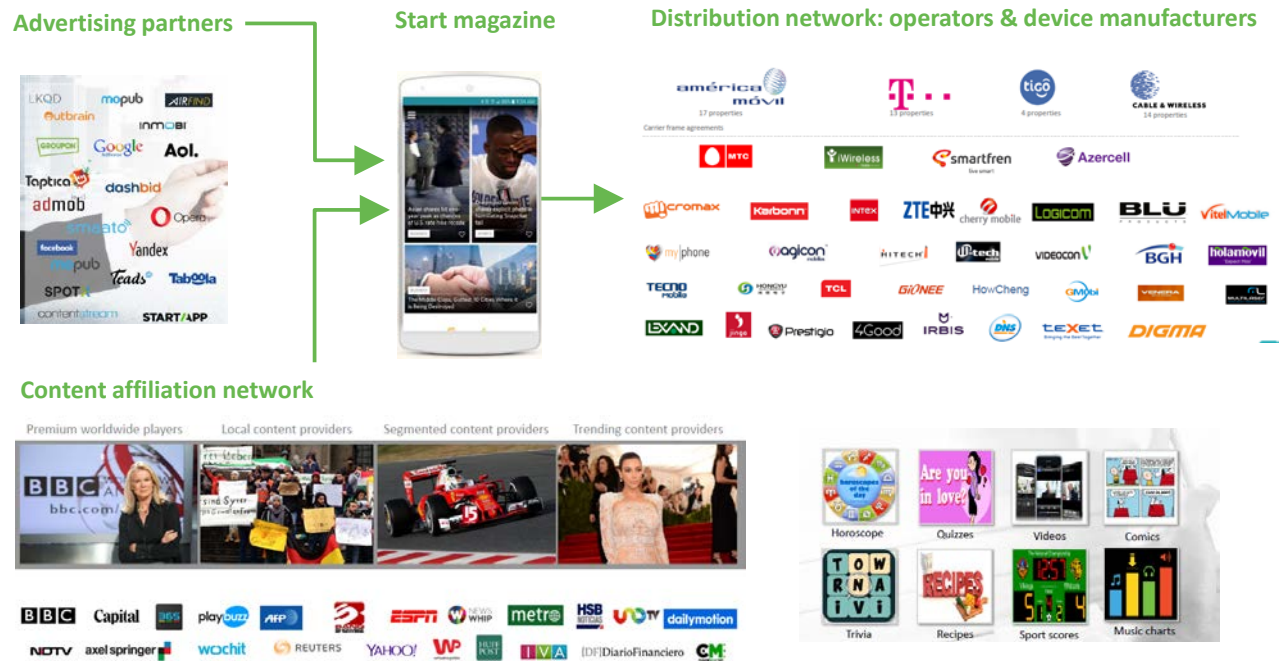
Following the initial success Celltick has had in driving engagement by bundling the Start Magazine with the Start application, the company has started to distribute the magazine to third-party app publishers enabling them to develop tailored in-app magazines in a wide variety of content categories and languages.

Ultimately, success is contingent on the level of user engagement, which in itself will be affected by the depth and quality of its content and distribution partnerships:

- **Content partners – targeted audience:** publishers are attracted to ecosystems that offer audience reach and engagement, which in turn drives monetisation. Via its integration with Start, in certain markets, the magazine already offers significant reach and Celltick has been able to sign key local content partners as well as a number of global partners including the BBC, CNN, ESPN, The Huffington Post, Reuters, MILENIO, NDTV and many others. The service is integrated with all the major mobile advertising exchanges and demand-side-platforms (DSPs), and can support a range of monetisation methods such as advertising (video, native, in-text, interstitial and display adverts sold on a CPM basis), app discovery and recommendations (cost per install) and sponsored content (cost per click, CPC).
- **App publishers:** the largest challenges faced by app developers are discoverability and then customer retention; on average 80% of apps users churn after three months. Start Magazine is an effective user engagement tool; by combining the magazine with its own app (Start UI), it has seen engagement times improve by 30%.

- **Operators, OEMs – brand differentiation, monetisation:** the overall magazine is provided on a white-label basis and can be branded according to partner preferences, allowing brand reinforcement. It should also enable the operator to grow its value-added service revenues as it shares advertising revenues with Celltick.

Exhibit 8: Start Magazine network



Source: Celltick, Edison Investment Research

Distribution: Global app market

A beta version is now being tested by a number of Chinese third-party app publishers such as Tencent, Alibaba, Chiho 360, Apus and Xiaomi, one of the largest telephone manufacturers in the world. We note that these tests are with a view to integrating the product on their sites and assets outside China.

The Start Magazine platform does not route users to the original content provider, but extracts the content and routes users to its own site, www.thestartmagazine.com. This creates a significant flow of user traffic to the platform's website. Only a year and a half after it was launched, it generates approximately 1bn page views per month in 70 languages from c 21 million MAUs (of which c 30% are via its own application, Start), ranking in the top 100 websites globally by Amazon Alexa. In Mexico, it ranks fifth in terms of page views, first after Google and Facebook sites.

The company intends to launch the product officially in the coming months and, subject to IPO funding, plans to increase investment in development, sales and marketing to increase its pipeline of app distributors as well as to optimise targeting and monetisation. Management believes it has the potential to become the world's largest mobile content publisher.

Competition: Global news apps

One of the largest changes to the news and magazine industry over the last few years has been in terms of news discoverability. Some of the largest newspaper brands have recreated audiences online. However, consumption has substantially shifting away from direct news sources towards aggregators such as Start Magazine, and social media channels that bring in several sources at once, and promote sharing and engagement around news.

Exhibit 9: Platforms used for accessing news by country

| | US | UK | GER | FRA | SPA | POR | ITA | IRE | FIN | NOR | SWE | DEN | BEL |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| TV | 66% | 70% | 78% | 74% | 79% | 82% | 83% | 73% | 75% | 72% | 72% | 71% | 75% |
| Radio | 23% | 33% | 46% | 28% | 34% | 37% | 30% | 48% | 47% | 47% | 47% | 47% | 46% |
| Print | 26% | 35% | 38% | 27% | 56% | 47% | 43% | 47% | 53% | 53% | 43% | 29% | 45% |
| Online | 72% | 72% | 59% | 71% | 86% | 88% | 83% | 84% | 89% | 89% | 89% | 84% | 82% |
| | NLD | SUI | AUT | HUN | CZE | POL | POL | TUR | KOR | JPN | AUS | CAN | Bel |
| TV | 76% | 69% | 76% | 72% | 81% | 80% | 66% | 80% | 71% | 69% | 65% | 71% | 79% |
| Radio | 57% | 43% | 43% | 25% | 35% | 42% | 34% | 41% | 12% | 17% | 40% | 27% | 35% |
| Print | 43% | 63% | 67% | 27% | 34% | 32% | 31% | 54% | 28% | 44% | 38% | 36% | 49% |
| Online plus social media | 81% | 82% | 73% | 88% | 91% | 96% | 96% | 90% | 86% | 72% | 78% | 75% | 91% |

Source: Reuters Institute: Which, if any, of the following have you used as a source of news in the last week?

Exhibit 9 summarises the key access points for news across both desktop and mobile. News aggregation has been an important category for some time across desktop, and is gaining in popularity on mobile since the launch of Apple News (and recently acquired Texture, the company behind the service). Survey data from Reuters show that aggregators do a better job of providing quick and easy access to a variety of news sources, but prefer social networks for interactivity.

Start Magazine differentiates from other feeds by offering a more tailored approach. Management considers Toutiao (which recently acquired News Republic) to be a similar service and we would also include the following as competitors:

- **News aggregators:** Google News, Apple News, MSN, Taboola, Outbrain's Sphere, Dailyhunt (India), BuzzFeed, the Huffington Post, SmartNews, News360, Toutiao ('Today's Headlines'), SmartNews (Japan) etc.
- **News and media groups (using their own reporters and content):** Associated Press, the BBC, CNN and other major global news groups also offer news feeds; while they are not aggregators, they have global coverage of many genres and so could be considered competitors.
- **Social media:** Facebook, Twitter and other large social media platforms now have a significant role to play in distributing trending news; 50% of US audiences access news this way and 10% use it as their primary news source (source: Reuters Institute).

Revenue model

In the LiveScreen division, Celltick operates three separate business models, of which charging for content and service subscriptions is the most established. Mass Alert sales are carried out on a licence basis (perpetuity) and professional services with an ongoing customisations and maintenance component. Revenues for the Start products are generated from advertising.

