Total Brain Limited

Delivering human performance solutions

18 February 2019

Total Brain (TTB) is an early stage company which has developed a brain performance management platform powered by the largest standardized neuroscientific database in the world formed over almost two decades and with $50m of R&D funding. Its products are sold by way of subscription (SaaS) resulting in recurring revenue. The company has been listed since 2000 but its business strategy has been completely overhauled since a December 2017 restructure and the appointment of managing director Louis Gagnon. Over the course of CY2018, the company has realigned its B2B product, developed a new B2C offering, more than doubled its employee base and reversed the negative revenue trends of the prior year. The company enters CY2019 with a focused sales plan for attracting Fortune 500 companies as clients and a new B2C application for consumers. We note that based on the company's estimated March 2019 quarter cash burn of $2.79m, TTB will need to raise capital before the end of FY19 and have assumed a $5m equity raise by 30 April 2019 and then another $6m in Q3FY20. Our base case DCF valuation incorporates the dilutionary impact of the raises, arriving at $0.13/share (WACC 14.9%, Beta 1.9, terminal growth rate of 2.2%). This equates to a valuation of $103.6m, with 68.9% of the valuation in the terminal value.

Scope

This report has been commissioned by Total Brain Ltd to present an explanation of the business model and to explore the value created from several possible outcomes.

Business model

Total Brain operates a subscription as a service (SaaS) model for its Brain Performance Management Platform. The science behind the platform has been developed over almost two decades with input from the leading academic institutions in the field. This has generated a proprietary neuroscientific database of scale which underpins the scientific validation that differentiates Total Brain from other brain training and wellness applications. Until late 2017, TTB's focus has solely been on the US corporate market, in particular Fortune 500 companies and large consumer focused entities. In September 2018, the company launched the Total Brain app, designed to capture a share of the estimated US$5bn mHealth market. The app, promoted by affinity partners, assesses the four core brain capacities (emotion, feeling, cognition, self-control), pre-screens seven common mental health conditions and delivers personalised brain and mind/body training.

Valuation of $103.6m

We have used the discounted cashflow methodology to value Total Brain, arriving at a base case valuation of $0.13/share, which includes the dilutionary impact our assumption TTB will raise $5m in the next quarter and $6m in FY20. Our $103.6m base case valuation is generated from a WACC of 14.9%, terminal value 2.2% and a CAGR of free positive cashflows from 2022 of 47.0%. In our view, demonstrated success with the new strategy should underpin Total Brain's share price performance.

Historical earnings and RaaS Advisory estimates

Year end	Revenue (A$m)	EBITDA reported (A$m)	NPAT reported (A$m)	EPS* (c)	P/E (x)	EV/Sales (x)
06/18a	2.6	(4.9)	(23.1)	(6.38)	na	8.8
06/19e	3.3	(7.4)	(5.3)	(0.95)	na	5.7
06/20e	8.7	(5.1)	(3.8)	(0.53)	na	2.4
06/21e	19.0	1.9	1.1	0.14	22.6	1.1
06/22e	26.5	6.6	4.4	0.57	5.5	0.6

Source: Company data, RaaS Advisory Estimates for FY19e, FY20e, FY21e and FY22e

Share details

ASX Code	TTB
Share price	$0.031
Market Capitalisation	$16.5M
Shares on issue	531M
Net cash at 31 December 2018	$3.3M
Free float	~57%

Share performance (since new code applied)
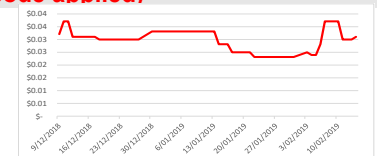
Upside Case

- Highly scalable SaaS model
- Customers achieve high ROI with ~A$8,900 in savings per employee
- Targeting predominantly US corporates and consumers

Downside Case

- Need to sell at the Enterprise level which means a sales cycle of 9-12 months for the B2B product
- New consumer product yet to be fully trialled in market
- Commercial success to date has been elusive

Board of Directors

Dr Evian Gordon	Executive Chairman/Founder
Louis Gagnon	Managing Director/CEO
Matthew Morgan	Non-Executive Director
Dr Stephen Koslow	Non-Executive Director
Ajay Arora	Non-Executive Director

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Total Brain Limited

Total Brain was listed in August 2001 after raising $5m at $0.25/share. The company has subsequently raised $51.5m over several stages, the last being a $10m placement at $0.06/share in December 2017 and a corresponding share purchase plan at $0.06/share in January 2018 which raised $1.25m. At the same time $14m in debt securities were converted, removing all debt from the balance sheet. The appointment of Louis Gagnon as CEO in May 2017 and managing director December 2017 after the recapitalisation was a turning point for the company. Mr Gagnon has completely overhauled the business strategy by repositioning the product as a Brain Optimisation Platform for both corporates and consumers and rebranding it Total Brain (previously MyBrainSolutions), bringing in a team of senior executives experienced in building early stage companies into profitable entities and redefining the go to market strategy by exclusively partnering with the Transformational Leadership for Excellence (TLEX) Institute for collaboration on mind-body training content in Total Brain. In our view, CY2018 was a transformational year for the company with CY2019 set to benefit from the changes.

Investment case

In our view, Total Brain Limited has the opportunity to achieve success for the following reasons:

- The company is unique in that it has amassed more than 1m standardised data sets of brain assessments in clinical settings over a near 20-year period and this science underpins the Total Brain's brain performance monitoring and training platform;
- The company is able to deliver tangible savings and a very high ROI via its screening product by flagging the seven most common mental health conditions within the employee population of a large company and directing affected people to mental health resources saving clients up to $8,900/affected person/year[1];
- There is growing acceptance among US corporates, in particular among Fortune 500 companies, that Optimal Brain Performance delivers productivity advantages[2], estimated at $9,300/person/year[3];
- Medical insurance, life insurance, disability insurance and retirement plans are standard employee benefits in the US; given the links that have been established between depression and productivity[4], we anticipate an increasing number of employers will look for solutions such as offered by Total Brain;
- Total Brain has a senior executive team, led by Louis Gagnon, with experience in building early stage companies into profitable entities. Mr Gagnon has engaged three key executives who successfully led online recruitment company Monster Worldwide from start-up to profitability and himself has been a key executive with Monster Worldwide, online marketing platform Yodle and Amazon's reading platform Audible;
- The company's executive chairman and founder Dr Evian Gordon is a renowned expert in neuroscience with several publications to his name. His gravitas has attracted a high-quality board of directors and advisors to the company;

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1 US$6,390 in healthcare cost per undiagnosed person per year, BCBS, The Health of America, "Major Depression: The Impact on Overall Health", May 2018
2 https://www.inc.com/marissa-levin/why-google-nike-and-apple-love-mindfulness-training-and-how-you-can-easily-love-.html; https://hbr.org/2015/12/why-google-target-and-general-mills-are-investing-in-mindfulness;
3 US$6,721 in disengagement costs per Harvard Business review, December 2010, "What's the hard return on employee wellness programs?"
4 National Alliance on Mental Illness

- Total Brain's partnership with TLEX Institute exposes it to TLEX's Fortune 500 clients and positions it to offer TLEX's validated breathing, mindfulness and relaxation techniques to its B2B and B2C Affinity customers, giving it a distinct competitive advantage over other mindfulness apps
- The company's B2C strategy is to market directly to Affinity partners' members/subscribers, thereby keeping advertising and marketing costs to a minimum.

DCF Valuation at $0.13/share (market capitalisation of $103.6m)

We have considered the following valuation methods:

- Discounted cash flow
- Application of the 'Golden Rule" as a way of analysing appropriate revenue multiples
- Expected cash flow profile implicit in the current share price

Our base case DCF is $0.13/share, a downside case is ($0.001)/share (which is based on 10% underperformance from our base case assumptions), and an upside case (based on 20% outperformance from our base case assumptions) is $0.57/share. Our valuation includes the dilutionary impact of anticipated capital raises in Q4 FY19 and Q3FY20. The current share price of $0.031/share implies a CAGR of 7.0% from FY22 to FY28, which is well below the CAGR forecasts for the mHealth apps market. We have applied the "Golden Rule" (which we discuss in detail from page 17) which relates the revenue multiple to profitability and investors' expected returns and determines the expected CAGR in revenues for the first five years. Using this rule, we arrive at a valuation of $84m or $0.16/share. In our view this is more robust as a valuation methodology than compco valuations as it takes into account the early stage nature of the business.

Exhibit 1: Valuation methodologies addressed in this report

Valuation method	Discount rate	EV/Rev	CAGR in FCF	Value in A$m	Value per share
Base case DCF valuation ^	14.9%		47.0%	103.6	$0.13
An upside case DCF ^	14.9%		38.6%#	438.5	$0.57
A downside case DCF ^	14.9%		nm	(1.5)	($0.001)
Reverse DCF*	14.9%		7.0%	16.5	$0.031
Golden rule valuation using tech PE and average NPAT margin*		9.7		84.0	$0.16

Source: RaaS analysis ^Uses fully diluted share count of 773m shares after anticipated raisings *Uses current share count of 531m shares #CAGR in FCF is taken from FY20-FY28 vs base case CAGR range of FY22-FY28

New Name and Strategy

Total Brain changed its name from Brain Resource Company in December 2018 as part of the final overhaul of the company's strategic direction and product offering. Over its near 20-year history, the company has achieved international recognition in scientific circles as a leader in the field of brain assessment and training and in recent years had secured corporate recognition of the cost benefits of allowing employees to privately screen for mental health "issues" whether they crossed the clinical diagnostic threshold to treatment or not. This corporate recognition had come from companies such as Boeing Corporation which has gradually expanded offering Total Brain to 125,000 of its 140,000 core employees (with an additional 65,000 dependents launching in January 2019) and the American Association of Retired Persons (AARP) which is contracted to spend at least A$0.67m and up to A$6m over two years.

The new business strategy is two-pronged:

- To scale B2B opportunities through its Screening and Assessment SaaS platform with large corporate clients and multi-year contracts either directly or through channel partners such as Mercer Consulting and Kaiser;
- To target consumers through consumer affiliates such AARP and generate revenue through subscriptions, while revenue sharing with its affiliates and through lead generation for practitioners and advertising partners.

The company's affiliates and channel partners lend an opportunity to scale quickly. It has also exclusively partnered with TLEX Institute, a leader in mind-body restoration techniques for Fortune 100 companies, to offer TLEX's proprietary breathing and guided meditation techniques via the company's Brain Optimization Platform. The company has also recently announced that it has partnered with Focus@will, a neuro-optimized music streaming service with 1.5M users and India's Mapmygenome, which owns Genomepatri, a platform for assessing inherited and acquired health issues for 100+ conditions. Both B2C Affinity partnerships involve a free trial period after which users will be able to subscribe to Total Brain's platform.

Capital raised to date

Total Brain has raised $42.45m in equity since its IPO in August 2001 and $56.45m in total. The company went through a recapitalisation in late 2017 in which it raised $10.1m at $0.06/share, converted $10m in bonds and $4m convertible preferred shares to remove all debt from its balance sheet and raised another $1.25m through its share purchase plan. The funds raised have been invested in people, with staff numbers more than doubling to 34 FTEs with a focus on engineering and product, and the addition of several key senior executives including a Chief Marketing Officer, Director of Human Resources and Vice President of User Experience to round out the team; all new hires have been focused on overhauling the business and re-defining its platform as a SaaS (software as a service) offering.

The company revealed in its recent December quarterly report that it had $3.3m in cash available at 31 December and that it anticipated that its cash burn for the March 2018 quarter would be $2.7m. We anticipate that the company will need to raise at least $5.0m before the end of this financial year and, on our base case forecasts, another $6m may need to be raised in by Q3FY20.

