



A new era in neuroscience and early childhood digital health



AGM Presentation November 2019 (ASX:NHL)

Corporate Overview (ASX:NHL)



- **NOVITA** Healthcare Limited is an ASX listed digital software development and commercialisation business focused in the area of neuroscience (the early child brain currently)
- TALi has achieved ARTG Class 1, FDA Class 2 and CE Mark – **we are a medical device**
- Significant IP (Australian Patent granted) generated - the technology is a scientifically and clinically proven digital assessment and training program focused on childhood attention

Share price (25-November-19)	A\$0.069
Number of shares	749.3m
Market capitalisation	A\$51.7m
Cash (at 30-Sept-19 and combining raise)	A\$7.60m
Debt (30-Jun-18)	No debt
Enterprise value	A\$44.10m

Source: Automic

Notes:

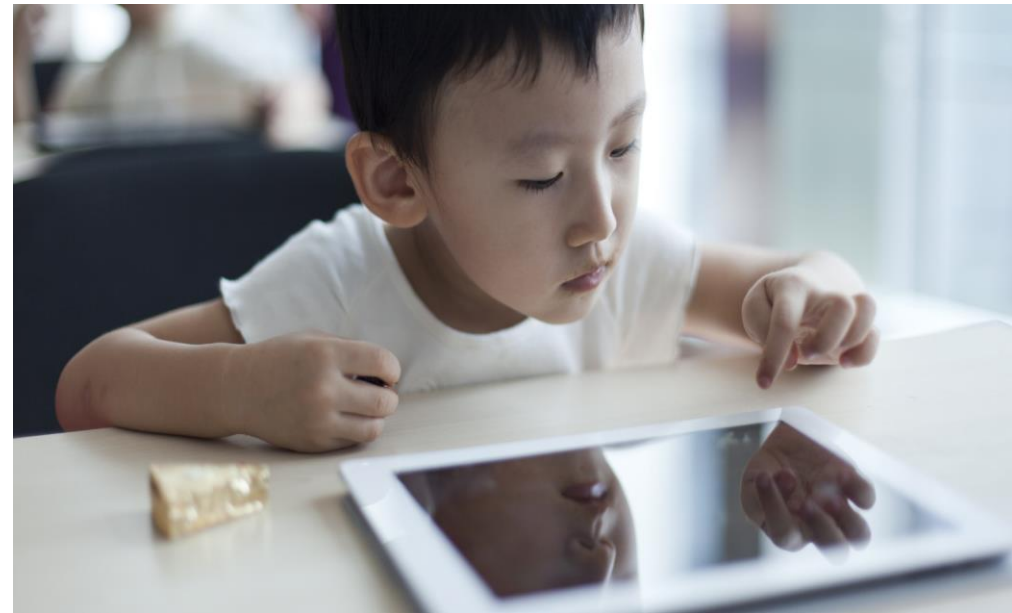
- 1 Excludes unlisted options on issue at various vesting and expiry dates with A\$0.03 and A\$0.09 exercise prices
- 2 Post announcement of the 25th November 2019 regarding capital raised and assumes shares allotted

Other key developments and investment highlights

- **CPT reimbursement code access** via predicate device pathway
- AUD\$8.2m (August and October) capital raise to help drive international marketing and sales
- **Go to market strategy and business model set**
- Partner discussions underway that will assist in roll out of products globally