LiveScreen: Good visibility, cash generative

The LiveScreen product was originally sold to telecom operators under licensing agreements, but since 2007 Celltick has been steadily transferring the business model to managed services. Since 2009, all new contracts have been signed as managed services and the company has successfully renegotiated its older accounts. To further enhance the product, Celltick has invested in technology, hardware and sourcing content. In return, the operators have committed to distribute the LiveScreen applet to all their users.

Service agreements are typically one- to three-year terms, with automatic renewal. To date, approximately 85% of managed services are derived from recurring revenues on a subscription basis, selling content and service packages to subscribers. The remaining revenue is derived from a pay-per-click model where Celltick shares revenues with the operator and content providers. We

understand that total gross margin for the managed services business is approximately 60%. LiveScreen is highly cash-generative and its recurring revenue profile provides visibility.

Mass Alert: Licence fees plus maintenance, lumpy

The Mass Alert product is supplied as a non-recurring licence, with licence values ranging from c \$0.5m to \$7m per contract. Gross margins are expected to be extremely high for Mass Alert at c 75%. There is also a maintenance component at c 15% of the licence fee, which typically starts 12 months from the original licence sale. There is little visibility regarding the timing of the conversion of the sales pipeline, which may lead to a fairly volatile revenues profile.

Start: Advertising participations, seasonal

Revenues for both Start and the magazine are generated principally from advertising. Content and adverts are integrated into the news feeds, 'Starters' or served directly to the screen.

The majority of advertising is served on a CPM basis with content discovery generally on a CPC basis. This is shared with the distribution partner and the content provider, with Celltick retaining c 40%. Advertising is seasonal, with Q4 typically the largest quarter.

| Exhibit 10: Start Magazine – illustrative impact of changes in KPIs on revenue | | | |
|--|-----------|-----------|-----------|
| DAUs | 1,000,000 | 1,000,000 | 1,000,000 |
| Engagement | 10% | 15% | 30% |
| Number of sessions per user | 1 | 1 | 2 |
| Number of articles per user | 3 | 4 | 5 |
| Number of ads per page | 2 | 2 | 3 |
| Daily ads impressions* | 600,000 | 1,200,000 | 9,000,000 |
| CPM (\$)** | 1 | 1 | 1 |
| Daily revenue (CPM) (\$) | 600 | 1,200 | 9,000 |
| Monthly revenue (CPM) (\$) | 18,000 | 36,000 | 270,000 |
| Yearly revenue (CPM) (\$) | 219,000 | 438,000 | 3,285,000 |

Source: Celltick estimates. Note: *Daily ads impressions = DAU*engagement*#sessions*#articles*#ads.
 **CPM refers to banner displays only. CPM for interstitials and/or video ads are significantly higher.

Strategy: Create the world’s leading mobile publisher

Overall, we consider LiveScreen to be a relatively stable, cash-generative product line, with the Mass Alert service offering the potential to add high-margin licence revenues if Celltick successfully converts its pipeline of customers. The inflection point for the group will be the successful roll-out of Start and Start Magazine, which is where the majority of the IPO proceeds will be invested.

The company’s vision is to become one of the largest content distributors in the world, by aggregating content from leading content providers, targeting and distributing it via applications (including its own) that will make use of the magazine to drive user retention, engagement and revenues.

There is a natural network effect when it comes to aggregation services; the larger the audience, the more content partners are attracted, and the more engaging the content becomes. Growth will ultimately depend on Celltick’s ability to grow its distribution partner network (which increases its DAUs), along with its ability to increase engagement with its Starters, which in turn would increase the number of impressions per user. IPO proceeds will be directed towards expanding its network, specifically in the areas listed below.

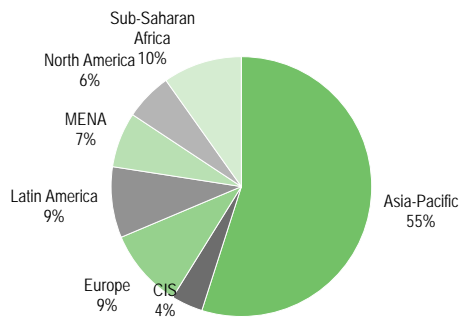
- Distribution:** Start already has a well-developed roll-out plan for the UI, providing immediate scale for the magazine. To expand its relationships with other app publishers, Celltick plans to gradually recruit 20-25 local additional sales people and step up its event marketing activities.

- **Advertising ROI:** the company would like to expand its advertising network, adding more programmatic sources, header bidding and private marketplace deals, which should add volume, improve the return on investment (ROI) and would also reduce the current dependence on Google's advertising systems (ADEX and AdSense). In more established markets such as Mexico, it is also considering investing in its own sales team to facilitate direct deals with larger brands.
- **Content:** adding new, relevant content partners enables Celltick to extend the types of apps for which the magazine is relevant, as well as improving user engagement and, ultimately, revenues.
- **R&D:** a new version of Start is planned for the end of 2018 and Celltick is investing in training its algorithms to optimise content targeting.

Mobile market backdrop

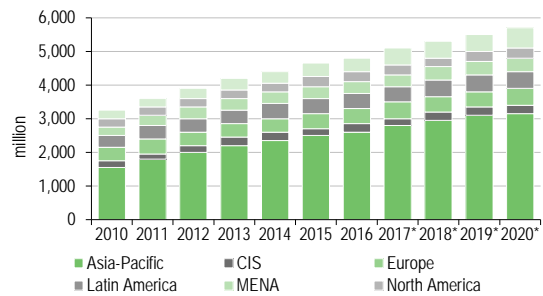
At 4.8bn, the world's mobile users continue to increase in numbers, forecast to reach 5.7bn by 2020 (see Exhibit 12).

Exhibit 11: Mobile subscribers by region (2016)



Source: GSMA/Statista

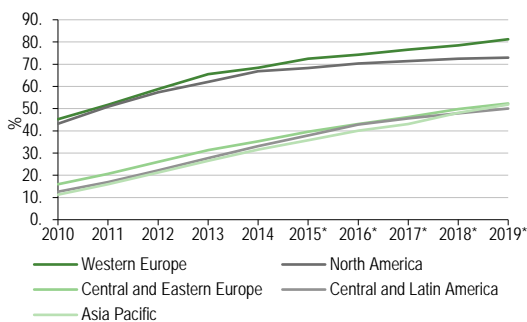
Exhibit 10: Mobile subscribers world wide



Source: GSMA/Statista

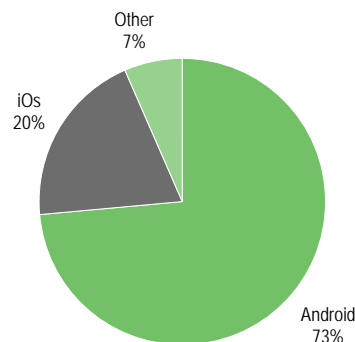
Smartphone penetration has been increasing at the expense of feature phones, a trend that is forecast by eMarketer to continue. With the majority of LiveScreen's revenues derived from content sales to feature phone users, the scope for growth in this product may be limited. However, with an increasing share of mobile users acquiring unlocked phones, for operators, access to SIM-based services may become increasingly important and the group is developing complementary SIM-based products.

Exhibit 13: Smartphone penetration by geography



Source: HKExnews; Haitong

Exhibit 14: Smartphone operating system

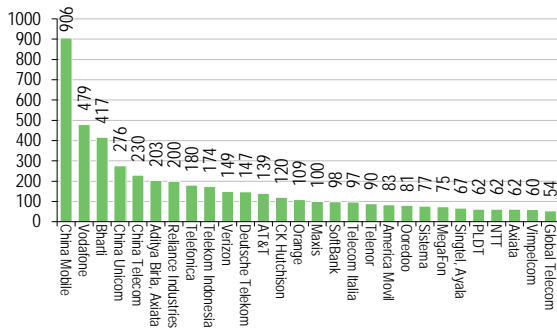


Source: Statcounter, Statista

In contrast, the Start products, which derive revenues from mobile advertising to its Android users, should benefit from this trend. eMarketer forecasts global mobile advertising to increase to 24% \$166bn in 2018. Celltick has significant operations in India (a market with over 1.1bn mobile

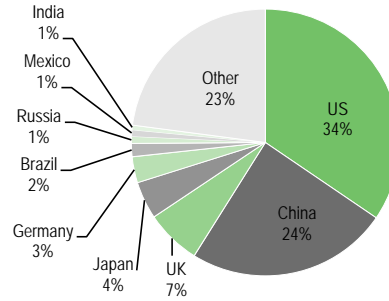
subscribers), Sri Lanka (26m), Russia (255m), Brazil (244m) with Mexico (111m) and the US (121m) forecast to increase in share.