Exhibit 2: Capital Raised to Date

Year	Transaction	Amount $M
Aug-01	IPO at 25cps	5.00
Feb-02	Placement at 25cps	1.00
May-03	Placement at 26.5cps	2.25
Nov-03	Placement at 45 cps	3.81
Jul-05	Placement at 30 cps	1.63
Jun-06	Placement at 26.5 cps	1.50
Feb-13	Placement at 30 cps	1.00
Aug-13	Placement at 30 cps	2.00
Aug/Sept 2014	Placement/SPP at 25 cps	8.06
Nov-15	Placement/SPP at 20 cps	3.11
Apr-17	Placement at 8.0 cps	1.32
Aug-17	Placement at 8.0 cps	0.09
Dec-17	Placement at 6.0 cps	10.10
Jan/Feb 2018	SPP inc shortfall at 6.0 cps	1.25
Option exercises		0.32
Total Funds raised through ordinary equity		**42.45**
Convertible bonds		10.00
Exchangeable Convertible Preference Share		4.00
Total Funds Raised		**56.45**

Source: Company data

Background to the technology

Total Brain has evolved from neuroscientific research undertaken at the some of the world's leading universities. Its Brain Optimisation Platform is powered by the largest standardised neuroscientific database developed over two decades. Founder and executive chairman Dr Evian Gordon spearheaded the standardization in the early 2000s with some of the world's top neuroscientists, defining four core processes – cognition, emotions, feelings and self-regulation – which can be measured by 17 markers. The most valid "pen and paper" tests for each brain marker were then digitised and validated through a series of in-house and third party assessments to create more than one million standardised data sets, including 200 brain studies at Harvard, NYU, MIT, Stanford, Oxford and Cambridge, 600K+ individual brain assessments and brain trainings through employers and clinics, 54k EEGs, 2 clinical trials predicting drug effectiveness for depression and Attention Deficit and Hyperactivity Disorder

On the last point, the company has been at the forefront of clinical trials to identify objective predictors of treatment responses to three of the most commonly used ant-depressants: Lexapro, Zoloft and Effexor. The study, iSPOT-D (International Study to Predict Optimised Treatment in Depression) is at an early stage, having initial positive results on the predictive ability of the iSPOT algorithms for the three drugs in question. The company has engaged a healthcare investment bank to assist with evaluating alternatives for its future fit including licensing, commercialisation or M&A. We have not incorporated iSPOT into our forecasts.

In our view, Total Brain's key competitive advantage is this deep database together with its proprietary algorithms and several patents protecting the company's brain measurement system and method and the biomarkers it has defined.

How the platform works

The following exhibit highlights how the platform works:

- There is an initial 20-minute assessment in which the user responds to photos of various expressions and completes a series of exercises;
- This assesses the user's strengths/weaknesses in terms of emotion, cognition, feeling and self-control and screens for seven mental conditions (depression, anxiety, ADHD, PTSD, sleep apnoea, social phobia and addiction);
- The program then recommends brain and mind/body exercises each month or at earlier intervals and, if the user is at risk of one or more of the mental conditions, the program sends the individual

a risk notification. If the user is an employee of a corporate client, the platform encourages them to contact the company's Employee Assistance Program.

Exhibit 3: Total Brain's Brain Performance Management Platform

BRAINPERFORMANCE MANAGEMENT PLATFORM

1 POPULATION ASSESSMENT
HR or MRK sends invite to a 20-min digital assessment of 12 brain capacities

2 ASSESSMENT RESULTS
Users understand Strengths & Weaknesses (S&W) and PCTL Ranking for each capacity

3 TRAINING
Users get custom program to train S&W via Brain and Mind/Body Exercises

4 SCREENING 7 MENTAL CONDITIONS (70-80% accurate)
Some users (60%) get a risk notification for potential conditions that may affect their performance (Depression, Anxiety, ADHD, PTSD, Sleep Apnea, Social Phobia, Addiction)
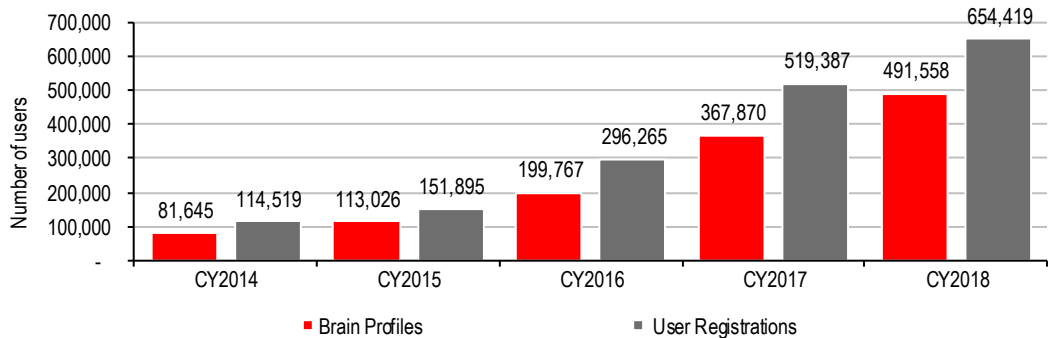
SYMPTOMS SELF-VALIDATION   USER-INITIATED CALL TO EAP

Source: Company presentations

Total Brain's user registrations as at December 31 were almost 655k, an increase of 30% on the prior year while the brain profiles it has on the platform has increased 34% to more than 490K.

Exhibit 4: User registrations and brain profiles

Source: Company data

Recent operating performance

The company released its Q2FY19 quarterly results on January 31 and noted that revenues for the calendar year 2018 were US$2m (A$2.7m). This is below the guidance provided by the company in February 2018 for US$3.2m and demonstrates both the challenge of trying to predict contract lead times and how clients' timing can impact a small company's cashflows. It is worth noting that the company announced that recurring revenue for the period increased 42% year on year whilst exiting all non-core revenue generating activities.

Managing director Louis Gagnon highlighted on the investor call that the expectation had been to close more contracts by December end, contracts that are now expected to flow into this calendar year. He also noted that decline in cash receipts in the December quarter versus the September quarter (as highlighted in

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the exhibit below) was due to an upfront payment from AARP of $347,000 in the September quarter. Excluding this, cash receipts would be been up 13% in December on the prior quarter and 30% year on year.

Exhibit 5: Quarterly cash receipts
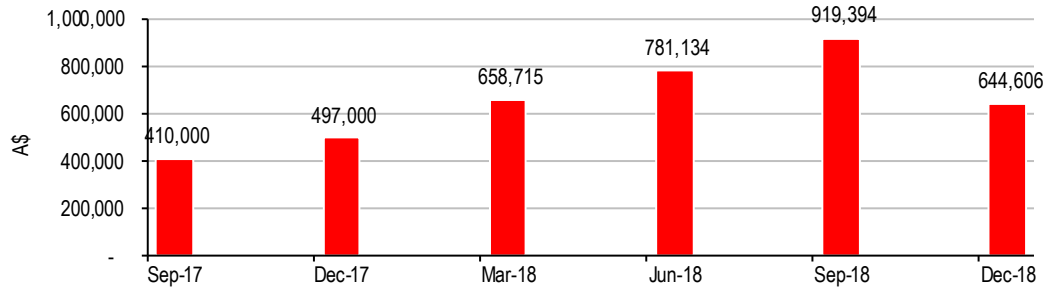
Source: Company data

Industry growth forecasts

Total Brain operates in the mobile health or mHealth sector which market research companies such as Grandview Research and Statista have estimated generates around US$5b a year. Grandview is forecasting this to rise to US$112b by 2025, a CAGR of 44.2%, while Statista expects mHealth to grow to at a CAGR of 34% to US$50b from 2015 to 2020 (as we show in Exhibit 6 below). This sector encompasses Health Risk Assessment companies such as Aetna, WebMD and Optum; Neuroscientific Assessment companies such as Cognifit and Cambridge Brian Science, Disorder Screening Tools such as Mindstrong and Reset, Wellness Solutions such as eMindful, Calm, Headspace and meQuilibrium and Brain Training Apps such as Lumosity and Brain HQ. Total Brain has a unique proposition asthe only player that offers assessment and benchmarking, screening, mind-body training and specific brain training apps.

Exhibit 6: Value of global digital health market by segment
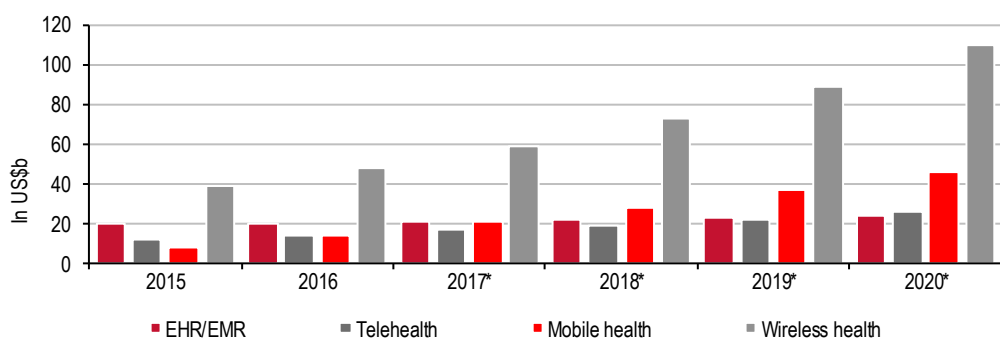
Source: Statista *estimated

According to Statista, 33% of users tapping into the mHealth market were focused on health and fitness apps.

Exhibit 7: Main user groups of mHealth Apps (2016)

Source: Statista

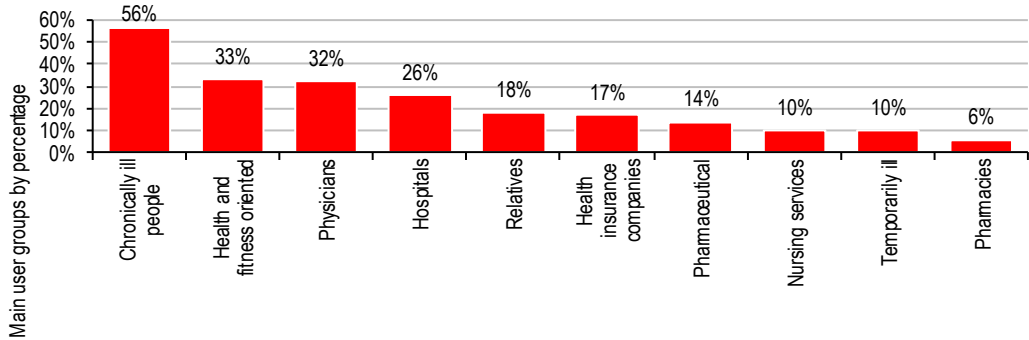Mindfulness apps are also growing in terms of volume and consumer spending. There are now more than 1,000 mind-body apps available to download and US consumer spending on self-care mobile apps grew 40% year on year in Q1 CY2018, according to Apptopia. We discuss this segment in more detail on page 15.

The global cognitive assessment and training market is forecasted to grow to US$9b by 2023. MarketResearchFutures is forecasting a CAGR of 25% to US$9n from 2017 to 2023 while Research & Markets is forecasting a CAGR of 32.3% to US$8.1b from 2018 to 2021.

RaaS Advisory's forecasts for Total Brain

The key driver of revenue is Annualised Recurring Revenue (ARR) from the sale of software products to corporates using the SaaS subscription model. The company has provided advice to the market[5] that it has identified 2,200 sales leads from which it has prospective leads of $12.55m. TTB has estimated that it will convert 30% of these on an annualised basis, giving it a weighted pipeline of $3.77m with an average contract value of $110,000 at September 2018. We are forecasting that the company will grow this pipeline to $118m by FY28, of which one-third will be converted to sales opportunities.