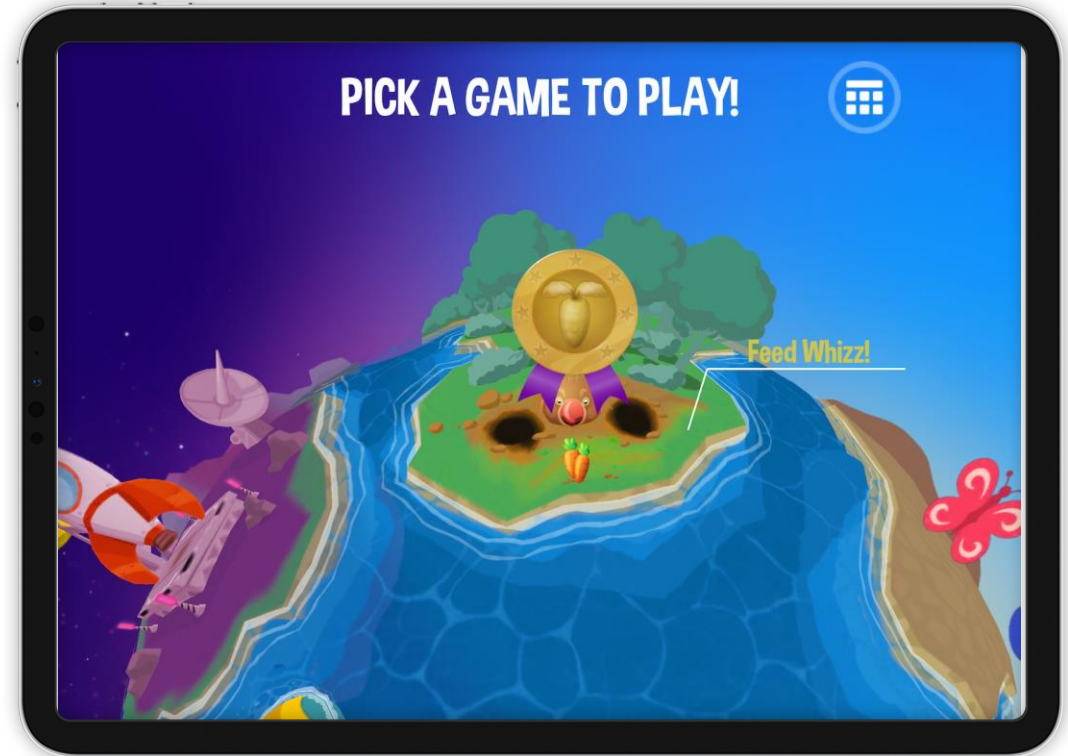
We are TALi

- Digital screening and treatment during childhood
- Focus on attention and attention related areas **for 3-8 year old children**
- Solutions delivered under the TALi brand (www.talihealth.com) globally
- **TALi has been designed for ALL children in early childhood**



First the screening (assessment) – TALi Detect*

- A scalable tool to detect early attention difficulties **(takes 20 mins)**
- Delivered via a tablet: iOS and Android
- Designed for children aged 3 to 6 (but up to 8 years of age).
- Designed for widespread national and global use.



*TALi Detect has been developed via an Australian Government CRC-Project in conjunction with Monash University and Torus Games. The project has yet to complete and the clinical trial data not yet published. As such the product is referred to as 'in-market testing or Beta phase'

Flagging children who need support – the Report



Vulnerable

Children who are likely experiencing attention vulnerabilities.



Borderline

Students who are at risk of becoming attentionally vulnerable.



On Track

Students who are performing at or above the expected level for their age.

A data driven approach to empower parents, teachers and healthcare professionals

Then the training (treatment) – TALi Train

- Trains early attention skills in 3-8 age range
- 25 x 20 minute sessions backed by randomised controlled clinical trials
- Cleared by regulatory authorities as a registered **Medical Device** in Australia (**TGA**), USA (**FDA**) and EU (**CE**)
- Delivered via a tablet: iOS and Android