Exhibit 15: MNO subscribers (m) by parent company



Source: Statista

Exhibit 16: Mobile advertising spend



Source: eMarketer

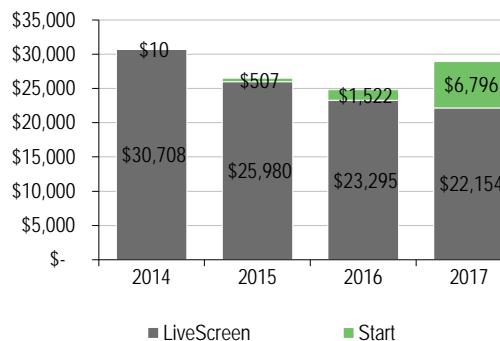
Financials

Historical performance affected by currency and investment

Prior to 2017, revenues are exclusively from the LiveScreen division. As seen in Exhibit 17 revenues decreased from \$30.7m in 2014 to \$22.2m in 2017. Part of this decline was due to the depreciation of the dollar against the Russian rouble, Indian rupee and Brazilian real. Based on constant 2014 exchange rates, revenues increased 2% in FY15 but still declined in 2016 and 2017 by 8% and 9%, respectively. On a reported basis, however, in 2017, overall revenues increased by 17.3% to \$29m; currency tailwinds and the quadrupling of the revenues from Start more than offset continued declines from LiveScreen (-5%), which was affected by service disruption in Chile. During 2016, Celltick implemented a 'one-click registration' process for mobile users. The ease of registration resulted in many customers inadvertently registering for multiple packages and the distributor (Claro) scaled back the service level. Celltick has now moved to a point-to-point system, and is rebuilding its user base in Chile.

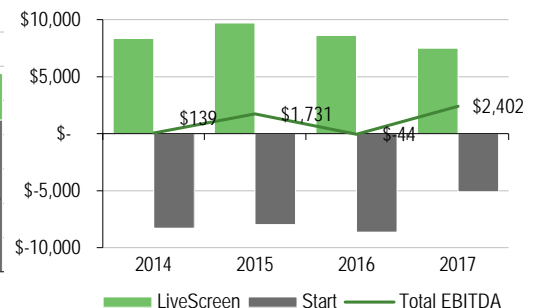
Despite \$22m of start-up investment in Start in 2014-17, throughout this period the group remained profitable in all years bar 2016, when it reported a small EBITDA loss (Exhibit 18).

Exhibit 17: Historical revenues by division



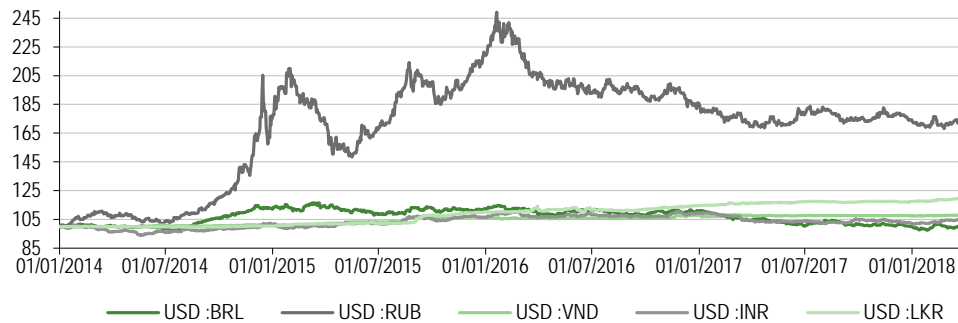
Source: Celltick data

Exhibit 18: Historical EBITDA by division



Source: Celltick data

Exhibit 19: Currency movements against US\$



Source: Bloomberg

Forecasts scenarios: Differing degree of maturity and visibility

There is strong visibility within the LiveScreen division, which comprises 77% of revenues. However, the company’s growth strategy clearly hinges on the prospects of the more nascent businesses, Start and Start Magazine, and converting the Mass Alert pipeline.

As with most new product lines, there is a higher degree of risk to future forecasts and we have modelled three separate scenarios to demonstrate the impact on our base case if we vary core assumptions. Within each scenario, we have not factored in any IPO proceeds, but assume that funding is available where necessary. Whereas Celltick reports across two divisions, in our analysis we show scenarios for sales of Start Magazine to third-party app developers separately as we consider the execution risk here to be higher than that for Start which is underpinned by relationships with operators.

While there are many variables, at this stage of development we consider the key sensitivities to be:

- LiveScreen’s ability to convert its pipeline of local and national government customers to the Mass Alert service.
- The pace at which Starts existing partners roll out the Start UI, and its ability to add new distribution partners.
- The success of scaling the distribution of Start Magazine via third party app publishers.

We summarise our scenarios in Exhibit 20 and explain our forecast assumptions in more detail below.

In summary, for our base case we assume a fairly stable performance from LiveScreen with growth of 3% a year, plus the sale of one \$4m (estimated average contract value) Mass Alert licence a year. Within Start, from c 8m in 2017, we forecast the combined average DAUs for Start and Start Magazine to increase to 14m in 2018, 22m in 2019 and 35m by 2020. In this scenario we expect Start to reach profitability in 2019, and Start Magazine the following year with overall group EBITDA margin increasing to c 18% from the 8% reported in 2017.

We do not forecast currency, but note the depreciation of the Indian rupee against the dollar since the start of the year. Management does hedge where it can, but the company will nevertheless be exposed to currency fluctuations.

In 2018, management expects to deliver overall revenue growth of c 25% before any potential upside from Mass Alert, and approximately 60% growth from Start. This is broadly in line with our base case forecast for 28% group revenue growth excluding Mass Alert and 34% inclusive, in 2018. In 2018, the mix of our revenue forecast is skewed more towards Start where, given the strong Q1

momentum, roll-out plan and seasonality considerations, we are forecasting revenues to double in 2018 – ahead of management's guidance.

Exhibit 20: Summary forecast scenarios (\$000)

| | Conservative scenario | | | | | Base case | | | | | Blue sky | | | | |
|-----------------------------|-----------------------|---------------|---------------|---------------|------------|---------------|---------------|---------------|---------------|------------|---------------|---------------|---------------|---------------|------------|
| | 2017 | 2018 | 2019 | 2020 | CAGR | 2017 | 2018 | 2019 | 2020 | CAGR | 2017 | 2018 | 2019 | 2020 | CAGR |
| KPI assumptions | | | | | | | | | | | | | | | |
| Start av. DAU | 7,934 | 10,711 | 12,853 | 14,781 | 23% | 7,934 | 13,091 | 17,018 | 19,571 | 35% | 7,934 | 13,885 | 20,827 | 23,951 | 45% |
| Start Magazine av. DAU | | 1,043 | 3,128 | 6,257 | 145% | | 1,043 | 5,214 | 15,642 | 278% | | 1,043 | 9,385 | 28,155 | 420% |
| No. of Mass Alert contracts | | 0.5 | 0.5 | 0.5 | | | 1.0 | 1.0 | 1.0 | | | 2.0 | 2.0 | 2.0 | |
| Revenues (\$m) | | | | | | | | | | | | | | | |
| Start | 6,796 | 11,078 | 16,052 | 22,291 | 49% | 6,796 | 13,540 | 21,255 | 29,515 | 63% | 6,796 | 14,361 | 26,011 | 36,120 | 75% |
| Start Magazine | - | 567 | 2,054 | 4,960 | 196% | | 567 | 3,423 | 12,401 | 368% | | 567 | 6,162 | 22,321 | 527% |
| Live Screen | 22,141 | 23,810 | 24,765 | 25,747 | 5% | 22,141 | 25,810 | 27,065 | 28,356 | 9% | 22,141 | 29,810 | 31,665 | 33,574 | 15% |
| Total revenues | 28,937 | 35,456 | 42,871 | 52,999 | 22% | 28,937 | 39,917 | 51,743 | 70,272 | 34% | 28,937 | 44,738 | 63,837 | 92,015 | 47% |
| EBITDA LiveScreen | 7,498 | 7,914 | 8,234 | 8,564 | 5% | 7,498 | 8,954 | 9,355 | 9,769 | 9% | 7,498 | 11,034 | 11,597 | 12,178 | 18% |
| EBITDA Start | (5,096) | (2,473) | 204 | 1,475 | - | (5,096) | (1,439) | 620 | 2,342 | | (5,096) | (1,094) | 1,001 | 3,134 | |
| EBITDA Magazine | - | (2,706) | (2,198) | (939) | - | | (2,706) | (2,472) | 263 | | | (2,706) | (1,815) | 3,236 | |
| Total EBITDA | 2,402 | 2,735 | 6,240 | 9,101 | 56% | 2,402 | 4,809 | 7,504 | 12,374 | 73% | 2,402 | 7,234 | 10,784 | 18,548 | 98% |
| EBITDA margin | 8% | 7.7% | 14.6% | 17.2% | | 8% | 12.0% | 14.5% | 17.6% | | 8% | 16.2% | 16.9% | 20.2% | |

Source: Edison Investment Research

LiveScreen: Geared to converting Mass Alert pipeline

While LiveScreen delivered strong growth up to 2014, performance since then has been mixed. The outlook for this division will depend on Celltick's ability to mitigate churn from its largely feature phone user base by upselling higher value content, adding new operators and adding additional SIM-based services. In the near term, one of the more significant sensitivities will be its ability to convert the \$12m pipeline for Mass Alert.