We are forecasting that the company grows its ARR to $3.9m in FY19 and that this expands rapidly as Total Brain's sales team converts sales leads into customers. We have assumed strong but declining rates of growth in ARR as the base grows as set out below:

Exhibit 8: Total Brain forecasts – Annualised Recurring Revenue ($m)
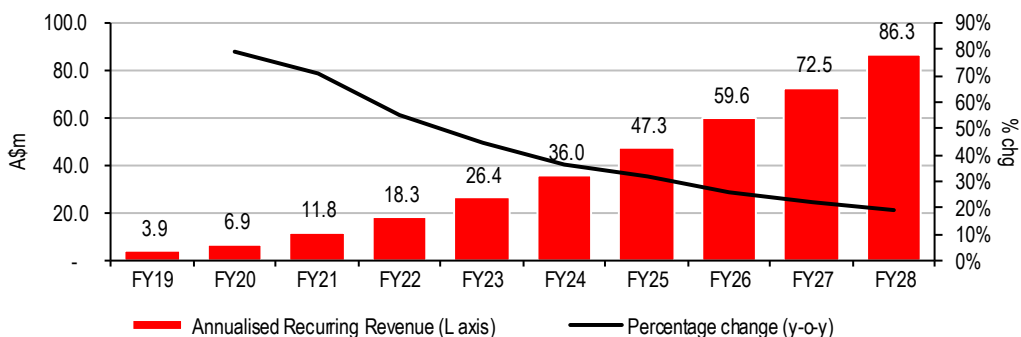
Source: RaaS estimates

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Our base case forecast of ARR assumes that 5% of recurring revenue will not be renewed at the end of the contract period and that 50% of new revenue will be deferred by six months. This is reflected in the current liability Deferred Revenue.

Whilst the market opportunity is substantial given the early stage of Total Brain's sales into the B2C market our forecasts for B2C revenues as set out in Exhibit 10 below, appear more modest, increasing from a standing start to $10m in FY28. It is important to note that our B2C revenue forecasts net off the revenue share arrangements that Total Brain has entered into with its affinity partners. The company has highlighted in presentations[6] to investors that it estimates its current addressable market from its initial three partners is 237m in monthly visits of which 1% could be expected to be driven to Total Brain's app. It then anticipates 0.32% of this traffic to convert to a paid subscription and 0.04% will convert to an advertising lead. We have utilised these parameters in our forecasts.

Total Brain's success is dependent on the performance of its sales team. We have assumed that the company significantly ramps up the sales force over the next several years to become more than half total employee costs as the following exhibit demonstrates.

Exhibit 9: Total Brain Sales staff costs and as a proportion of total employee costs.
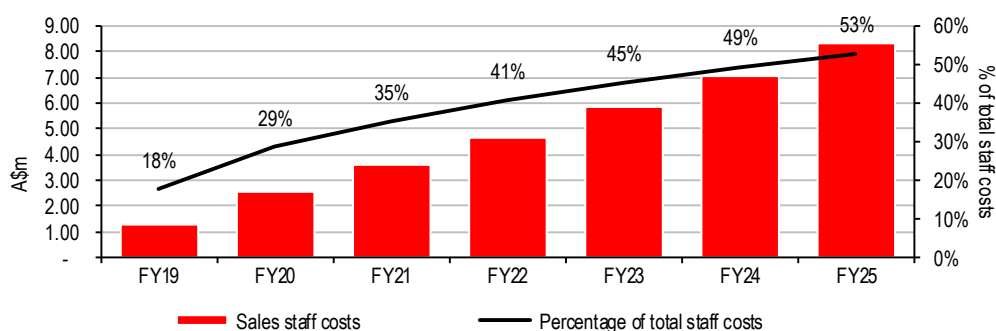
Source: RaaS estimates

Our estimates assume that apart from marketing costs which remain a small component of the cost base, the rest of the cost base is largely fixed, growing at CPI, which is demonstrated in the detailed exhibit containing our earnings estimates below.

Exhibit 10: RaaS Earnings Estimates for Total Brain

Year Ending June 30	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
B2B Revenue	3.3	7.0	11.8	18.8	27.3	37.1	48.6	61.7	74.7	88.6
B2C Revenue	0.0	1.7	7.1	7.5	7.9	8.3	8.7	9.1	9.6	10.1
Total Revenue	**3.3**	**8.7**	**19.0**	**26.3**	**35.1**	**45.4**	**57.3**	**70.8**	**84.3**	**98.7**
COGS	0.5	1.7	3.8	5.3	7.0	9.1	11.5	14.2	16.9	19.7
Gross Margin	**2.7**	**6.9**	**15.2**	**21.0**	**28.1**	**36.3**	**45.8**	**56.7**	**67.5**	**79.0**
Employee costs	7.0	8.9	10.2	11.4	12.8	14.2	15.7	17.3	19.0	20.7
Other costs	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.3
Total Costs	**10.1**	**12.0**	**13.3**	**14.6**	**16.0**	**17.4**	**18.9**	**20.5**	**22.2**	**24.0**
EBITDA	**(7.4)**	**(5.1)**	**1.9**	**6.4**	**12.2**	**18.9**	**26.9**	**36.1**	**45.3**	**55.0**
Profit before Tax	(7.5)	(5.4)	1.5	6.1	11.8	18.8	27.0	36.6	46.2	56.5
NPAT	**(5.3)**	**(3.8)**	**1.1**	**4.2**	**8.3**	**13.1**	**18.9**	**25.6**	**32.3**	**39.6**

Source: RaaS Estimates

As the company has historically provided guidance and commentary on its calendar year performance, we have set out our base case forecasts for calendar year in the exhibit below.

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Exhibit 11: RaaS Earnings Estimates for Total Brain on a calendar year basis

Year Ending December 31	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
B2B Revenue	5.2	9.0	15.2	23.6	34.8	46.9	60.7	74.4	88.9	104.5
B2C Revenue	0.8	4.4	7.3	7.7	8.1	8.5	8.9	9.4	9.9	10.4
Total Revenue	6.1	13.4	22.5	31.3	42.9	55.4	69.6	83.7	98.8	114.8
COGS	1.2	2.7	4.5	6.3	8.6	11.1	13.9	16.7	19.8	23.0
Gross Margin	**4.8**	**10.7**	**18.0**	**25.0**	**34.3**	**44.3**	**55.7**	**67.0**	**79.0**	**91.9**
Employee costs	8.1	9.5	10.8	12.1	13.5	15.0	16.5	18.1	19.8	21.6
Other costs	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.3	3.3
Total Costs	**11.2**	**12.7**	**13.9**	**15.3**	**16.7**	**18.2**	**19.7**	**21.4**	**23.1**	**24.9**
EBITDA	**(6.4)**	**(2.0)**	**4.1**	**9.7**	**17.6**	**26.2**	**36.0**	**45.6**	**55.9**	**67.0**
Profit before Tax	(6.6)	(2.4)	3.7	9.4	17.4	26.2	36.3	46.5	57.4	68.0
NPAT	**(4.6)**	**(1.7)**	**2.6**	**6.6**	**12.2**	**18.3**	**25.4**	**32.5**	**40.2**	**47.6**

Source: RaaS Estimates

Our forecasts show that net cash of $3.3m at 31 December 2018 will not be sufficient to cover the cash burn rate for the next two quarters. We have assumed that in addition to the capital already raised in FY18 that the company will raise $5m in this current half and another $6m in H2FY20. Based on our forecasts, this should be sufficient to bring the company to break even.

Exhibit 12: Operating cash flow for the year and Net Cash at year end and equity raises forecast
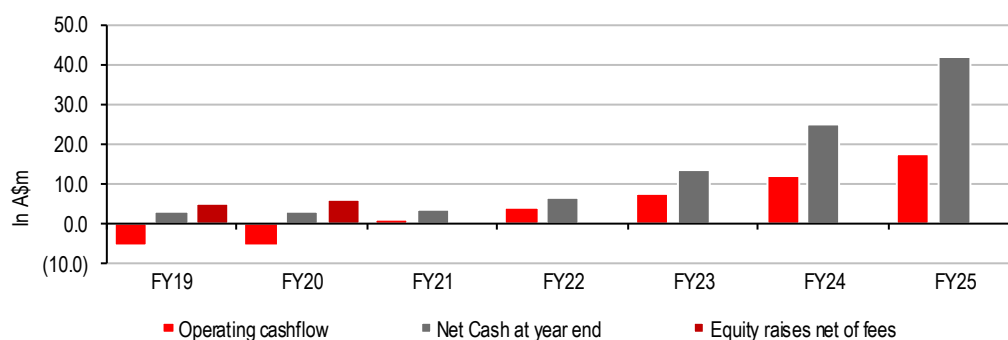
Source: RaaS estimates

SWOT analysis

In our view the strengths and opportunities for Total Brain outweigh the weaknesses and threats.

Exhibit 13: Strengths, Weaknesses, Opportunities, Threats

Strengths	Opportunities
Highly experienced managing director and senior executive team in the human capital sector and building early stage companies into profitable enterprises	Our forecasts for B2C penetration are modest; other mind-body apps without the clinical assessment or brain training are generating higher revenues than we have forecast.
Executive chairman is an internationally recognised expert in the field of neuroscience and has brought advisers and directors of similar gravitas into the company	Exclusive partnership with TLEX Institute potentially enables Total Brain to leverage TLEX's relationships with Fortune 500 companies
Two decades of science and $50m R&D funding behind the platform	Commercialisation of iSPOT is not in our forecasts and may deliver upside to the company
A deep database compiled over almost two decades and collaborated on by the world's leading minds in neuroscience and psychiatry giving Total Brain a unique and clear competitive advantage against other mind-body and cognitive assessment and training apps.	mHealth apps sector forecasted to grow at a CAGR of 44.2% to US$112b by 2025, according to Grand View Research
Affinity partnerships deliver Total Brain an instant audience negating the need to spend significant amounts on marketing and advertising	
Demand by US corporates for clinical assessment and assistance with emotional wellbeing of workforce is growing	
Two Fortune 500 clients have expanded their take-up of TTB's new platform launched in September 2018, an early validation of the new business strategy and product	
Two new institutional shareholders on register in December 2018 quarter including Och ZIff's former head of Asian investment who has personally acquired a ~20% stake	
Weaknesses	**Threats**
Small player in a crowded marketplace where large tech investors are backing other players	Thousands of mind-body apps coming to market making it difficult to stand above the competition although as noted in strengths Total brain has a unique position with the science it has invested in
Long-time shareholder Och Ziff has sold down its stake from 36.17% to 8.9% but as noted above a former Och Ziff executive has invested personally	Corporates may by-pass Total Brain to create their own internal controls
Unexpected length of sales cycles and multiple stakeholders need to be sold into the B2B corporate market making it difficult to predict timing of recurring revenue	
Needs to raise capital to execute the new business strategy	

Source: RaaS analysis

Sensitivities

- Total Brain has been a listed entity for almost two decades and commercial success has proven elusive. The current business strategy implemented by experienced leadership, in our view, should translate into recurring revenue streams but there is no guarantee of success.

- It is seeking to build a B2C business in a very crowded market place with an estimated 2,600 new mind-body apps appearing on the iOS and Android stores every year[7], however the company's strategy of aligning with Affinity partners will negate the need for significant marketing spend and the company is unique in terms of the database which backs its offering and the screening and reporting capabilities that it can offer to a B2C Affinity partner;

- Sales at the enterprise level take 9-12 months resulting in longer lead times than several of its competitors in the mindfulness space;

- The company's expected cash consumption in Q3 FY19 is $2.79m (this does not include anticipated cash receipts). Based on our forecasts for cash burn, we anticipate that the company will need to raise $5m before the end of the financial year and another $6m in FY20.