Selection



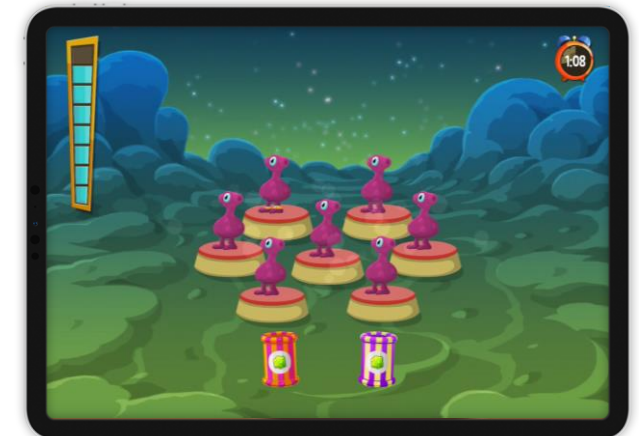
Inhibition



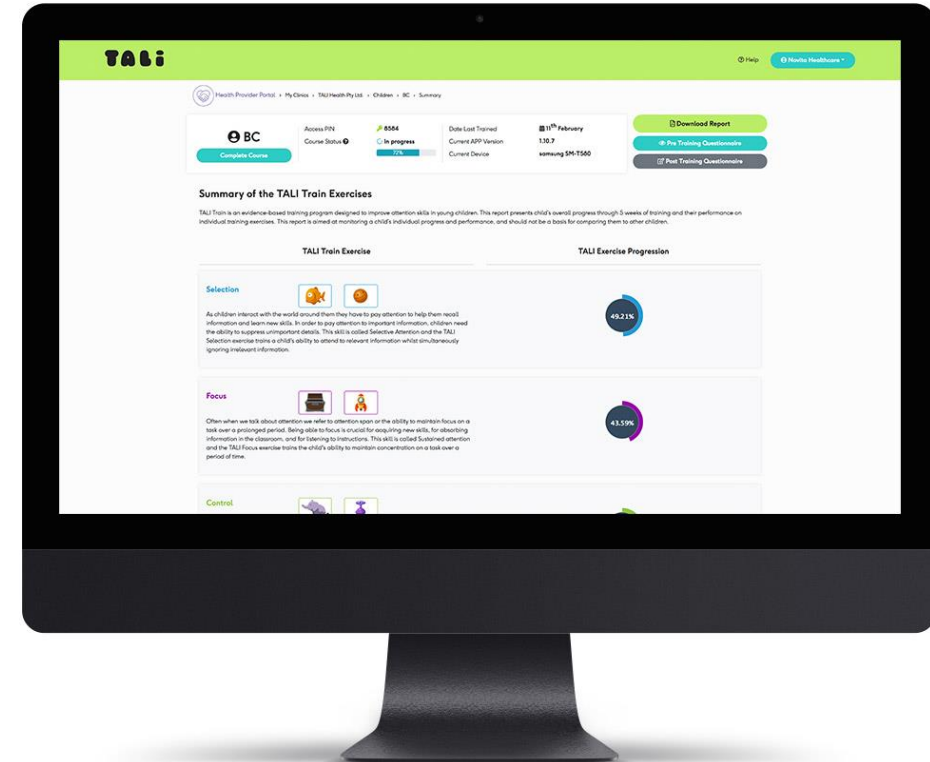
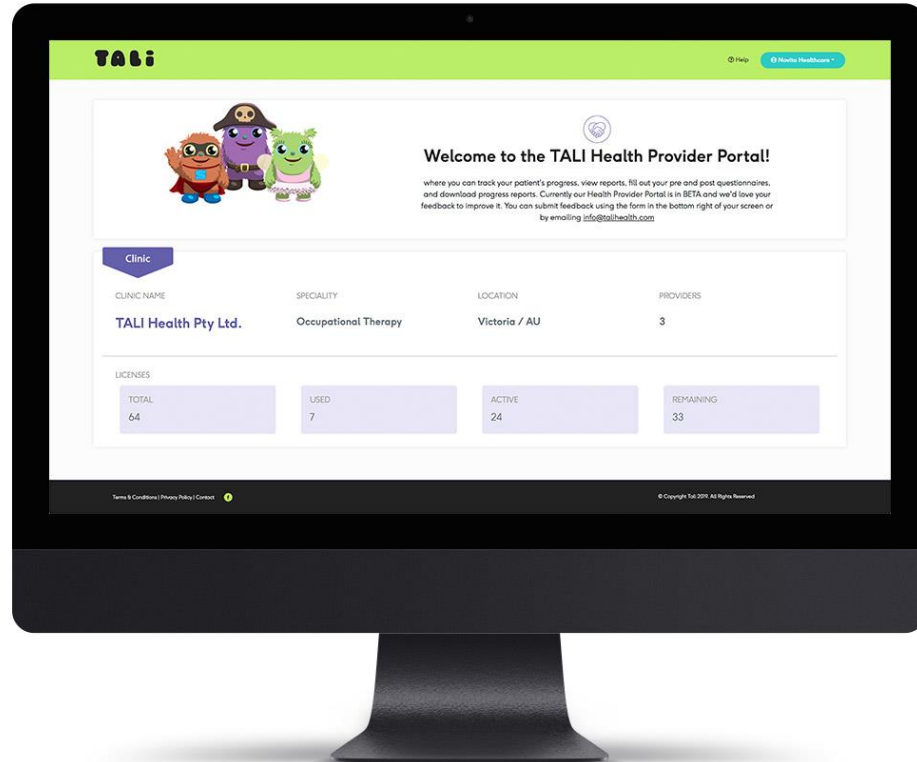
Focus