Revenues: in our base case we assume 3% revenue growth for LiveScreen (exclusive of Mass Alert). Given the advanced stage of discussions with three states in India, we believe in the near term it is the Mass Alert product that has the potential to make a material impact on revenues and we forecast that it converts one \$4m licence in each of the forecast years (plus associated maintenance revenues).

Costs: historically, gross margins have been around 55%, with payments to content providers comprising the majority of the costs of sales. We forecast a slight increase in gross margin, given the steady addition of the Mass Alert licence revenues, which have a c 75% margin. We assume operating expenses including development sales and marketing increase in line with sales. On this basis, each additional \$1m of new licence revenues from converting the Mass Alert pipeline would have a c 50% drop-through rate to EBITDA.

Scenario analysis: we also demonstrate the impact on forecasts should Celltick convert more (\$8m per year) or less (\$2m) of its pipeline in Mass Alert. The timetable is contingent on signing contracts with local governments in India; while its discussions with three states are at an advanced stage, timing is outside Celltick's control.

- Based on the above assumptions, our base case forecasts revenue to increase from \$22.1m in FY17 to \$28.4m in FY20. With the cost structure outlined, we would expect EBITDA margins to remain at approximately 34%.
- Our blue sky scenario would increase our 2020 revenue forecast to \$33.6m, with EBITDA margins expanding to 36% by 2020.
- Our more cautious scenario would reduce our 2020 revenue forecast to \$25.7m, on an EBITDA margin of 33%.

Exhibit 21: LiveScreen forecast scenarios (\$m)

| | Conservative scenario | | | | | Base case | | | | | Blue sky | | | | |
|-----------------------|-----------------------|---------------|---------------|---------------|-----------|---------------|---------------|---------------|---------------|-----------|---------------|---------------|---------------|---------------|------------|
| | 2017 | 2018 | 2019 | 2020 | CAGR | 2017 | 2018 | 2019 | 2020 | CAGR | 2017 | 2018 | 2019 | 2020 | CAGR |
| Managed service | 20,249 | 20,856 | 21,482 | 22,127 | 3% | 20,249 | 20,856 | 21,482 | 22,127 | 3% | 20,249 | 20,856 | 21,482 | 22,127 | 3% |
| Mass Alert | 965 | 2,000 | 2,000 | 2,000 | 27% | 965 | 4,000 | 4,000 | 4,000 | 61% | 965 | 8,000 | 8,000 | 8,000 | 102% |
| Maintenance | 926 | 954 | 1,282 | 1,621 | 21% | 926 | 954 | 1,582 | 2,230 | 34% | 926 | 954 | 2,182 | 3,448 | 55% |
| Total revenues | 22,140 | 23,810 | 24,765 | 25,747 | 5% | 22,140 | 25,810 | 27,065 | 28,356 | 9% | 22,140 | 29,810 | 31,665 | 33,574 | 15% |
| Gross profit | 12,236 | 13,391 | 13,930 | 14,486 | 6% | 12,236 | 14,891 | 15,580 | 16,291 | 10% | 12,236 | 17,891 | 18,880 | 19,900 | 18% |
| Gross margin | 55% | 56% | 56% | 56% | | 55% | 58% | 58% | 57% | | 55% | 60% | 60% | 59% | |
| Total op ex | (4,738) | (5,476) | (5,696) | (5,922) | 8% | (4,738) | (5,936) | (6,225) | (6,522) | 11% | (4,738) | (6,856) | (7,283) | (7,722) | 18% |
| EBITDA | 7,498 | 7,914 | 8,234 | 8,564 | 5% | 7,498 | 8,954 | 9,355 | 9,769 | 9% | 7,498 | 11,034 | 11,597 | 12,178 | 18% |
| EBITDA margin | 34% | 33% | 33% | 33% | | 34% | 35% | 35% | 34% | | 34% | 37% | 37% | 36% | |

Source: Edison Investment Research

Start: Contracted operator roll-out underpins growth in MAUs

Revenues grew almost fourfold in 2017, increasing from \$1.5m in 2016 to \$6.8m in 2017, contributing \$1.7m at the gross profit level. However, after R&D, sales and marketing and general expenses, it was loss making in terms of EBITDA (\$5.1m).

Revenue forecasts hinge on the pace of operator adoption, which will drive the volume of advertising impressions that can be monetised (itself a function of both the DAUs and the level of engagement) and the geographic mix; for instance, CPMs in developed markets such as the US and Europe command rates approximately four times those in Mexico (Start's largest market). Management has a well-developed pipeline from existing partner entities – in particular América Móvil, with whom it is rolling out Start in additional markets. It should also start to see revenues from its new US partner during 2018. While a seasonally small quarter for advertising, Q118 has started well with Start revenues broadly double the level in Q117 (and flat on Q4). Given this pipeline and revenue momentum, for our base case we assume a 65% increase in average DAUs in 2018 to 13 million, rising to c 20m by 2020. We assume an annual increase of 15% in CPMs (due to mix effects rather than price increases) leading to a CAGR in revenue of c 63% over the forecast period to 2020.

Costs: the operators' share and payments to content providers (c 55%) comprise the majority of cost of sales. We assume a further 5% for other direct costs and model a gross margin trending to 60%. Excluding the investment in the magazine (which we forecast separately), we forecast the growth of R&D and sales and marketing to be linked to sales.

Scenario analysis: while the CPM rate is an important driver, in the early years, it will be the rate at which it can add to its user base that will be the most significant variable driving revenues. We also demonstrate the impact on forecasts should DAUs grow approximately 10% faster or slower than forecast; this could be the case if an operator themselves gains or losses market share, a faster or slower roll out of the pipeline or a change in the geographic mix of operators towards developed markets.

- Based on the above assumptions, our base case forecasts revenues to increase from \$6.8m in FY17 to \$29.5 by FY20. With the cost structure outlined, we would expect Start to become profitable at the EBITDA level in 2019.
- Our blue sky scenario would increase our 2020 revenue forecast to \$36.1m, bring forward EBITDA break-even and allow a 9% EBITDA margin by 2020.
- In the conservative scenario we reduce our 2020 revenue forecast to \$22.3m, at which point the service would have reached breakeven.

Exhibit 22: Start base case forecasts and sensitivity scenarios (\$000)

| | Cautious | | | | | Base | | | | | Blue sky | | | | |
|---------------------|----------|---------|---------|---------|------|---------|---------|---------|----------|------|----------|---------|---------|----------|------|
| | 2017 | 2018 | 2019 | 2020 | CAGR | 2017 | 2018 | 2019 | 2020 | CAGR | 2017 | 2018 | 2019 | 2020 | CAGR |
| Av. CPM (\$) | 1.38 | 1.59 | 1.83 | 2.10 | 15% | 1.38 | 1.59 | 1.83 | 2.10 | 15% | 1.38 | 1.59 | 1.83 | 2.10 | 15% |
| Impression/ user | 1.70 | 1.79 | 1.87 | 1.97 | 5% | 1.70 | 1.79 | 1.87 | 1.97 | 5% | 1.70 | 1.79 | 1.87 | 1.97 | 5% |
| Average DAUs | 7,934 | 10,711 | 12,853 | 14,781 | 23% | 7,934 | 13,091 | 17,018 | 19,571 | 35% | 7,934 | 13,885 | 20,827 | 23,951 | 45% |
| Revenues | 6,796 | 11,078 | 16,052 | 22,291 | 49% | 6,796 | 13,540 | 21,255 | 29,515 | 63% | 6,796 | 14,361 | 26,011 | 36,120 | 75% |
| Gross profit | 1,338 | 4,653 | 6,742 | 9,362 | 91% | 1,338 | 5,687 | 8,927 | 12,396 | 110% | 1,338 | 6,032 | 10,925 | 15,170 | 125% |
| Gross margin | 20% | 42% | 42% | 42% | | 20% | 42% | 42% | 42% | | 20% | 42% | 42% | 42% | |
| Total op ex | (6,434) | (7,126) | (6,538) | (7,887) | 7% | (6,434) | (7,126) | (8,307) | (10,054) | 16% | (6,434) | (7,126) | (9,924) | (12,036) | 23% |
| EBITDA | (5,096) | (2,473) | 204 | 1,475 | - | (5,096) | (1,439) | 620 | 2,342 | | (5,096) | (1,094) | 1,001 | 3,134 | |
| EBITDA margin | -75.0% | -22.3% | 1.3% | 6.6% | | -75.0% | -10.6% | 2.9% | 7.9% | | -75.0% | -7.6% | 3.8% | 8.7% | |