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7 Source: Apptopia report April 2, 2018

Board and management
Directors

Dr Evian Gordon, Executive Chairman and Founder, is an internationally acknowledged expert in human brain research and has more than 30 years' experience in this field. He was previously the director of the Brain Dynamics Centre at Sydney's Westmead Hospital and a senior lecturer in the Department of Psychological Medicine at the University of Sydney. He is the author of more than 200 publications in this field.

Louis Gagnon, Managing Director and CEO has been the chief executive of Total Brain since May 2017 and Managing Director since December 2017. He brings more than 25 years' experience in leading high growth digital businesses, most notably Amazon's Audible where he held the position of Chief Product and Marketing Officer. He also has held chief product and marketing positions at internet marketing and advertising company Yodle and at executive solutions company Monster Worldwide. In the period he was at Yodle, the company's customer base grew more than five-fold to 50,000 and during his five-year stint at Monster Worldwide, the executive recruitment business doubled revenues.

Matthew Morgan, Non-Executive Director, is the principal of Millers Point Company, an advisory business to high growth emerging companies. He is also currently a non-executive director of Sensera Ltd (ASX:SE1), and a non-executive director of Leaf Resources (ASX:LER). He also is a director of unlisted company, Think Mobility, a supplier of equipment to the aged care and rehabilitation sector. Matthew was previously a co-founder of Diversa Ltd (ASX:DVA) a financial services business acquired by OneVue Holdings (ASX: OVH) and was previously a venture capitalist for QIC.

Dr Stephen Koslow, Non-Executive Director, has been involved with the company since its inception, having previously acted as a consultant to the company. He became a director in March 2016. Stephen has also served as the inaugural Director of the Neuroscience Research Branch at the US National Institute of Mental Health and while in this role initiated the multi-agency Human Brain Project. He is also authored more than 90 publications, 20 chapters in books and edited 16 books in the field, including "Databasing the Brain".

Ajay Arora, Non-Executive Director, has more than 20 years' experience in senior management roles within leading digital subscription businesses in the US. He is currently Director of Product Innovation at Netflix, the global leader in subscription entertainment and was previously VP of Product Management at Imgur, a top 100 global destination for image sharing. His previous roles also include global product management for Audible where he led the integration of Audible into Amazon's Kindly and Echo product lines.

Management

Several members of the senior management team were part of the successful executive team that took Monster Worldwide from an early stage online recruitment company in the late 1990s to profitability. Monster Worldwide was acquired by Amsterdam-based Randstad Digital Ventures for US$429m in 2016, a 23% premium to the previous closing price. In our view, the experience with Monster, a digital business in the human capital sector, together with subsequent roles these executives have taken on will benefit Total Brain.

Matt Mund, Chief Operating Officer, joined Total Brain in July 2017 and brings more than 13 years' experience in senior roles with Monster Worldwide where he was Executive Vice President, Chief Product and Marketing Officer. Prior to Monster, Matt held roles in strategy and change internal practice at IBM.

Marcel Legrand, Chief Revenue Officer, joined Total Brain in September 2017. He is a co-founder and investor in Vertical Knowledge (an open source data, information services and analytics company), and ngage (a SaaS cloud platform to help companies drive engagement from their workforce). He has previously had stints at Blackfin Capital (private equity) and Monster Worldwide where he held several positions over 8 years including SVP Strategy and Corp Development/Product Dev and Global Development.

Matt Resteghini, **Chief Marketing Officer**, joined Total Brain in January 2018. He is also an adviser to Alignable, a networking platform for small businesses and previously senior vice president of marketing at Randstad Digital Ventures. Prior to this Matt spent 17 years at Monster Worldwide in several senior marketing and customer relationship management roles.

Emil Vasilev, Director of Finance and Operations joined Total Brain in May 2017. He brings several years' experience in early stage companies both operationally and from the corporate side. He previously was finance director at Ride, a carpooling transportation company incubated by TPG Growth and Uber Co-Founder Oscar Salazar and had stints at private equity firm Corsair Capital and investment banker, Barclays Capital.

Donna Palmer, Chief Science Officer, has been with the company for almost 10 years and is an acknowledged expert in neuroplasticity, brain mapping and cognitive neuroscience. Donna is also attached to the Brain Dynamics Centre at Westmead Institute for Medical Research. She is the author and co-author of several publications in this field.

Meredith Haase, Director of Human Resources, joined Total Brain in January 2018 from Monster Worldwide where she held several senior executive roles in the area of human capital.

Advisers

Total Brain has a team of expert advisers from whom management and the board can draw for various aspects of the business:

Dr Barbara Van Dahlen, Adviser - Mental Health, is the founder/President of Give an Hour, a not-for-profit organisation founded in 2005 to help emotionally and mentally injured war veterans through free counselling. It is composed of almost 7,000 volunteers who have given an estimate of 57,000 hours of free service to soldiers who have served in the Middle East. In 2012, Time Inc voted Dr Van Dahlen one of the World's Top 100 Most Influential People.

Patrick Manzo, Adviser - Privacy/Security, is the former Chief Privacy Officer and Executive Vice President, Monster Worldwide. He is also a corporate attorney with several years' experience in both corporate and litigation.

Christopher Dolan, Adviser – Technology, is currently the CTO at ANSWR, a Boston-based software company that is reinventing how social knowledge is created, discovered, and shared on the Internet. He is a former vice president engineering at Monster Worldwide.

Dr John Rush, Adviser - iSPOT Depression, is an internationally renowned psychiatrist. He is Professor Emeritus in Duke-NUS Medical School at the National University of Singapore, and Adjunct Professor of Psychiatry and Behavioural Sciences at Duke University School of Medicine.

Dr Glen Elliott Adviser - iSPOT ADHD, diagnoses and treats severe psychiatric disorders in children and adolescents at Stanford. He is an internationally recognised expert in this field and the principal investigator in the largest study undertaken to improving the diagnosis and treatment of Attention Deficit and Hyperactivity Disorder (ADHD).

David Whitehouse, Adviser - Health Systems, brings several years' experience as Chief Medical Officer and Head of Digital Health with UST Global, a leading digital technology services company that provides solutions for Global 1000 companies; with Catalyst RX (now Catamaran) and with Optum Health Behavioural Solutions.

Institutional Support

Total Brain has had long time institutional support from international investor Och Ziff Capital Management, which became a substantial shareholder in August 2013 and held 39.7% of the company until late last year. Och Ziff currently holds 8.9% of the company, having reduced its stake in December 2018. It's important to note, however that Zoltan Varga, former executive managing director and head of Asian investing for Och Ziff has emerged as the largest shareholder in Total Brain, personally acquiring 105.5m shares, or 19.8% of the company, in December 2018. In the same month, Hong Kong based institutional investor Sun Hung Kai Global acquired 45m shares or 8.5% of the company. The board and management collectively hold around 5% of the outstanding shares in the company.

Peer Comparison

Total Brain is the only listed mental health assessment and training company. Its most comparable peers are privately held US and UK mind-body companies funded by private equity and venture capital interests. Most notably, Calm has been valued at US$1b in its latest US$88m funding round. This equates to US$1,000 per paying subscriber[8] if media reports on the estimated number of subscribers are correct. We have set out the mind-body peers in the following exhibit and expand upon their characteristics below.

Exhibit 14: Mind/Body Apps, capital raised and valuation applied

	Total Brain	eMindful	Happify Health	Headspace	Lumosity	Calm	Mindstrong Health	Simple Habit	meQuilibrium	Lantern
Valuation (US$M)	14	28-41	72	320	140	1,000	Unknown	Unknown	30	37
Capital Raised (US$M)	40	12	26	74	79	116	29	10	29.5	22
Lead Investors	Och Ziff	LFE Capital	TT Capital Partners	Spectrum Equity/Chernin Group	FirstMark Capital	TPG Growth, Insight Venture Partners	ARCH Venture Partners/Bezos Expeditions	Cowboy Venture/Reach Capital	HLM Venture Partners	Mayfield Fund

Sources: Owler.com, SensorTower, TechCrunch, Forbes

The key point of difference between Total Brain and this group is that Total Brain delivers a robust platform with clinically validated assessment, mind-body and brain exercises, deep reporting and analytics with the ability to impact both cognition, emotion, or the total brain. In contrast:

- eMindful is a mind-body only app;
- Happify Health offers mind-body and brain exercises;
- Headspace is mind-body/meditation, no assessment;
- Lumosity is focused on memory offering brain exercises;
- Calm is mind-body only;
- Mindstrong Health is focused on biomarkers for predicting depression;
- Simple Habit is a mind-body app;
- meQuilibrium is focused on resilience training to relieve stress but has no clinical assessment;
- Lantern is a mind-body app.

SaaS peers

We have instead turned to predominantly SaaS or recurring revenue models for our peer comparison and sought out those that are profitable. We have examined the US listed SaaS market which has 44 players and taking consensus for 12 months forward revenue, we have arrived at an average EV/Revenue multiple of 10.4 times with a range from 2.3 times to 23.2x. It should be noted that many of the larger companies by market capitalisation have attracted higher multiples but this is not universal. We have set out the US peer group in Exhibit 16. If we were to apply this EV/Revenue multiple to our Total Brain FY20 revenues, the implied valuation would be $90m or $0.17/share based on the current share count.

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8   Meditation app Calm backed by Ashton Kutcher valued at $1B
      https://www.dailyherald.com/business/20190209/meditation-app-calm-backed-by-ashton-kutcher-valued-at-1b

Exhibit 15: US SaaS Companies (In US$m unless otherwise stated)

Company	Ticker	Price (US$)	MarketCap	EV	Fwd EV/Rev (x)
2U, Inc.	TWOU	65.68	3,816	3,260	6.0
Adobe Systems Incorporated	ADBE	260.23	126,920	126,920	11.4
AppFolio, Inc.	APPF	65.06	2,230	2,160	9.1
Atlassian Corporation Plc	TEAM	105.25	25,210	24,240	20.2
BlackLine, Inc.	BL	48.45	2,650	2,530	9.1
Box	BOX	24.16	3,460	3,360	5.5
Carbonite, Inc.	CARB	24.82	858	756	2.3
Coupa Software Incorporated	COUP	94.72	5,630	5,470	21.6
DocuSign, Inc.	DOCU	53.65	8,870	8,040	11.6
Dropbox, Inc.	DBX	25.45	10,350	9,460	5.9
Ellie Mae, Inc.	ELLI	98.9	3,460	2,580	5.1
Everbridge, Inc.	EVBG	64.97	1,930	1,920	10.3
Five9, Inc.	FIVN	53.80	3,190	3,090	10.4
HubSpot, Inc.	HUBS	171.87	6,740	6,460	10.1
Instructure, Inc.	INST	39.58	1,390	1,240	4.8
j2 Global, Inc.	JCOM	81.88	4,040	4,410	3.4
LogMein, Inc.	LOGM	96.20	4,920	4,850	3.8
Medidata Solutions, Inc.	MDSO	72.05	4,420	4,160	5.6
Mimecast Limited	MIME	49.83	3,010	2,600	7.8
Mindbody	MB	36.48	1,750	1,670	5.6
New Relic, Inc.	NEWR	105.07	6,030	5,730	12.2
Okta, Inc.	OKTA	83.60	9,230	9,070	23.2
Paycom Software, Inc.	PAYC	173.06	9,910	9,950	14.3
Paylocity	PCTY	82.65	4,370	4,310	9.5
Paypal	PYPL	94.01	110,290	103,580	5.7
Proofpoint, Inc.	PFPT	118.94	6,560	6,250	7.1
Q2 Holdings, Inc.	QTWO	65.22	2,830	2,670	8.7
Qualys, Inc.	QLYS	82.31	3,240	3,400	10.3
RealPage, Inc.	RP	57.89	5,240	5,600	5.6
Ringcentral, Inc.	RNG	103.11	8,280	8,110	9.9
Salesforce.com Inc	CRM	160.4	122,710	125,480	9.5
ServiceNow, Inc.	NOW	231.97	41,590	41,350	12.1
Shopify	SHOP	172.02	18,990	16,570	15.6
Smartsheet	SMAR	35.98	3,720	3,430	19.6
Square	SQ	75.63	31,270	31,110	13.8
The Ultimate Software Group, Inc.	ULTI	331.73	10,390	10,230	7.5
Twilio Inc.	TWLO	106.87	13,190	11,150	13.4
Veeva Systems Inc.	VEEV	118.97	17,290	16,190	18.9
Wix.com Ltd.	WIX	119.41	5,770	5,250	6.9
Workday, Inc.	WDAY	187.75	40,930	41,300	14.7
Yext, Inc.	YEXT	18.21	1,840	1,730	7.6
Zendesk, Inc.	ZEN	77.49	8,290	8,460	10.9
Zscaler, Inc.	ZS	49.00	5,990	5,680	20.9
Zuora	ZUO	21.18	2,300	2,140	9.1
Mean			**16,252**	**15,853**	**10.4**