Attentional Control



TALI is another “tool in the toolkit” as a first line assessment and intervention or complimentary to existing practice



Cloud based, real time access and management of children via the TALI Portal

Our Model



Parents

There is an opportunity for parents to positively impact their child's future development if signs of attention difficulties are spotted and diagnosis / treatment is sought.



Providers

It is clinically proven and well-known amongst the clinical community that early intervention provides the best outcomes for patients with attention difficulties. However, clinicians are searching for non-drug based therapies to use in the early stages that provide long term results.



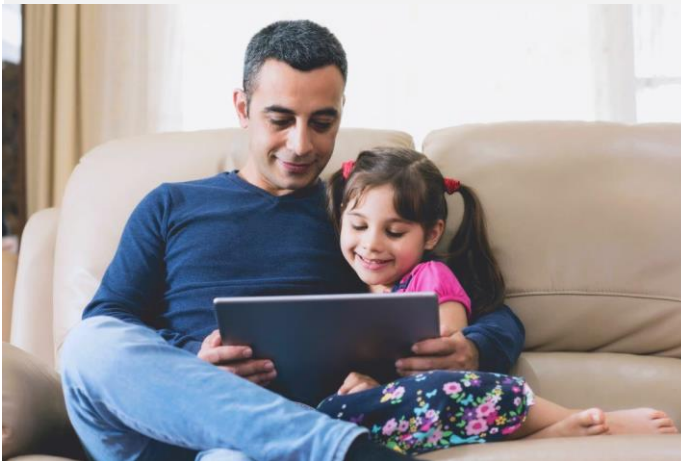
Schools

Early intervention will present improvements in learning for children with attention difficulties in the initial stages of their education, reducing pressure on the schooling system to offer extensive special needs assistance.

TALi is delivered via tablet – freemium SaaS model

- Access point: Free to undertake assessment - TALi Detect
- Then initial payment point: \$199 once off for TALi Train for 25 x 20min sessions (volume price for schools and other institutions)
- Then recurring \$10 per month ongoing charged to iTunes/Google Play or credit card

At home (via healthcare professional)



At school



The Evidence

Tali is Effective for Children with Development Disorders as well as Typically Developing Children