Source: Edison Investment Research

Start Magazine: Forecasts hinge on adding app partners

The distribution of Start Magazine to third-party apps is at an earlier stage of development than the other products. While it has 21 million MAUs, engagement levels are lower with only one million DAUs. First revenues are expected from Q118 and proceeds from the IPO would allow Celltick to step up its investment in sales and marketing, as well as content targeting to drive engagement levels in order to accelerate the growth of this division. Given the lack of track record, forecast risk for this service is very high.

We assume a formal commercial launch later in the year and consequently little change in DAUs in 2018. By 2020 we assume average DAUs increase to c 16m. We forecast a starting CPM at half the rate generated by Start, which we then grow by 15% a year to increase to approximately \$1 in FY20.

Subject to funding, management plans to put in place an additional 25 employees across sales, and to increase investment in software and data engineers. In 2018 we forecast R&D costs of approximately \$1.75m (of which \$1.25m is capitalised) and a similar level of sales and marketing, with opex accounting for the same share of revenues by 2020 as for Start.

Scenario analysis: in our sensitivity analysis we flex our DAU assumption from our base case, leaving other assumptions unchanged. On the outlined cost structure we believe a revenue base of approximately \$10m is required to achieve EBITDA breakeven. However, in reality, if revenues evolve more slowly than management expects, it may choose to rationalise the cost base.

- Base case: We forecast first revenues of \$0.6m in FY18, increasing to \$12.4m by 2020. With the cost structure outlined, we expect EBITDA losses for the magazine to be broadly similar in 2018 as 2017 with EBITDA profitability reached in 2020 (2% EBITDA margin).
- Our blue sky scenario would increase our 2020 revenue forecast to \$22.3m, generating an EBITDA margin of 15% in 2020.
- Our conservative scenario would reduce our 2020 revenue forecast to \$5.0m.

Exhibit 23: Start Magazine (third-party app) forecast scenarios (\$000)

| | Conservative | | | | Base | | | | Blue sky | | | |
|------------------|--------------|---------|---------|------|---------|---------|---------|------|----------|---------|---------|------|
| | 2018 | 2019 | 2020 | CAGR | 2018 | 2019 | 2020 | CAGR | 2018 | 2019 | 2020 | CAGR |
| Average CPM (\$) | 0.73 | 0.84 | 0.96 | 15% | 0.73 | 0.84 | 0.96 | 15% | 0.73 | 0.84 | 0.96 | 15% |
| Impression/user | 2.05 | 2.15 | 2.26 | 5% | 2.05 | 2.15 | 2.26 | 5% | 2.05 | 2.15 | 2.26 | 5% |
| DAUs | 1,043 | 3,128 | 6,257 | 145% | 1,043 | 5,214 | 15,642 | 287% | 1,043 | 9,385 | 28,155 | 420% |
| Revenues | 567 | 2,054 | 4,960 | 196% | 567 | 3,423 | 12,401 | 368% | 567 | 6,162 | 22,321 | 527% |
| Gross profit | (212) | 364 | 1,559 | | (212) | 980 | 4,908 | | (212) | 2,212 | 9,372 | |
| Gross margin | -37% | 18% | 31% | | -37% | 29% | 40% | | -37% | 36% | 42% | |
| Total opex | (2,494) | (2,562) | (2,498) | 0% | (2,494) | (3,452) | (4,644) | 36% | (2,494) | (4,027) | (6,136) | 57% |
| EBITDA | (2,706) | (2,198) | (939) | | (2,706) | (2,472) | 263 | | (2,706) | (1,815) | 3,236 | |
| EBITDA margin | -477% | -477.2% | -107.0% | | -477.2% | -72.2% | 2.1% | | -477% | -29.5% | 14.5% | |

Source: Edison Investment Research

Taxation, share capital base and other

In its largest market, India, Celltick pays tax of 7% on 30% of its revenues. In other markets, it pays withholding tax on revenues repatriated from its overseas group companies at varying rates, but rarely above 10%. These taxes are predominantly related to LiveScreen. Revenues for Start are dealt with under the local regime in Israel, but with tax losses carried forward of approximately \$30m, this division is unlikely to be subject to tax within the forecast period. Once it starts to pay tax, as the group is classified an approved enterprise, it is expected to be c 10% of taxable profits.

Balance sheet and cash flow

In 2017 the group reported net debt of \$5.9m, comprising debt of \$8.7m and cash of \$2.8m. Of this \$8m relates to a loan from Kreos Capital (a venture capital company) and the balance relates to a short-term loan from Bank Leumi. In March it also put in place an additional line of credit with Kreos for \$3m, meaning it currently has total debt facilities of \$13m. The interest rate of the debt is approximately 12%. Attached to this debt, Celltick has issued 59k warrant options to Kreos, which can be exercised after an IPO. This debt is being paid off over the coming five years.

Celltick recognises revenues based on information received from partners. For LiveScreen, this information is reconciled to Celltick's own systems, which are integrated into the partners' billing systems (LiveScreen) and invoiced on a monthly basis. Mass Alert revenues are recognised on a percentage-of-completion basis. Receivables are collected approximately 60 days later for LiveScreen and 30-60 days later for Start. LiveScreen and Start make payment to its suppliers based on back-to-back collection from customers.

Capital expenditure in 2017 was \$1.3m, of which \$1.1m relates to R&D capitalised relating to Start Magazine. We forecast capital expenditure to increase to \$1.6m in 2018 and \$2.0m by 2020.

Assuming our base case forecasts, this would mean the group generates a healthy level of operating cash flow in the forecast period. IPO funds are likely to be used to provide a working capital cushion and provide flexibility to make smaller acquisitions.

Exhibit 24: Cash flow – base case forecasts (\$'000)

| | 2015 | 2016 | 2017 | 2018e | 2019e | 2020e |
|-----------------------------|----------------|----------------|----------------|--------------|--------------|---------------|
| EBITDA | 1,731 | (44) | 2,402 | 4,809 | 7,504 | 12,374 |
| Depreciation & amortisation | (370) | (957) | (55) | (1,290) | 0 | 0 |
| Exceptionals & other | 0 | 0 | 0 | 0 | 0 | 0 |
| Working capital movement | (771) | 193 | 351 | 11 | 647 | (634) |
| Tax | (1,124) | (1,593) | (1,389) | (1,562) | (1,637) | (1,716) |
| Operating cash flow | (534) | (2,401) | 1,309 | 1,969 | 6,513 | 10,024 |
| Net interest | (605) | (924) | (1,277) | (1,047) | (889) | (431) |
| Capex | (223) | (225) | (1,346) | (1,550) | (1,800) | (2,000) |
| Other | (81) | (34) | (2) | 0 | 0 | 1 |
| Net cash flow | (1,443) | (3,584) | (1,316) | (629) | 3,824 | 7,594 |
| Opening net debt | 738 | (1,410) | (3,956) | (5,871) | (6,500) | (2,675) |
| FX | (705) | 167 | 118 | 0 | 0 | 0 |
| Movement in borrowings | | 871 | (717) | 0 | 0 | 0 |
| Closing net (debt)/cash | (1,410) | (3,956) | (5,871) | (6,500) | (2,675) | 4,919 |

Source: Edison Investment Research

Valuation

Having modelled a base case that we believe is achievable based on discussions with management, undertaken sensitivity analysis and benchmarked Celltick against quoted peers, we derive a base case valuation for Celltick of \$109m. This would suggest an EV/revenue multiple of 2.9x in 2018 and 2.2x in FY19 – in line with its peer group in 2018, although a discount in 2019. Investments made into Start mean that on an EV/EBITDA multiple, it would be at a considerable premium until these services break even. Stripping out this investment from our base case forecasts (ie assuming breakeven for Start), our valuation would imply a 12.8x EV/ EBITDA multiple in 2018 and 12.2x in 2019. This is a slight premium to peers (9.9x in FY19), which we believe is justified given the growth opportunity.