Sources: Thomson Reuters, Bloomberg Prices at 13 February 2018

While Total Brain operates almost exclusively in the US, it is listed in Australia and is more likely to be compared to the Australian peer group than either the US SaaS sector. The exhibit on the following page details 17 peers that we have identified in the Australian and New Zealand markets. The average PE of this group is 47x, and the median is 25.7x. The average EV/Revenue multiple on a 12 months' rolling basis is 6.6x. If we were to apply the industry EV/Revenue multiple to our FY20 revenue forecasts (being the first full year of the B2B and B2C strategy in play), we would arrive at a compco valuation of $57m or $0.11/share based on the current share count. However, we are of the view that a simple compco valuation does not take into account the early stage nature of Total Brain's business. Instead, we apply some additional metrics defined in our Golden Rule discussion on page 18.

Exhibit 16: Profitable Australian and New Zealand SaaS/Tech compcos

Company	Code	Business model	Mkt Cap ($m)	EV ($m)	Revenue fwd ($m)	NPAT margin fwd((%)	PE fwd (x)	EV/ Rev (x)
Appen	APX	Data solutions and services for global tech cos	1890	1930	353	12%	35	5.5
Altium	ALU	Software for the design of electronic products	3840	3400	170	30%	44	20.0
Bravura Solutions	BVS	Investment software and services	979	954	250	13%	27	3.8
Class	CL1	SaaS Cloud solution for SMSF administration	175	153	38.5	21%	20	4.0
Empired	EPD	Customer experience and IT solutions for corporates	79	89	192	4%	9	0.5
Gentrack	GTK.NZ	Enterprise billing and CRM software for utilities	484	473	118	17%	25	4.0
GBST Holdings	GBT	Sells software and implementation services	87	76	90	8%	10	0.8
Infomedia	IFM	SaaS offering for electronics and auto sectors	407	394	82	19%	23	4.8
IRESS	IRE	Trading platform and wealth management software	2120	2310	465	16%	26	5.0
Integrated Research	IRI	Diagnostic and performance monitoring software for unified comms and payments networks	429	418	100	21%	19	4.2
MSL Solutions	MPW	SaaS software solutions for sports and hospitality sectors	21	14	40	3%	9	0.3
Myob	MYO	Cloud based enterprise/ SME solution for accounting and HR	2010	2350	451	21%	21	5.2
Pushpay	PPH.NZ	Mobile commerce and electronics payments platform	838	820	115	4%	67	7.1
Praemium	PPS	Wealth management software and platform	235	224	50	12%	35	4.5
Serko	SKO.NZ	Corporate travel software solutions	245	227	18	10%	79	12.6
Wisetech Global	WTC	Enterprise wide SaaS solutions for logistics industry	6660	6540	336	19%	87	19.5
Xero	XRO	SaaS for online accounting and business services	6530	6540	641	3%	229	10.2
Mean			**1590**	**1583**		**14%**	**45.1**	**6.6**

Source: ASX/NZX data, Stockopedia for fwd consensus, RaaS Analysis *Prices at 13 February 2019

Consensus has this compco group generating a mean CAGR of revenues from 2013 to 2019/20 of 23%, set out on the table below. We note that our forecasted CAGR for Total Brain from FY21 (the first year we anticipate that the company will be profitable) and FY28 is 23%. The Company also ended CY2018 with a 22% total revenue growth and 42% core business revenue growth.

Exhibit 17: CAGRs in revenues generated by Australian/New Zealand tech compcos

Company	7-year CAGR in revenues from 2013
Appen	40%
Altium	15%
Bravura Solutions	4%
Class	41%
ELMO Software	26%
Empired	22%
Gentrack	17%
GBST Holdings	1%
Infomedia	8%
IRESS	12%
Integrated Research	11%
MSL Solutions	29%
Myob	11%
Praemium	35%
Pushpay	35%
Serko	21%
Wisetech Global	34%
Xero	49%
Mean	**23%**

Source: Company reports, Consensus from Stockopedia, RaaS Analysis

It is worth observing that Australia and New Zealand's SaaS companies trade at a discount to their US peers. In our view, the relative size of the US peer group plays a part in this.

Valuation – 'the Golden Rule'

The sense of pre-earnings and pre-cash flow valuations can be cross checked using a simple relationship that focuses attention on the most significant risks and opportunities. This premise was examined by Dr Kingsley Jones[9] and suggested as a golden rule used by venture capitalists and early stage investors to sense check their valuations. The golden rule is based on the following:

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9   Jevons Global – Valuation for Early-Stage Technology Companies

- Early-stage companies have revenue as the most visible performance metric
- Later-stage companies have earnings and margin as visible metrics
- Valuations at both stages are subject to sentiment and changing multiples

This simple valuation rule takes into account profit margins and earnings multiples and is defined as:

*Current price to sales = Stable NPAT margin X Price Earnings Ratio X Sales uplift/Price uplift.*

The price that the market will pay at a given time is dependent on the cyclicality of markets. When the market favours growth then the emphasis is on revenue multiples with seemingly little regard for profitability. However, as this enthusiasm cools the market will turn its attention to profitability and return on funds employed. If we apply the simple valuation rule explained above and make the following assumptions:

- Sales uplift (defined as the expected growth in sales over the investor's investment horizon) divided by price (to the investor) uplift (defined as the investor's expectations of return over the investor's investment horizon).
- A long run EBITDA profit margin for the industry of ~18% which converts to 14% NPAT margin using a tax rate 30%. We have based this margin on the average NPAT margin discussed in the peer group above.

The third component to this calculation is Price Earnings Ratio. The long-term PE ratio of the ASX is 15x. The mean PE for profitable companies in our comparative company group is 45.1x. The median PE for this group is 25.7x. The market capitalization of this group of companies averages $1.59b. Most of these companies are profitable tech leaders in their respective markets and this, together with relative size and growth prospects, sees the market paying around 1.5x the median market PE.

Our simple valuation approach (the Golden Rule) described above is a way of taking into account the ultimate profitability of each company. In a buoyant financial market where growth is king, investors will tend to focus on revenue (the spring season). The next stage will be a focus on margins followed by an autumn period where the focus turns to profit before entering the depressed winter stage where cash is king. In our view the market seems to have turned its attention more to profitability or at least the path to profitability rather than revenue growth. Investor mood changes are illustrated in the exhibit below:

Exhibit 18: The seasons of valuation
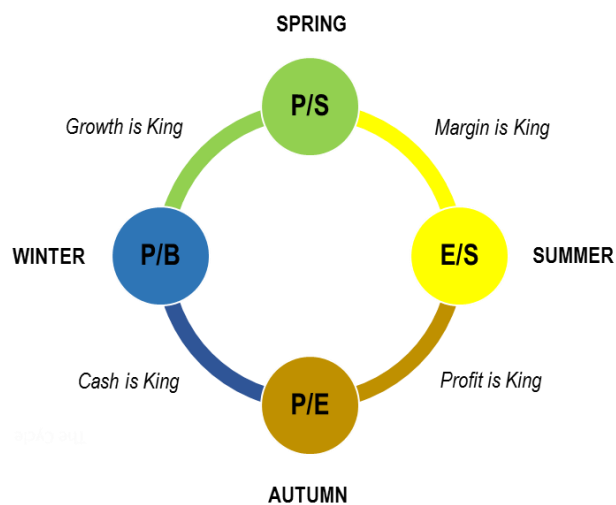
Source: Jevons Global – Valuation for Early-Stage Technology Companies (P/S – Price/Sales; E/S – Earnings/Sales; P/E – Price/Earnings; P/B – Price/Book)

Application of Golden Rule

Input selection

We have selected as a long-term steady state PE 25.7x which is a 71% premium to the long-term average market PE of 15x and an 87.6% premium to the current market PE of 13.7x. Our analysis of the comparative company group suggests that companies with intellectual property in operating platforms where they are able to scale on a fixed cost base are rewarded with long term PE multiples of 20-30x. The median for the group is 25.7x on a 12-month rolling basis; the mean is 45.1x. We have set out in the next two exhibits the impact that different PE's have on the implied uplift factor required to achieve the current market capitalisation of each of these companies. In the first exhibit, we use each company's current PE, in the second, we have adjusted the PE to that of the tech sector 25.7x to demonstrate what uplift factor is required.

Exhibit 19: Uplift factor implied in each peer's current PE to achieve market cap

Company	PE	NPAT Margin	Uplift factor	Revenue multiple	Revenue FY19(A$M)	Market (A$M)cap
Appen	35.4	11.6%	1.30	5.4	353	1,890
Altium	44.1	29.8%	1.72	22.6	170	3,840
Bravura Solutions	27.4	12.7%	1.13	3.9	250	979
Class	20.3	21.2%	1.06	4.5	39	175
Empired	9.07	4.1%	1.10	0.4	192	79
Gentrack	24.6	16.5%	1.01	4.1	118	484
GBST Holdings	10.1	7.6%	1.27	1.0	90	87
Infomedia	23.4	19.1%	1.11	5.0	82	407
IRESS	25.7	16.3%	1.09	4.6	465	2,120
Integrated Research	19.3	20.7%	1.07	4.3	100	429
MSL Solutions	9	3.5%	1.67	0.5	40	21
Myob	21.44	21.1%	0.99	4.5	451	2,010
Pushpay	66.7	3.9%	2.79	7.3	115	838
Praemium	34.6	12.4%	1.09	4.7	50	235
Serko	79.4	10.0%	1.71	13.6	18	245
Wisetech Global	86.6	18.8%	1.21	19.8	336	6,660
Xero	229.4	2.7%	1.64	10.2	641	6,530
Mean	**25.7***	**13.7%**	**1.35**	**6.8**	**206**	**1,590**

Source: RaaS Analysis * We have applied the median rather than mean to PE to get a comparable PE to the market which currently is trading on a median of 13.7x and long-term of 15x

As the table above demonstrates, the implied uplift factor for many of these companies is around 1.35x, however when we apply the tech PE, the uplift factor required varies, reflecting the different stages of profitability and market expectations for each of these companies.