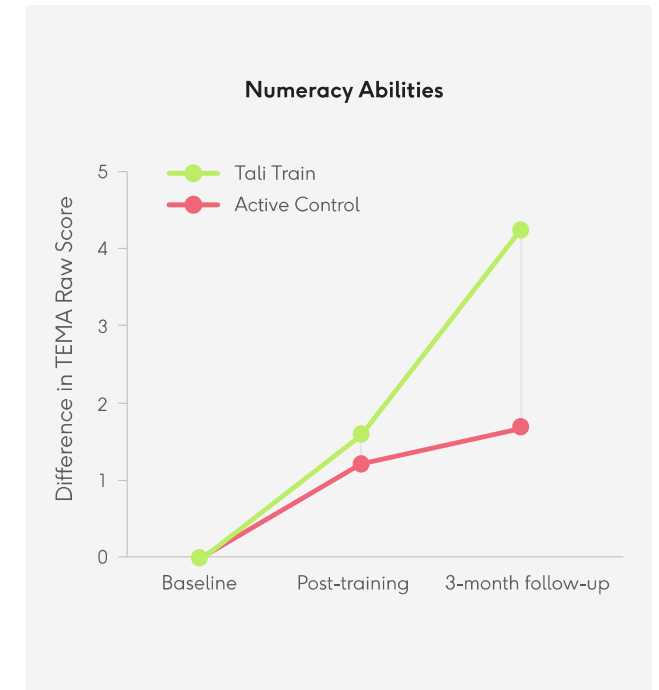
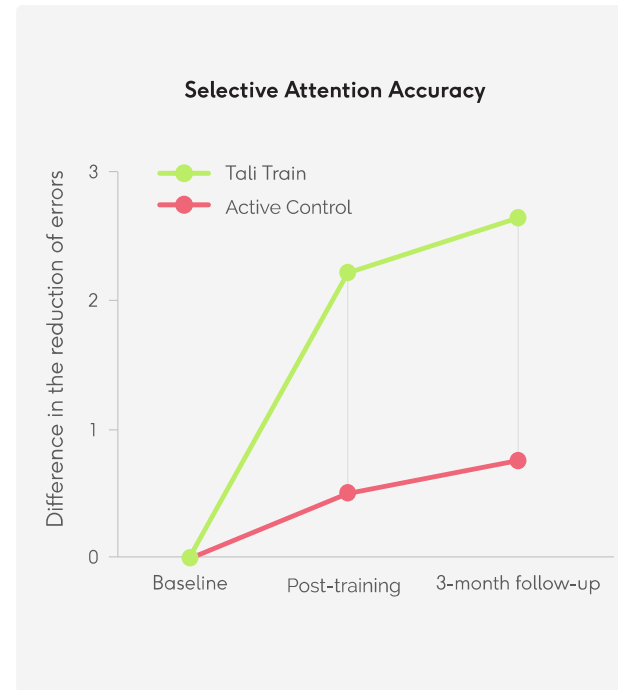
Results of a rigorous double-blind randomised controlled clinical trial investigating the effectiveness of Tali Train have shown that children who used Tali Train vs another touchscreen program for the same period of time are as follows ⁵:

Children with developmental disorders:

- Achieved significantly greater gains in selective attention immediately after training [b= -1.68, p<0.05, d=0.24]
- Attentional gains were maintained up to three months after training had ceased [b= -1.87, p<0.05, d=0.26]
- Showed significantly greater improvements in numeracy skills three months after training had ceased [b= 1.94, p<0.05, d=0.15].
- These findings are part of one of the few studies that have successfully promoted transfer to untrained skills

Typically developing children:

- Had a significant reduction in ADHD symptoms in the classroom immediately after training [b=-13.53, p=0.001, d=0.86]



Scientific Publications and Awards



Australian Government
Australian Research Council



2012 Australian Research Council **Grant**

Professor Kim Cornish awarded ARC Linkage Grant

How does childhood inattention impact on the emerging cognitive landscape?

2015 Publication: **Review**

Review of cognitive training

Need more evidence of their efficacy

Cognitive training as a resolution for early executive function difficulties in children with intellectual disabilities
Kirk, H., Gray, K., Riby, D., and Cornish, K. (2015)



2016 Publication: **Experimental**

Children with developmental disorders have different cognitive attention profiles despite similar behavioural attention profiles

Visual attention and academic performance in children with developmental disabilities and behavioural attention difficulties
Kirk, H., Gray, K., Riby, D., Taffe, J. and Cornish, K. (2016)



2016 Publication: **RCT**

Tali Train significantly reduced errors in selective attention

Attention training can positively impact aspects of attention in children with developmental disorders

Computerised attention training for children with intellectual and developmental disabilities: A randomised controlled trial
Kirk, H., Gray, K., Ellis, K., Taffe, J. and Cornish, K. (2016)



2017 Publication: **RCT**

Tali Train significantly improved numeracy skills in children with developmental disorders

Improvements in untrained outcomes (e.g. numeracy) may benefit children with ASD, DS, NSID