Discounted cash flow: Sum of the parts valuation

Given the different business models and stages of development of each of the divisions, we have performed a DCF analysis on each division individually, which we then aggregate.

Methodology: Capturing differing stages of maturity and visibility

Evaluating risk: we believe that Celltick's track record and relationships with operators place it in a strong position to launch new products into an expanding market. Nevertheless, the majority of growth that we forecast is from relatively new services. A more diverse profit spread ultimately lowers the overall risk profile of the group. However, there are no guarantees that these new services will develop in line with expectations. Consequently, we use a higher discount rate in our valuation for these early stage segments, capturing execution risk. We also take into consideration the geographic mix of revenues, which leans towards emerging markets.

Our base case uses a WACC of 12% for LiveScreen, taking into account its emerging market focus, 13% for Start and 15% for Start Magazine, which results in a weighted by value WACC of 12.5% for our base case. As our choice of discount rate is subjective, we also demonstrate the impact on valuation if we increase or reduce this rate by 1pp.

Longer-term growth: we base our DCF on the three years explicitly forecast for each division. We then assume a 'fade' period of revenue growth to 2027 (10 years in total) where the growth rate fades uniformly to our terminal growth rate.

EBITDA margin potential: for each division we have applied a potential peak EBITDA margin. The level and timing of reaching this will change depending on each growth scenario.

Terminal assumptions: We apply a terminal growth rate of 2% on stable margins, a cash tax rate in line with P&L tax and a capital expenditure to sales ratio, which settles out at approximately 3% for each division.

Divisional DCFs

Here we summarise our divisional DCFs, centred on the base case, while also demonstrating the impact on valuation under the blue sky and more cautious scenarios. For completeness we show each scenario across three different discount rates. However, as explained above, we would generally attach a lower discount rate to our more cautious scenario, and a higher rate to the more bullish one. Note that the valuations are on an EV basis, as we have not split the debt per division.

LiveScreen: \$68m base case valuation

We assume that the 9% CAGR in revenues forecast in the period to 2020 fades to 2% over 2020-2027. We assume EBITDA margins remain stable at 34% and use a WACC of 12.0%. This returns a DCF value of \$68m. Our base case valuation for LiveScreen implies an EV/EBITDA of 7.6x in 2018. 40% of the implied enterprise value is in the terminal value.

Start: \$34m base case valuation

We assume that the 63% CAGR in revenues in the three forecast years fades to 7.6% over 2020-2027. On this profile, we believe peak EBITDA margins of 17.5% could be achieved by 2027. We use a WACC of 13.0%, which returns a DCF value of \$34m for Start. We note that even though we forecast EBITDA profitability from 2019, 55% of the implied enterprise value is in the terminal. Our base case valuation for Start would imply an EV/sales multiple of 2.5x in 2018, which is in line with peers.

Start Magazine: \$6m base case valuation

We have assumed that the CAGR in revenues of 370% in the three forecast years fades to 15.6% over 2020-2027. We believe that on this growth profile, EBITDA margins of 15% could be achieved by 2025, where we assume they peak. Given the magazine is still in the beta stage, execution risk is higher than for LiveScreen and Start and, consequently, we use a relatively high discount rate of 15%.

Our base case forecasts return a DCF value of \$6.2m for Start Magazine, of which 130% of the implied enterprise value is in the terminal value (due to near term losses). This would imply an FY19 (the first year after commercial launch) EV/sales multiple of 1.8x.

Aggregate group DCF equity value: \$109m base case valuation

Aggregating our divisional DCFs suggests a base case equity value for the group of \$109m on a blended WACC of 12.5%, which equates to an EV of \$114m.

Exhibit 25 summarises our three DCF scenarios and shows the impact of increasing or reducing the WACC by 1pp in each segment.

We also show the impact on the DCF were Celltick to perform in line with our more cautious or blue sky scenarios. Given the early-stage and loss-making position of the Start and Start Magazine divisions, relatively small changes to our assumptions have a significant effect on the valuation. This demonstrates the importance of these divisions to the group's valuation longer term.

Exhibit 25: Summary DCF valuation scenarios (\$m)

| WACC % | LiveScreen | | | Start | | | Magazine | | | Total equity value | | |
|-----------------------|------------|-------|-------|-------|-------|-------|----------|-------|-------|--------------------|-------|-------|
| | 11.0% | 12.0% | 13.0% | 12.0% | 13.0% | 14.0% | 14.0% | 15.0% | 16.0% | 11.5% | 12.5% | 13.5% |
| Conservative scenario | 66.2 | 59.0 | 53.3 | 23.7 | 20.5 | 17.9 | Neg. | Neg. | Neg. | 89.8 | 80.0 | 71.1 |
| Base case | 76.8 | 68.4 | 61.8 | 39.0 | 33.9 | 29.9 | 7.9 | 6.2 | 4.9 | 123.6 | 108.5 | 96.4 |
| Blue sky scenario | 98.0 | 87.3 | 78.8 | 52.5 | 46.1 | 40.9 | 30.2 | 26.2 | 23.0 | 180.7 | 159.6 | 142.6 |

Source: Edison Investment Research

Peer comparison: Cross-sector comparison

With its three distinct services, we benchmark our DCF valuation against peers from three relevant industry segments:

- **Performance marketing, use acquisition groups.** These companies also generate revenues from advertising participations and have a gross profit profile similar to Start and Start Magazine. However, they do not have direct relationships with the telecoms operators, rather with a wide network of affiliate publishers (often via intermediaries).
- **Value added service providers (VAS):** VAS companies provide ringtones, entertainment or productivity services to mobile users. Listed pure play VAS companies include OnMobile (India), Acotel (Italy) or IMImobile (UK). In this category we also include Boku, a mobile payments company. Like Celltick, these companies have direct relationships with a network of mobile operators worldwide, and revenues are either transaction based or from software licences.
- **Portals:** Like Start Magazine, digital publishers that run web portals largely rely on the growth of their reader base to determine growth, although they often both create and distribute content.

In aggregate, this peer group trades on an average FY18 EV/sales multiple of 2.8x (2.7x in FY19), an EV/EBITDA multiple of 14.8x (9.9x FY19). The start-up investment in Start and Start Magazine are suppressing profitability until breakeven, which we forecast in 2020 – consequently, our group DCF derived equity value of \$109m implies an EV/ EBITDA multiple of 23.9x in FY18. However, this decreases to 9.2x in 2020 when these services are forecast to be profitable. In terms of EV/sales, our valuation implies an FY18 multiple of 2.9x and 2.2x in FY19, a discount to peers by 2019.

Exhibit 26: Summary peer comparison

| Name | Market cap (\$m) | Sales last (m) | Sales growth (%) | | EBITDA margin (%) | | EV/Sales (x) | | | EV/EBITDA (x) | | | P/E (x) | | |
|------------------------|------------------|----------------|------------------|-------|-------------------|------|---------------|---------------|---------------|---------------|-----------------|---------------|---------|-----------------|-----------------|
| | | | 1FY | 2FY | 1FY | 2FY | Last | 1FY | 2FY | Last | 1FY | 2FY | Last | 1FY | 2FY |
| IMImobile | 234 | 76.1 | 39.9 | 11.7 | 11.8 | 12.6 | 2.1 | 1.5 | 1.3 | 18.7 | 12.5 | 10.5 | 27.6 | 24.5 | 20.4 |
| Blue Label Telecoms | 942 | 26,312 | 5.1 | (0.0) | 5.5 | 6.1 | 0.4 | 0.4 | 0.4 | 8.2 | 6.8 | 10.5 | 4.9 | 4.7 | |
| Xlmedia | 527 | 138 | 10.0 | 6.6 | 32.7 | 32.8 | 3.5 | 3.2 | 3.0 | 10.4 | 9.8 | 9.2 | 16.0 | 15.2 | 13.8 |
| Taptica international | 309 | 211 | 55.7 | 10.5 | 11.8 | 11.9 | 1.5 | 1.0 | 0.9 | 10.1 | 8.1 | 7.2 | 21.1 | 11.1 | 10.0 |
| Boku | 313 | 24 | 12.9 | 24.0 | 14.1 | 29.4 | 8.7 | 7.8 | 6.3 | (39.2) | 55.1 | 21.3 | (6.2) | 358.3 | 46.7 |
| IAC/ interactivecorp | 11,144 | 3,307 | 20.0 | 13.5 | 22.6 | 25.0 | 3.6 | 3.0 | 2.7 | 39.6 | 13.4 | 10.8 | 35.1 | 22.9 | 17.9 |
| J2 Global | 3,948 | 1,118 | 9.3 | 7.6 | 40.3 | 42.0 | 4.1 | 3.8 | 3.5 | 11.3 | 9.3 | 8.3 | 25.2 | 13.2 | 12.0 |
| Care.com | 474 | 174 | 9.7 | 12.1 | 16.1 | 17.5 | 2.5 | 2.3 | 2.1 | 53.7 | 15.5 | 12.8 | 44.0 | 23.9 | 21.8 |
| Celcom Israel | 650 | 3,871 | 1.7 | N/A | 21.2 | N/A | 1.3 | 1.2 | N/A | 5.8 | 5.9 | 5.4 | 23.5 | 20.7 | 18.5 |
| Nice Ltd | 5,913 | 1,332 | 8.4 | 7.1 | 29.4 | 30.3 | 4.4 | 4.0 | 3.8 | 19.0 | 13.7 | 12.4 | 42.7 | 21.5 | 19.5 |
| Partner Communications | 666 | 3,268 | N/A | N/A | N/A | N/A | 1.0 | N/A | N/A | 3.9 | 4.6 | 4.2 | 39.5 | 20.5 | 20.2 |
| Average | | | 17.3 | 10.3 | 20.6 | 23.1 | 3.0/ 2.2** | 2.8/ 2.3** | 2.7/ 2.2** | 12.8* | 14.8/ 10.3** | 9.9/ 8.8** | 25.4* | 48.8/ 17.8** | 18.7/ 15.9** |