Exhibit 20: Uplift factor required to reach each market cap using the tech sector's PE

Company	Tech PE	NPAT Margin	Uplift factor required	Revenue multiple	Revenue FY19 (A$M)	Market cap (A$M)
Appen	25.7	12%	1.79	5.4	353	1,890
Altium	25.7	30%	2.95	22.6	170	3,840
Bravura Solutions	25.7	13%	1.20	3.9	250	979
Class	25.7	21%	0.84	4.5	39	175
Empired	25.7	4%	0.39	0.4	192	79
Gentrack	25.7	17%	0.97	4.1	118	484
GBST Holdings	25.7	8%	0.50	1.0	90	87
Infomedia	25.7	19%	1.01	5.0	82	407
IRESS	25.7	16%	1.09	4.6	465	2,120
Integrated Research	25.7	21%	0.81	4.3	100	429
MSL Solutions	25.7	3%	0.58	0.5	40	21
Myob	25.7	21%	0.82	4.5	451	2,010
Praemium	25.7	4%	7.25	7.3	115	838
Pushpay	25.7	12%	1.47	4.7	50	235
Serko	25.7	10%	5.30	13.6	18	245
Wisetech Global	25.7	19%	4.09	19.8	336	6,660
Xero	25.7	3%	14.64	10.2	641	6,530
Mean		**13.7%**	**2.69**	**6.8**	**206**	**1,590**

Source: RaaS Analysis

Taking this information, we have laid out the following exhibit to demonstrate the impact on revenue multiples to apply in our Golden rule analysis. Highlighted on this table is the revenue multiple that most closely matches the peer group in terms of uplift factor, NPAT margin and long-term PE. If we apply this revenue multiple of 9.7x to our FY20 base case revenue forecast for Total Brain, we arrive at a Golden Rule valuation of $84m or $0.16/share on the current share count.

Exhibit 21: Impact on revenue multiples from uplift factors

Uplift factor	NPAT %	PE	Rev multiple (x)	Change Rev Mult (x)
1.00	14.0%	25.7	3.60	
1.30	13.0%	25.7	4.34	0.75
1.30	14.0%	25.7	4.68	1.08
1.30	15.0%	25.7	5.01	1.41
1.50	13.0%	25.7	5.01	1.41
1.50	14.0%	25.7	5.40	1.80
1.50	15.0%	25.7	5.78	2.18
1.70	13.0%	25.7	5.68	2.08
1.70	14.0%	25.7	6.12	2.52
1.70	15.0%	25.7	6.55	2.96
1.90	13.0%	25.7	6.35	2.75
1.90	14.0%	25.7	6.84	3.24
1.90	15.0%	25.7	7.32	3.73
2.10	13.0%	25.7	7.02	3.42
2.10	14.0%	25.7	7.56	3.96
2.10	15.0%	25.7	8.10	4.50
2.30	13.0%	25.7	7.68	4.09
2.30	14.0%	25.7	8.28	4.68
2.30	15.0%	25.7	8.87	5.27
2.50	13.0%	25.7	8.35	4.75
2.50	14.0%	25.7	9.00	5.40
2.50	15.0%	25.7	9.64	6.04
2.70	13.0%	25.7	9.02	5.42
2.70	14.0%	25.7	9.71	6.12
2.70	15.0%	25.7	10.41	6.81
2.90	13.0%	25.7	9.69	6.09
2.90	14.0%	25.7	10.43	6.84
2.90	15.0%	25.7	11.18	7.58
3.10	13.0%	25.7	10.36	6.76
3.10	14.0%	25.7	11.15	7.56
3.10	15.0%	25.7	11.95	8.35

Source: RaaS estimates

DCF valuation

We are of the view that the discounted cashflow methodology is the most appropriate methodology for valuing early stage companies. Our base case DCF valuation of Total Brain is $0.13/share and uses a WACC of 14.9% (terminal value of 2.2% which is the long-term real GDP growth rate of the Australian economy*) to reflect the early stage nature of the business and the competitive landscape. We have also applied a higher than sector average beta of 1.9. SaaS companies traditionally have a beta of 1.3. Note that we have included yet to be issued shares in our calculation. Based on the current share count of 531m shares, our valuation would be $0.195/share. *There is an argument that we should use the long-term US real GDP rate (3.4%) but given Total Brain is being compared with Australian companies, we have opted to use the more conservative Australian rate.

Exhibit 22: Base Case DCF valuation

Parameters	Outcome
Discount Rate / WACC	14.9%
Beta	1.9
Terminal growth rate assumption	2.20%
Sum of PV	31.2
PV of terminal Value	69.2
PV of Enterprise	100.3
Debt (Cash)	(3.3)
Net Value - Shareholder	103.6
No of shares on issue*	773
NPV	$0.13

Source: RaaS estimates *We have diluted for two forecasted capital raises which we estimate will result in an additional 240m shares on issue.

Reverse DCF

Using our base case WACC of 14.9% and a terminal growth rate of 2.2% the current share price of $0.03 is pricing in a CAGR of free cashflows of 7.0% from FY22 to FY28. This factors in little growth for a business at this point in its lifecycle.

Exhibit 23: Reverse DCF

| Parameters	Outcome
Discount Rate / WACC	14.9%
Beta	1.9
Terminal growth rate assumption	2.20%
Sum of PV	5.7
PV of terminal Value	7.5
PV of Enterprise	13.2
Debt (Cash)	(3.3)
Net Value - Shareholder	16.5
No of shares on issue	531
NPV	$0.031

Source: RaaS estimates

Scenario analysis

We set out some of the parameters we have used to reach our base, an upside and a downside case and highlight these graphically in the next two exhibits.:

- Base case revenues are forecast to grow at a CAGR of 42% from 2019-2028 with B2B revenue growing at a CAGR of 40% for the same period and B2C subscriptions and lead generation revenues growing at a CAGR of 22% from FY20 to FY28. We assume delayed contract revenue of 50%, employment costs of $7m in FY19 (69% of total costs) rising to just under $21m by 2028 (86% of total costs);
- An upside case has been set at 20% above our base case assumptions for addressable market, penetration and conversion rates and 20% below our base case cost assumptions, with the exception of sales staff who are a key driver of revenue growth;
- A downside case has been set at 10% below our base case assumptions for addressable market, penetration and conversion rates and 10% above our base case cost assumptions.

Exhibit 24: Revenue estimates by case selection
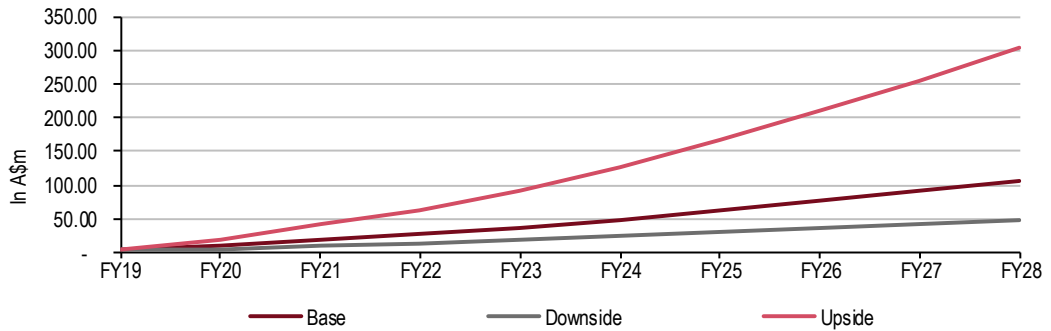
Source: RaaS estimates

Exhibit 25: EBITDA estimates by case selection
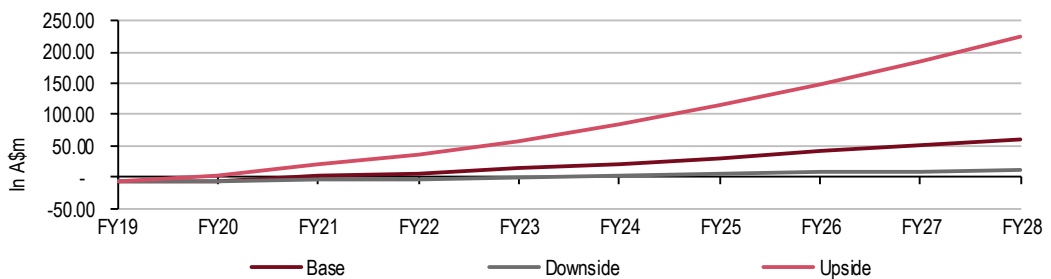
Source: RaaS estimates

We have set out the impact of our upside case and downside case on the P&L on both a financial year and calendar year basis in the four tables below. The upside case pre-supposes that the sales pipeline rises from $12.55m at the end of December 2018 to $369m in FY28 while the downside case has the sales pipeline only growing to $39m during the same period. It is worth noting that our forecasts for B2C revenue (a combination of subscriptions and sales leads) is forecasted to be a much smaller component of revenues until such time as management demonstrates the success of its B2C affinity channel partner strategy. Total Brain is competing in a crowded marketplace for consumers and players such as Calm[10], Headspace[11] and Lumosity are reportedly generating revenues in the US$50m range.

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10 Calm kicks off global expansion by launching its meditation platform in German, September 25, 2018; https://venturebeat.com/2018/09/25/calm-kicks-off-global-expansion-by-launching-its-meditation-platform-in-german/

11 Headspace Revenue Surpasses $60 Million in Q2, Growing 50% Year-Over-Year, July 18, 2018, https://sensortower.com/blog/headspace-revenue

Exhibit 26: Financial Year P&L Impact of an upside case

Year ending June 30	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
B2B Revenue	4.6	14.2	28.3	49.4	76.4	109.0	148.3	194.8	241.5	292.4
B2C Revenue	0.0	4.0	17.5	19.0	20.6	22.4	24.3	26.4	28.6	31.1
Total Revenue	**4.6**	**18.2**	**45.8**	**68.4**	**97.0**	**131.4**	**172.6**	**221.2**	**270.1**	**323.5**
COGS	0.7	3.0	7.6	11.4	16.2	21.9	28.8	36.9	45.0	53.9
Gross Margin	3.9	15.2	38.2	57.0	80.9	109.5	143.9	184.3	225.1	269.5
Employee costs	6.9	8.3	9.5	10.7	11.9	13.3	14.7	16.2	17.7	19.3
Other costs	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.9	5.2
Total Costs	**10.1**	**11.7**	**13.1**	**14.5**	**15.9**	**17.5**	**19.1**	**20.8**	**22.6**	**24.5**
EBITDA	**(6.1)**	**3.5**	**25.1**	**42.5**	**64.9**	**92.0**	**124.8**	**163.5**	**202.5**	**245.0**
Profit before Tax	(6.3)	3.1	24.9	42.6	65.6	93.5	127.5	167.9	209.0	254.3
NPAT	**(4.4)**	**2.2**	**17.4**	**29.8**	**45.9**	**65.5**	**89.2**	**117.5**	**146.3**	**178.0**

Source: RaaS Estimates

Exhibit 27: Calendar Year P&L impact of an Upside Case

Y/E December 31	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
B2B Revenue	9.3	19.4	36.0	59.3	91.6	127.4	169.1	211.4	257.3	307.5
B2C Revenue	1.8	9.2	15.6	16.5	17.5	18.6	19.7	21.0	22.2	23.6
Total Revenue	11.1	28.6	51.6	75.8	109.1	146.0	188.8	232.3	279.5	331.1
COGS	2.0	5.2	9.4	13.8	19.8	26.5	34.3	42.2	50.8	60.2
Gross Margin	9.1	23.4	42.2	62.0	89.3	119.4	154.5	190.1	228.7	270.9
Employee costs	8.4	10.1	11.4	12.8	14.2	15.7	17.3	19.0	20.7	22.5
Other costs	3.3	3.5	3.6	3.7	3.8	3.9	4.0	4.2	4.3	4.5
Total Costs	**11.7**	**13.6**	**15.0**	**16.4**	**18.0**	**19.6**	**21.3**	**23.1**	**25.0**	**27.0**
EBITDA	**(2.6)**	**9.8**	**27.2**	**45.6**	**71.3**	**99.8**	**133.2**	**167.0**	**203.7**	**243.9**
Profit before Tax	(2.9)	9.5	27.1	45.8	72.0	101.5	136.1	171.7	210.7	248.4
NPAT	**(2.0)**	**6.7**	**19.0**	**32.0**	**50.4**	**71.0**	**95.3**	**120.2**	**147.5**	**173.8**

Source: RaaS Estimates

Correspondingly we have set out the P& L impact of a downside case in term of both financial year and calendar year in the following two exhibits.