Impact of attention training on academic achievement, executive functioning, and behaviour: A randomised controlled trial
Kirk, H., Gray, K., Ellis, K., Taffe, J. and Cornish, K. (2017)



Australian Government
National Health and Medical Research Council



2017 Development **Grant**

Professor Cornish & Dr Kirk for the development of Tali Train

Typically developing children and children with ABI's

Interactive attention training technology to enhance cognitive skills in early life
Kirk, H., Anderson, V., Harcourt, J., Catroppa, C., McIntosh, B., Reynolds, J., and Cornish, K. (2017)



Australian Government
Department of Industry, Innovation and Science

Business
Cooperative Research Centres Program

2017 Cooperative Research Centre Project **Grant**

Professor Cornish & Dr Kirk awarded CRC-P Grant from the Department of Industry, Innovation and Science

A scalable detection tool for childhood inattention: Tali Detect™

What is the problem? Lack of attention

In simple terms most of us take for granted the ability to stay focused on one task. But did you know that attention problems are the **most commonly reported childhood difficulty**.

Attention is important because:

- A lack of attention is closely associated with the ability to learn, social inclusion and critical to mental and general well being

Studies have found:

- Attention at the age of 4 years predicts math and reading at the age of 21 years
- Attention at the age of 4 years predicts the odds of completing college by age 25
- 136 million children globally have diagnosed severe attention difficulties

Attention — A Global Issue: cognitive assessment and training market to grow from USD 1.98 billion in 2016 to USD 8.06 billion by 2021 (CAGR of 32.3%).

Attention problems are the most commonly reported childhood issue with 40% of children who are otherwise typically developing at the age of four have some degree of attention difficulty



136M children
globally have severe attention
difficulties



6.1M children
in the USA have ADHD as a
diagnosed condition



400,000 children
in Australia severe attention difficulties
with **\$24 billion dollars** as the annual cost
of childhood inattention in Australia

- NHMRC, The Royal Australasian College of Physicians. *Australian Guidelines on ADHD (2009)*
- Buescher A.V., Cidav Z., Knapp M., Mangell D.S. *JAMA Pediatr* 168(8):721-728 (2014). *Economic Cost of Autism Spectrum Disorders in Australia*. Synergies Economic Consulting (2011)

Attention related disorders



The Competition

Test or Intervention	Validation
Psychostimulants Methylphenidates Amphetamines	<ul style="list-style-type: none"> Data for assistance with symptoms. Side effects include: Appetite loss, abdominal pain, headaches, and sleep disturbances, worsening of tics and anxiety, psychotic symptoms
Kneomedia	<ul style="list-style-type: none"> Not a clinically validated tool. Education settings only
MindMed (ADHD Treatment)	<ul style="list-style-type: none"> No clinical validation (and/or under question) Claims to treat ADHD – no evidence
Play Attention	<ul style="list-style-type: none"> Neurofeedback based – no evidence or unreliable
Concentration - Kids Attention Trainer	<ul style="list-style-type: none"> No peer reviewed literature supporting effectiveness
BrainBeat	<ul style="list-style-type: none"> App trains motor function only
Atentiv	<ul style="list-style-type: none"> Neurofeedback based – no evidence or unreliable
Myndlif	<ul style="list-style-type: none"> Neurofeedback based - no peer reviewed literature supporting effectiveness

WHY ARE THE EARLY YEARS SO IMPORTANT



- The early years of development from conception to age 6 (particularly for the first 3 years) set the base for competence and coping skills that will affect:
 - learning
 - behaviour and
 - health throughout life.