Source: Bloomberg. Note: Priced at 2 May 2018. *Excludes negatives. **Excludes Boku.

User comparisons yield significantly higher values

For internet publishers in the early stages of commercialisation, metrics based on DAUs are often cited. On this front we believe it is worth highlighting how Celltick's MAU base on c 87m (comprising

45m LiveScreen, 20m Start and 21m Start Magazine) compares to Twitter (c 330m), Weibo (340m) and Snapchat (c 320m). With the majority of this base currently from LiveScreen, the levels of engagement and eventual monetisation is much lower than these internet giants and we feel that relying on valuations based on these metrics at this stage is disingenuous. However, as the Start products scale this could be an increasingly relevant metric and therefore should be taken into account.

By way of illustration, Snapchat reported average annual revenues per DAU in 2017 of \$4.4. This is approximately five times the level currently generated by Start. Each of Snapchat's DAUs on this basis are valued at c \$80. Adjusting for the lower average revenue per user, the same metric applied to Start's user base in 2019 would imply a valuation for these divisions of an order of magnitude higher than our DCF (which derives an EV/DAU of approximately \$1.8 in our base case).

Sensitivities

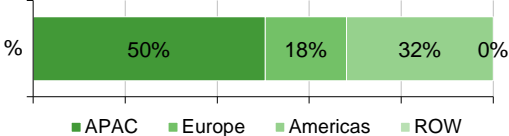
- **Start and Start Magazine are still very early-stage businesses.** As we have highlighted above, there is a high degree of uncertainty relating to the future prospects of the Start and Start Magazine businesses, where there are limited historical financials. We have modelled three scenarios to capture different potential outcomes, but there is a risk that these businesses fail to develop according to the company's expectations.
- **Currency.** Celltick operates its three business divisions globally, with a US dollar reporting currency and a cost base that is largely in Israeli shekels. Although Celltick continuously hedges its risks, the accounts have historically been affected by FX fluctuations (especially Indian rupee, Russian rouble and Brazilian real). Additional currency risks comes from credit obligations, which are largely US dollar denominated. Our forecasts are based in dollars and may not fully reflect exchange rate fluctuations.
- **Dependency on large customers and distribution partners.** Although the business is far more diversified than in previous years, Celltick's partnerships with a few large telecom operators is key for both LiveScreen and the Start businesses. For LiveScreen, this is especially true in India and for Start, América Móvil (Claro brands) is a key distributor across Latin America. The loss (or gain) of any one major operator would have a material impact on revenues and profitability. For the Start businesses (Start and Start Magazine), Google currently represents 80% of revenues (or 19% of group revenues). Google changing its terms of business could have an adverse impact on Start's revenues.
- **Competition.** Although LiveScreen has limited competition, there are innumerable alternatives in the app market and the online publishing market is also highly competitive.
- **Funding requirements.** If profitability fails to materialise, the company might need to return to the market for further funding, raising the possibility of equity dilution.
- **Stock overhang.** After the IPO, the original investors will continue to hold a material percentage of the shares. Although management has committed to not selling shares in the near term, we believe that some of the original investors may be looking for an exit in the short to medium term.
- **Changes to telecom operators' product offerings.** Changes in the structure and nature of communications packages that the cellular operators offer to their subscribers might affect Celltick's revenues, particularly with regards to the LiveScreen product.
- **Advertising policies.** The majority of Start revenues come from Celltick's partnership with Google AdSense and Ad Exchange. Changes in Google's policies could impact Celltick's margins or the functionality of the product.

- **Third-party content.** Celltick makes extensive use of third-party content (Magazine). Changes in the willingness or policies of these content providers to provide access may alter the company's opportunities to generate revenues.
- **Regulation.** Changes to regulation, ranging from the forthcoming GDPR to Google's internal regulation as to how and where advertisements can be displayed could affect Celltick's ability to generate revenues.
- **Emerging market risk.** Through its LiveScreen product, Celltick predominately operates in emerging markets, many of which are characterised by a higher degree of political or economic instability. In addition to currency risk, changes to the political landscape could result in difficulty receiving payments, repatriating funds or, in a more extreme case, the closure of Celltick subsidiaries.
- **Increasing smartphone penetration.** A significant portion of LiveScreen revenues continues to be derived from feature phones (c 70% of customers) and, if smartphone penetration increases more rapidly than expected in emerging markets, there could be a short-term impact on Celltick's profits.