Exhibit 28: Financial Year P&L Impact of a downside case

Year ending June 30	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
B2B Revenue	2.8	4.6	6.8	10.1	14.6	19.6	25.2	30.8	36.5	42.5
B2C Revenue	0.0	0.9	3.8	4.0	4.1	4.3	4.5	4.7	4.9	5.1
Total Revenue	**2.8**	**5.5**	**10.6**	**14.0**	**18.7**	**23.9**	**29.7**	**35.5**	**41.4**	**47.6**
COGS	0.5	1.2	2.3	3.1	4.1	5.3	6.5	7.8	9.1	10.5
Gross Margin	**2.3**	**4.3**	**8.3**	**11.0**	**14.6**	**18.6**	**23.1**	**27.7**	**32.3**	**37.1**
Employee costs	6.9	8.4	9.6	10.8	12.2	13.5	15.0	16.5	18.2	19.9
Other costs	3.1	3.3	3.4	3.5	3.6	3.7	3.8	4.0	4.1	4.2
Total Costs	**10.0**	**11.7**	**13.0**	**14.3**	**15.8**	**17.3**	**18.8**	**20.5**	**22.2**	**24.1**
EBITDA	**(7.7)**	**(7.4)**	**(4.7)**	**(3.4)**	**(1.2)**	**1.4**	**4.3**	**7.2**	**10.1**	**13.0**
Profit before Tax	(7.9)	(7.8)	(5.2)	(3.9)	(1.8)	0.7	3.7	6.6	9.6	12.7
NPAT	**(5.5)**	**(5.5)**	**(3.6)**	**(2.8)**	**(1.3)**	**0.5**	**2.6**	**4.6**	**6.7**	**8.9**

Source: RaaS Estimates

Exhibit 29: Calendar Year P&L Impact of a downside case

Y/E December 31	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
B2B Revenue	3.7	5.4	8.3	12.1	17.1	22.3	28.0	33.6	39.4	45.6
B2C Revenue	0.5	2.3	3.9	4.0	4.2	4.4	4.6	4.8	5.0	5.2
Total Revenue	**4.2**	**7.8**	**12.2**	**16.2**	**21.3**	**26.7**	**32.6**	**38.4**	**44.4**	**50.8**
COGS	0.9	1.7	2.7	3.6	4.7	5.9	7.2	8.5	9.8	11.2
Gross Margin	**3.3**	**6.1**	**9.5**	**12.6**	**16.6**	**20.8**	**25.5**	**30.0**	**34.7**	**39.6**
Employee costs	7.7	9.0	10.2	11.5	12.8	14.3	15.8	17.3	19.0	20.7
Other costs	3.2	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.3
Total Costs	**10.9**	**12.3**	**13.7**	**15.0**	**16.5**	**18.0**	**19.7**	**21.4**	**23.1**	**25.0**
EBITDA	(7.6)	(6.3)	(4.1)	(2.4)	0.1	2.8	5.8	8.6	11.5	14.6
Profit before Tax	(7.9)	(6.7)	(4.6)	(3.0)	(0.5)	2.1	5.2	8.1	11.1	14.5
NPAT	**(5.6)**	**(4.7)**	**(3.2)**	**(2.1)**	**(0.4)**	**1.5**	**3.6**	**5.7**	**7.8**	**10.1**

Source: RaaS Estimates

Exhibit 30: Financial Year Financial Summary

Total Brain (TTB.AX)					Share price (15 February 2019)					A$	0.031

Profit and Loss (A$m) — left panel; **Interim (A$m)** — right panel

Y/E 30 June	FY18A	FY19F	FY20F	FY21F	FY22F	Interim (A$m)	H118A	H218A	H119F	H219F	H120F	H220F
Revenue	2.6	3.3	8.7	19.0	26.5	Revenue	1.1	1.5	1.2	2.1	3.9	4.7
Gross profit	2.5	2.7	6.9	15.2	21.2	EBITDA	(2.4)	(5.9)	(3.7)	(3.7)	(2.7)	(2.4)
GP margin %	95.3%	83.5%	80.0%	80.0%	80.0%	EBIT	(12.4)	(9.3)	(3.8)	(3.8)	(2.9)	(2.6)
EBITDA	(4.9)	(7.4)	(5.1)	1.9	6.6	NPAT (normalised)	(12.1)	(11.0)	(2.6)	(2.7)	(2.0)	(1.8)
Depn	(0.0)	(0.1)	(0.3)	(0.3)	(0.3)	Minorities	0.0	0.0	0.0	0.0	0.0	0.0
Amort	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	NPAT (reported)	(12.1)	(11.0)	(2.6)	(2.7)	(2.0)	(1.8)
EBIT	(23.4)	(7.6)	(5.5)	1.5	6.2	EPS (normalised)	(6.3)	(0.1)	(0.5)	(0.5)	(0.3)	(0.2)
Interest	(0.5)	0.0	0.0	0.1	0.1	EPS (reported)	(6.3)	(0.1)	(0.5)	(0.5)	(0.3)	(0.2)
Tax	0.8	2.3	1.6	(0.5)	(1.9)	Dividend (cps)	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	0.0	0.0	0.0	0.0	0.0	Imputation	30.0	30.0	30.0	30.0	30.0	30.0
Equity accounted assoc	(0.0)	0.0	0.0	0.0	0.0	Operating cash flow	(1.6)	(2.2)	(2.2)	(3.5)	(2.8)	(2.5)
NPAT pre significant items	(23.1)	(5.3)	(3.8)	1.1	4.4	Free Cash flow	(1.4)	(0.8)	(0.9)	(2.1)	(2.6)	(2.3)
Significant items	0.0	0.0	0.0	0.0	0.0	**Divisionals**	**H118A**	**H218A**	**H119F**	**H219F**	**H120F**	**H220F**
NPAT (reported)	**(23.1)**	**(5.3)**	**(3.8)**	**1.1**	**4.4**	B2B Revenue	1.1	1.5	1.2	2.1	3.1	3.9
Cash flow (A$m)						B2C Revenue		-	0.0	0.8	0.9	
Y/E 30 June	FY18A	FY19F	FY20F	FY21F	FY22F	Total Revenue	**1.1**	**1.5**	**1.2**	**2.1**	**3.9**	**4.7**
EBITDA	(4.9)	(7.4)	(5.1)	1.9	6.6							
Interest	0.0	0.0	0.0	0.1	0.1	Gross profit	1.0	1.5	1.0	1.7	3.2	3.8
Tax	0.0	0.0	0.0	(0.5)	(1.9)	Gross Profit Margin %	93%	97%	90%	80%	80%	80%
Working capital changes	1.0	1.6	(0.3)	(0.6)	(0.9)							
Operating cash flow	(3.9)	(5.7)	(5.4)	0.9	3.9	Employment	1.4	1.9	3.2	3.8	4.3	4.6
Mtce capex	0.0	(0.1)	(0.1)	(0.1)	(0.1)	Marketing	0.1	0.2	0.3	0.3	0.3	0.3
Free cash flow	(3.9)	(5.8)	(5.4)	0.8	3.8	Other costs	1.0	1.1	1.2	1.2	1.2	1.2
Growth capex	(1.7)	(2.6)	(0.4)	(0.4)	(0.4)	Total costs	**2.5**	**3.2**	**4.7**	**5.4**	**5.8**	**6.2**
Acquisitions/Disposals	0.0	0.0	0.0	0.0	0.0							
Other	(0.1)	0.0	0.0	0.0	0.0	**EBITDA**	**(1.5)**	**(1.7)**	**(3.7)**	**(3.7)**	**(2.7)**	**(2.4)**
Cash flow pre financing	(5.7)	(8.4)	(5.8)	0.4	3.4	EBITDA margin %	nm	nm	nm	nm	nm	nm
Equity	10.5	4.8	5.7	0.0	0.0	Margins, Leverage, Returns		FY18A	FY19F	FY20F	FY21F	FY22F
Debt	(0.1)	0.0	0.0	0.0	0.0	EBITDA margin %		(187.4%)	(225.7%)	-58%	10%	25%
Dividends paid	0.0	0.0	0.0	0.0	0.0	EBIT margin %		(896.0%)	(232.8%)	-63%	8%	23%
Net cash flow for year	4.7	(3.6)	(0.1)	0.4	3.4	NPAT margin (pre significant items)		(885.5%)	(161.9%)	-44%	6%	16%
Balance sheet (A$m)						Net Debt (Cash)		6.62	3.19	3.06	3.50	6.93
Y/E 30 June	FY18A	FY19F	FY20F	FY21F	FY22F	Net debt/EBITDA (x)	(x)	n/a	n/a	n/a	1.84	1.05
Cash	6.6	3.2	3.1	3.5	6.9	ND/ND+Equity (%)	(%)	(43.6%)	(17.7%)	(15.2%)	(16.9%)	(32.1%)
Accounts receivable	1.3	1.0	1.6	2.7	4.3	EBIT interest cover (x)	(x)	n/a	n/a	n/a	(4.2%)	(1.3%)
Inventory	0.0	0.0	0.0	0.0	0.0	ROA		(95.8%)	(33.1%)	(22.8%)	5.6%	21.0%
Other current assets	0.0	0.0	0.0	0.0	0.0	ROE		(124.4%)	(24.6%)	(17.2%)	4.5%	16.6%
Total current assets	8.0	4.2	4.7	6.3	11.3	ROIC		(162.5%)	(94.3%)	(82.7%)	16.6%	66.3%
PPE	0.2	2.8	3.0	3.2	3.4	**NTA (per share)**		4.1%	3.0%	3.0%	3.1%	3.7%
Goodwill	0.0	0.0	0.0	0.0	0.0	**Working capital**		82.8%	47.6%	110.5%	223.0%	381.4%
Investments	0.0	0.0	0.0	0.0	0.0	**WC/Sales (%)**		**31.7%**	**14.6%**	**12.7%**	**11.8%**	**14.4%**
Deferred tax asset	0.0	2.3	3.9	3.9	3.9	**Revenue growth**		10.1%	25.0%	165.8%	118.8%	39.7%
Other non current assets	14.7	13.7	13.6	13.5	13.3	**EBIT growth pa**		n/a	n/a	n/a	(126.6%)	323.1%
Total non current assets	14.9	18.8	20.5	20.5	20.6	**Pricing**		FY18A	FY19F	FY20F	FY21F	FY22F
Total Assets	22.9	23.0	25.2	26.8	31.8	No of shares (y/e)	(m)	531	698	773	773	773
Accounts payable	0.5	0.5	0.5	0.5	0.5	Weighted Av Dil Shares	(m)	362	698	773	773	773
Short term debt	0.0	0.0	0.0	0.0	0.0							
Tax payable	0.0	0.0	0.0	0.0	0.0	EPS Reported	cps	(6.38)	(0.71)	(0.44)	0.12	0.48
Deferred revenue	0.5	1.1	1.4	2.0	2.7	EPS Normalised/Diluted	cps	(6.38)	(0.95)	(0.53)	0.14	0.57
Total current liabilities	1.0	1.6	1.9	2.5	3.2	EPS growth (norm/dil)		n/a	n/a	n/a	-126%	312%
Long term debt	0.0	0.0	0.0	0.0	0.0	DPS	cps	-	-	-	-	-
Other non current liabs	0.1	0.1	0.1	0.1	0.1	DPS Growth		n/a	n/a	n/a	n/a	n/a
Total long term liabilities	0.1	0.1	0.1	0.1	0.1	Dividend yield		0.0%	0.0%	0.0%	0.0%	0.0%
Total Liabilities	1.1	1.7	2.0	2.6	3.3	Dividend imputation		30	30	30	30	30
Net Assets	**21.8**	**21.2**	**23.1**	**24.2**	**28.6**	PE (x)		-	-	-	26.6	6.5
						PE market		15.2	15.2	15.2	15.2	15.2
Share capital	58.1	62.8	68.5	68.5	68.5	Premium/(discount)			-100%	-100%	75%	-57%
Accumulated profits/losses	(40.2)	(45.5)	(49.3)	(48.2)	(43.9)	EV/EBITDA		- 4.7	- 2.5	- 4.1	-	-
Reserves	3.9	3.9	3.9	3.9	3.9	FCF/Share	cps	-0.7	-0.8	-0.7	0.1	0.5
Minorities	0.0	0.0	0.0	0.0	0.0	Price/FCF share		- 4	- 4	- 4.5	23.6	6.0
Total Shareholder funds	**21.8**	**21.2**	**23.1**	**24.2**	**28.6**	Free Cash flow Yield		(23.6%)	(26.1%)	(22.0%)	4.2%	16.8%

Source: RaaS Advisory

Total Brain Limited | 18th February 2019

Exhibit 31: Calendar Year Financial Summary

Total Brain (TTB.AX)						Share price (15 February 2019)					A$	0.031

Profit and Loss (A$m)

Y/E December 31	CY18A	CY19F	CY20F	CY21F	CY22F
Revenue	2.7	6.1	13.4	22.5	31.3
Gross profit	2.5	4.8	10.7	18.0	25.0
GP margin %	93.9%	80.0%	80.0%	80.0%	80.0%
EBITDA	(9.5)	(6.4)	(2.0)	4.1	9.7
Depn	(0.0)	(0.2)	(0.3)	(0.3)	(0.3)
Amort	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
EBIT	(13.1)	(6.7)	(2.4)	3.6	9.3
Interest	0.0	0.1	0.0	0.1	0.1
Tax	1.2	2.0	0.7	(1.1)	(2.8)
Minorities	0.0	0.0	0.0	0.0	0.0
Equity accounted assoc	0.0	0.0	0.0	0.0	0.0
NPAT pre significant items	(13.6)	(4.6)	(1.7)	2.6	6.6
Significant items	0.0	0.0	0.0	0.0	0.0
NPAT (reported)	**(13.6)**	**(4.6)**	**(1.7)**	**2.6**	**6.6**

Cash flow (A$m)

Y/E December 31	CY18A	CY19F	CY20F	CY21F	CY22F
EBITDA	(9.5)	(6.4)	(2.0)	4.1	9.7
Interest	0.0	0.1	0.0	0.1	0.1
Tax	0.0	0.0	(0.1)	(1.1)	(2.8)
Working capital changes	5.0	(0.0)	(0.3)	(0.8)	(1.1)
Operating cash flow	(4.5)	(6.3)	(2.3)	2.3	6.0
Mtce capex	(0.0)	(0.1)	(0.1)	(0.1)	(0.1)
Free cash flow	(4.5)	(6.4)	(2.4)	2.2	5.9
Growth capex	(2.8)	(1.5)	(0.4)	(0.4)	(0.4)
Acquisitions/Disposals	0.0	0.0	0.0	0.0	0.0
Other	(0.1)	0.0	0.0	0.0	0.0
Cash flow pre financing	(7.4)	(7.9)	(2.8)	1.8	5.5
Equity	1.2	4.8	5.7	0.0	0.0
Debt	0.0	0.0	0.0	0.0	0.0
Dividends paid	0.0	0.0	0.0	0.0	0.0
Net cash flow for year	(6.2)	(3.1)	2.9	1.8	5.5

Balance sheet (A$m)

Y/E December 31	CY18A	CY19F	CY20F	CY21F	CY22F
Cash	3.3	0.1	3.0	4.8	10.2
Accounts receivable	0.8	1.2	2.1	3.5	5.3
Inventory	0.0	0.0	0.0	0.0	0.0
Other current assets	0.0	0.0	0.0	0.0	0.0
Total current assets	*4.1*	*1.4*	*5.1*	*8.2*	*15.6*
PPE	1.5	2.9	3.1	3.3	3.4
Goodwill	0.0	0.0	0.0	0.0	0.0
Investments	0.0	0.0	0.0	0.0	0.0
Deferred tax asset	1.1	3.1	3.9	3.9	3.9
Other non current assets	13.8	13.7	13.5	13.4	13.3
Total non current assets	*16.5*	*19.7*	*20.5*	*20.6*	*20.6*
Total Assets	**20.6**	**21.1**	**25.6**	**28.8**	**36.2**
Accounts payable	0.5	0.5	0.5	0.5	0.5
Short term debt	0.0	0.0	0.0	0.0	0.0
Tax payable	0.0	0.0	0.0	0.0	0.0
Deferred revenue	0.9	1.2	1.7	2.3	3.1
Total current liabilities	*1.3*	*1.7*	*2.2*	*2.8*	*3.6*
Long term debt	0.0	0.0	0.0	0.0	0.0
Other non current liabs	0.1	0.1	0.1	0.1	0.1
Total long term liabilities	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Total Liabilities	**1.4**	**1.8**	**2.3**	**2.9**	**3.7**
Net Assets	**19.2**	**19.3**	**23.3**	**25.9**	**32.5**
Share capital	58.1	62.8	68.5	68.5	68.5
Accumulated profits/losses	(42.8)	(47.5)	(49.1)	(46.5)	(40.0)
Reserves	3.9	3.9	3.9	3.9	3.9
Minorities	0.0	0.0	0.0	0.0	0.0
Total Shareholder funds	**19.2**	**19.3**	**23.3**	**25.9**	**32.5**

Interim (A$m)	H1CY18A	H2CY18F	H1CY19F	H2CY19F	H1CY20F	H2CY20F
Revenue	1.5	1.2	2.1	3.9	4.7	8.6
EBITDA	(5.9)	(3.7)	(3.7)	(2.7)	(2.4)	0.4
EBIT	(9.3)	(3.8)	(3.8)	(2.9)	(2.6)	0.2
NPAT (normalised)	(11.0)	(2.6)	(2.7)	(2.0)	(1.8)	0.2
Minorities	0.0	0.0	0.0	0.0	0.0	0.0
NPAT (reported)	(11.0)	(2.6)	(2.7)	(2.0)	(1.8)	0.2
EPS (normalised)	(0.1)	(0.5)	(0.5)	(0.3)	(0.2)	0.0
EPS (reported)	(0.1)	(0.5)	(0.5)	(0.3)	(0.2)	0.0
Dividend (cps)	0.0	0.0	0.0	0.0	0.0	0.0
Imputation	30.0	30.0	30.0	30.0	30.0	30.0
Operating cash flow	(2.2)	(2.2)	(3.5)	(2.8)	(2.5)	0.2
Free Cash flow	(0.8)	(0.9)	(2.1)	(2.6)	(2.3)	0.4
Divisionals	**H1CY18A**	**H2CY18F**	**H1CY19F**	**H2CY19F**	**H1CY20F**	**H2CY20F**
B2B Revenue	1.5	1.2	2.1	3.1	3.9	5.1
B2C Revenue		-	0.0	0.8	0.9	3.5
Total Revenue	**1.5**	**1.2**	**2.1**	**3.9**	**4.7**	**8.6**
Gross profit	1.5	1.0	1.7	3.2	3.8	6.9
Gross Profit Margin %	97%	90%	80%	80%	80%	80%
Employment	1.9	3.2	3.8	4.3	4.6	4.9
Marketing	0.2	0.3	0.3	0.3	0.3	0.3
Other costs	1.1	1.2	1.2	1.2	1.2	1.2
Total costs	**3.2**	**4.7**	**5.4**	**5.8**	**6.2**	**6.5**
EBITDA	**(1.7)**	**(3.7)**	**(3.7)**	**(2.7)**	**(2.4)**	**0.4**
EBITDA margin %	nm	nm	nm	nm	nm	5%

Margins, Leverage, Returns		CY18A	CY19F	CY20F	CY21F	CY22F
EBITDA margin %		(353.4%)	(104.9%)	(14.7%)	18%	31%
EBIT margin %		(485.2%)	(110.8%)	(17.9%)	16%	30%
NPAT margin (pre significant items)		(504.4%)	(76.8%)	(12.4%)	11%	21%
Net Debt (Cash)		3.26	0.12	2.99	4.76	10.24
Net debt/EBITDA (x)	(x)	n/a	n/a	n/a	1.17	1.05
ND/ND+Equity (%)	(%)	(20.5%)	(0.6%)	(14.7%)	(22.5%)	(46.1%)
EBIT interest cover (x)	(x)	n/a	n/a	n/a	(1.8%)	(1.3%)
ROA		(56.3%)	(32.2%)	(10.3%)	13.3%	28.6%
ROE		(78.9%)	(24.2%)	(7.8%)	10.5%	22.5%
ROIC		(86.7%)	(137.9%)	(28.1%)	34.6%	96.5%
NTA (per share)		3.6%	2.8%	3.0%	3.3%	4.2%
Working capital		35.2%	75.0%	160.5%	295.4%	484.1%
WC/Sales (%)		**13.0%**	**12.4%**	**12.0%**	**13.1%**	**15.5%**
Revenue growth		14.0%	124.2%	120.6%	68.5%	38.9%
EBIT growth pa		n/a	n/a	n/a	(251.5%)	155.4%
Pricing		**CY18A**	**CY19F**	**CY20F**	**CY21F**	**CY22F**
No of shares (y/e)	(m)	531	698	773	773	773
Weighted Av Dil Shares	(m)	586	698	773	773	773
EPS Reported	cps	(0.61)	(0.67)	(0.21)	0.33	0.85
EPS Normalised/Diluted	cps	(0.51)	(0.67)	(0.21)	0.33	0.85
EPS growth (norm/dil)		n/a	n/a	n/a	-256%	154%
DPS	cps	-	-	-	-	-
DPS Growth		n/a	n/a	n/a	n/a	n/a
Dividend yield		0.0%	0.0%	0.0%	0.0%	0.0%
Dividend imputation		30	30	30	30	30
PE (x)		-	-	-	9.3	3.6
PE market		13.8	13.8	13.8	13.8	13.8
Premium/(discount)			(100.0%)	(100.0%)	(32.9%)	(73.6%)
EV/EBITDA		- 2.4	- 2.9	- 10.6	-	-
FCF/Share	cps	-0.7	-0.8	-0.7	0.1	0.5
Price/FCF share		- 4	- 4	- 4.5	23.6	6.0
Free Cash flow Yield		(23.6%)	(26.1%)	(22.0%)	4.2%	16.8%

Source: RaaS Advisory

Total Brain Limited | 18th February 2019

FINANCIAL SERVICES GUIDE

RaaS Advisory Pty Ltd

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Corporate Authorised Representative, number 1248415

of

BR SECURITIES AUSTRALIA PTY LTD

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- our services
- how we transact with you
- how we are paid, and
- complaint processes

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