Exhibit 27: Financial summary

| | \$'000s | 2015 | 2016 | 2017 | 2018e | 2019e | 2020e |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| 31-December | | GAAP | IFRS | IFRS | IFRS | IFRS | IFRS |
| INCOME STATEMENT | | | | | | | |
| Revenue | 26,487 | 24,676 | 28,937 | 39,917 | 51,743 | 70,272 | |
| Cost of Sales | (12,451) | (11,998) | (15,362) | (19,552) | (26,255) | (36,677) | |
| Gross Profit | 14,036 | 12,678 | 13,575 | 20,365 | 25,487 | 33,595 | |
| EBITDA | 1,731 | (44) | 2,402 | 4,809 | 7,504 | 12,374 | |
| Normalised operating profit | 1,443 | (310) | 1,921 | 3,928 | 6,172 | 10,841 | |
| Amortisation of acquired intangibles | 0 | 0 | 0 | 0 | 0 | 0 | |
| Exceptionals | (20) | (356) | 28 | (1,290) | 0 | 0 | |
| Share-based payments | (189) | (159) | (3,765) | (125) | (125) | (125) | |
| Reported operating profit | 1,234 | (825) | (1,816) | 2,513 | 6,047 | 10,716 | |
| Net Interest | (636) | (1,339) | (3,271) | (1,047) | (889) | (431) | |
| Joint ventures & associates (post tax) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Exceptionals | 0 | 0 | 0 | 0 | 0 | 0 | |
| Profit Before Tax (norm) | 807 | (1,649) | (1,350) | 2,881 | 5,283 | 10,410 | |
| Profit Before Tax (reported) | 598 | (2,164) | (5,087) | 1,466 | 5,158 | 10,285 | |
| Reported tax | (1,338) | (1,289) | (735) | (1,562) | (1,637) | (1,716) | |
| Profit After Tax (norm) | (531) | (2,938) | (2,085) | 1,319 | 3,645 | 8,694 | |
| Profit After Tax (reported) | (740) | (3,453) | (5,822) | (96) | 3,520 | 8,569 | |
| Minority interests | 0 | 0 | 0 | 0 | 0 | 0 | |
| Discontinued operations | 0 | 0 | 0 | 0 | 0 | 0 | |
| Net income (normalised) | (531) | (2,938) | (2,085) | 1,319 | 3,645 | 8,695 | |
| Net income (reported) | (740) | (3,453) | (5,822) | (96) | 3,520 | 8,569 | |
| Basic average number of shares outstanding (m) | N/A | N/A | 517,577 | 517,577 | 517,577 | 517,577 | |
| Revenue growth (%) | | | (-6.8) | 17.3 | 37.9 | 29.6 | 35.8 |
| Gross Margin (%) | 53.0 | 51.4 | 46.9 | 51.0 | 49.3 | 47.8 | |
| EBITDA Margin (%) | 6.5 | -0.2 | 8.3 | 12.0 | 14.5 | 17.6 | |
| Normalised Operating Margin | 5.4 | -1.3 | 6.6 | 9.8 | 11.9 | 15.4 | |
| BALANCE SHEET | | | | | | | |
| Fixed Assets | 662 | 613 | 1,490 | 2,159 | 2,627 | 3,093 | |
| Intangible Assets | 0 | 0 | 932 | 1,601 | 1,978 | 2,344 | |
| Tangible Assets | 564 | 519 | 464 | 464 | 555 | 655 | |
| Investments & other | 98 | 94 | 94 | 94 | 94 | 94 | |
| Current Assets | 10,932 | 10,678 | 12,819 | 13,037 | 14,372 | 22,845 | |
| Stocks | 0 | 0 | 0 | 0 | 0 | 0 | |
| Debtors | 6,568 | 6,495 | 8,839 | 10,953 | 12,127 | 13,756 | |
| Cash & cash equivalents | 3,499 | 3,365 | 2,755 | 859 | 1,020 | 7,866 | |
| Other | 865 | 818 | 1,225 | 1,225 | 1,225 | 1,225 | |
| Current Liabilities | 7,858 | 7,839 | 9,862 | 11,987 | 13,808 | 14,802 | |
| Creditors | 720 | 425 | 1,089 | 3,214 | 5,035 | 6,029 | |
| Tax and social security | 214 | 374 | 280 | 280 | 280 | 280 | |
| Short term borrowings | 3,220 | 3,421 | 2,947 | 2,947 | 2,947 | 2,947 | |
| Other | 3,704 | 3,619 | 5,546 | 5,546 | 5,546 | 5,546 | |
| Long Term Liabilities | 1,948 | 4,179 | 5,958 | 4,691 | 1,027 | 279 | |
| Long term borrowings | 1,689 | 3,900 | 5,679 | 4,412 | 748 | 0 | |
| Other long term liabilities | 259 | 279 | 279 | 279 | 279 | 279 | |
| Net Assets | 1,788 | (727) | (1,511) | (1,482) | 2,163 | 10,859 | |
| Minority interests | 0 | 0 | 0 | 0 | 0 | 0 | |
| Shareholders' equity | 1,788 | (727) | (1,511) | (1,482) | 2,163 | 10,859 | |
| CASH FLOW | | | | | | | |
| Op Cash Flow before WC and tax | 1,731 | (44) | 2,402 | 4,809 | 7,504 | 12,374 | |
| Working capital | (771) | 193 | 351 | 11 | 647 | (634) | |
| Exceptional & other | (370) | (957) | (55) | (1,290) | 0 | 0 | |
| Tax | (1,124) | (1,593) | (1,389) | (1,562) | (1,637) | (1,716) | |
| Net operating cash flow | (534) | (2,401) | 1,309 | 1,969 | 6,513 | 10,024 | |
| Capex | (223) | (225) | (1,346) | (1,550) | (1,800) | (2,000) | |
| Acquisitions/disposals | 0 | 0 | 0 | 0 | 0 | 0 | |
| Net interest | (605) | (924) | (1,277) | (1,047) | (889) | (431) | |
| Equity financing | 0 | 0 | 0 | 0 | 0 | 0 | |
| Dividends | 0 | 0 | 0 | 0 | 0 | 0 | |
| Other | (81) | (34) | (2) | 0 | 0 | 1 | |
| Net Cash Flow | (1,443) | (3,584) | (1,316) | (629) | 3,824 | 7,594 | |
| Opening net (debt)/cash | 738.0 | (1,410.0) | (3,956.0) | (5,871.0) | (6,499.6) | (2,675.2) | |
| FX | (705.0) | 167.0 | 118.0 | 0.0 | 0.0 | 0.0 | |
| Other non-cash movements | 0.0 | 871.0 | (717.0) | 0.0 | 0.0 | 0.0 | |
| Closing net (debt)/cash | (1,410.0) | (3,956.0) | (5,871.0) | (6,499.6) | (2,675.2) | 4,918.8 | |

Source: Company accounts, Edison Investment Research

| Contact details 32 Maskit Street PO Box 12878 Herzliya, 4673332 Israel +972 9 971 0200 www.celltick.com | Revenue by geography  <table border="1"> <thead> <tr> <th>Geography</th> <th>Revenue (%)</th> </tr> </thead> <tbody> <tr> <td>APAC</td> <td>50%</td> </tr> <tr> <td>Europe</td> <td>18%</td> </tr> <tr> <td>Americas</td> <td>32%</td> </tr> <tr> <td>ROW</td> <td>0%</td> </tr> </tbody> </table> | Geography | Revenue (%) | APAC | 50% | Europe | 18% | Americas | 32% | ROW | 0% | | | | | | |
|--|---|-----------|-------------|------|-----|---------|-----|--------------|-----|------|----|---------------------------|---|-------------------------|---|---------------|---|
| Geography | Revenue (%) | | | | | | | | | | | | | | | | |
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| Americas | 32% | | | | | | | | | | | | | | | | |
| ROW | 0% | | | | | | | | | | | | | | | | |
| Management team | | | | | | | | | | | | | | | | | |
| CEO: Ronen Daniel Ronen Daniel is CEO and founder of Celltick. He has over 25 years of experience in the high-tech industry, particularly in mobile technologies and media. Prior to founding Celltick, Ronen was an avionics expert at Israel Aircraft Industries. Ronen is the inventor of several patents including Celltick's main patent. | CFO: Shlomi Hagai Shlomi Hagai joined Celltick in 2007 and was previously corporate COO and CFO at MTS. Before that, Shlomi served as audit team manager at Ernst & Young's professional department, where he supervised privately held and public companies in the hi-tech, industrial, services and infrastructure sectors. | | | | | | | | | | | | | | | | |
| Director: Mike Kelly Mike Kelly was appointed in April 2018. He is the co-founder and CEO of digital media investment and advisory firm KNV, having previously held various executive positions at AOL and The Weather Channel Companies. | Chairman: Kobi Rozengarten Kobi Rozengarten is a general partner of JVP, one of the major initial investors in Celltick. Kobi has over 25 years of experience in senior management positions at global companies and c serves as a board member for a number of companies such as Altair, Infinite Memories and XtremIO. | | | | | | | | | | | | | | | | |
| Principal shareholders | | | | | | | | | | | | | | | | | |
| JVP Amadeus Ronen Daniel ESOP European Venture Partners Kreos Capital Companies Deutsche Bank | <table border="1"> <thead> <tr> <th></th> <th>(%)</th> </tr> </thead> <tbody> <tr> <td>JVP</td> <td>35</td> </tr> <tr> <td>Amadeus</td> <td>25</td> </tr> <tr> <td>Ronen Daniel</td> <td>10</td> </tr> <tr> <td>ESOP</td> <td>8</td> </tr> <tr> <td>European Venture Partners</td> <td>5</td> </tr> <tr> <td>Kreos Capital Companies</td> <td>4</td> </tr> <tr> <td>Deutsche Bank</td> <td>3</td> </tr> </tbody> </table> | | (%) | JVP | 35 | Amadeus | 25 | Ronen Daniel | 10 | ESOP | 8 | European Venture Partners | 5 | Kreos Capital Companies | 4 | Deutsche Bank | 3 |
| | (%) | | | | | | | | | | | | | | | | |
| JVP | 35 | | | | | | | | | | | | | | | | |
| Amadeus | 25 | | | | | | | | | | | | | | | | |
| Ronen Daniel | 10 | | | | | | | | | | | | | | | | |
| ESOP | 8 | | | | | | | | | | | | | | | | |
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| Kreos Capital Companies | 4 | | | | | | | | | | | | | | | | |
| Deutsche Bank | 3 | | | | | | | | | | | | | | | | |
| Companies named in this report | | | | | | | | | | | | | | | | | |
| IMIMobile PLC (IMO.LN), Blue Label Telecoms (BLU.SJ), Onmobile Global (ONMB.IN), XL Media (XLM.LN), Taptica International (TAP.LN), Boku (BOKU.LN), IAC/Interactive (IAC.US), J2 Global (JCOM.US), Care.com (CRCM.US), Cellcom Israel (CEL.IT), NICE (NICE.IT), Partner Communications (PTNR.IT). | | | | | | | | | | | | | | | | | |

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