NEURAL PRUNING – USE IT OR LOSE IT – AND THAT’S WHERE NURTURE COMES INTO THE EQUATION

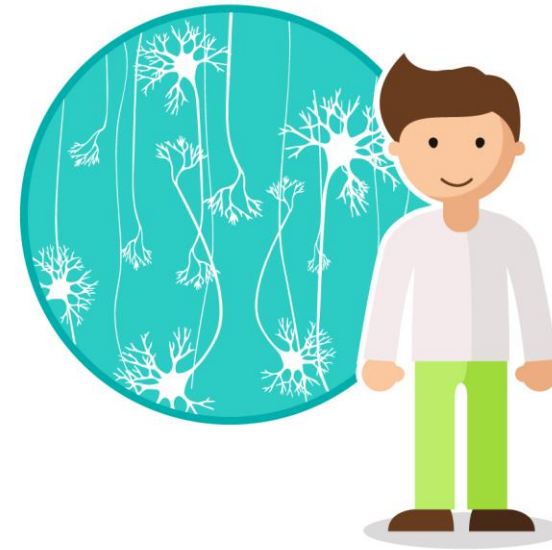
At Birth



6 Years Old



14 Years Old



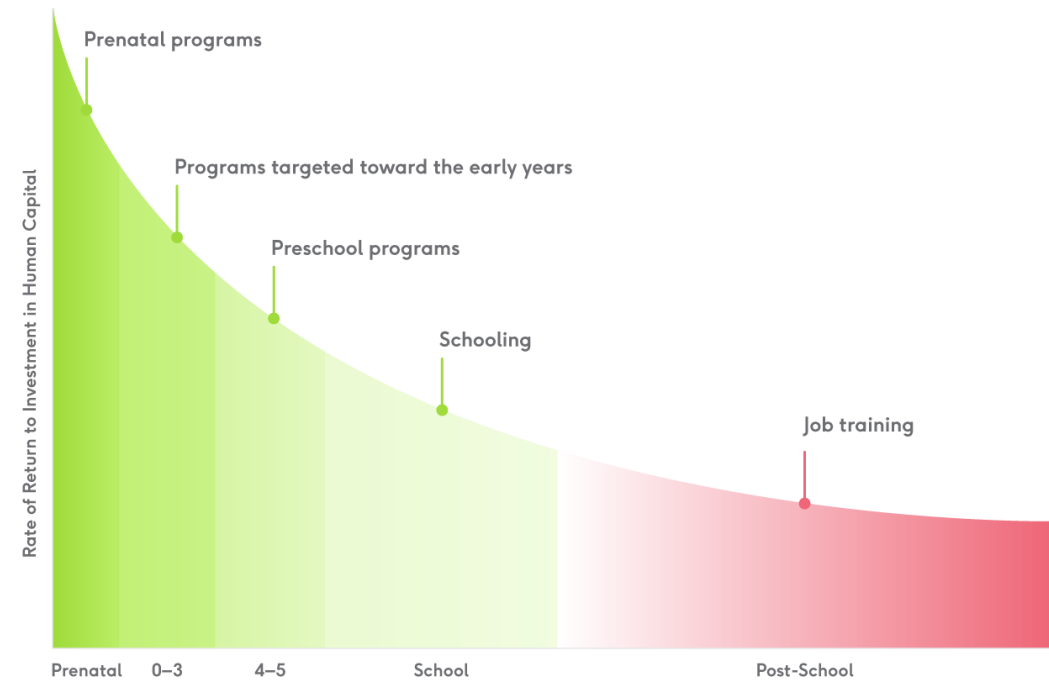
A child's brain grows from around $1/4^{\text{th}}$ at birth to $2/3^{\text{rd}}$ the size of the adult brain by age 3.

INVESTMENT IN EARLY CHILDHOOD

- Focusing on early childhood development through neuro-supportive, school-based intervention models would maximise an investment in national brain health and fitness.
- James Heckman, Nobel Memorial Prize winner in economics and an expert in the economics of human development:
Investing in early childhood development returns \$7-\$10 per dollar investment

Early Childhood Development is a Smart Investment

The earlier the investment, the greater the return



Source: James Heckman, Nobel Laureate in Economics

What are the real costs?

- In other words, we can 'pay now' by ensuring positive conditions for healthy development, or 'pay more later' in the form of:
 - health care
 - costly educational remediation
 - mental health services
 - increased rates of incarceration



Attention-related disorders (including ADHD) cost Australians over \$20 billion per year

Current practice is good but not optimal for 3 – 8 year old children in the attention related segment

- Children must go through a healthcare for assessment and intervention (treatment) – this includes children who are neurotypical
- In clinic programs not optimal for 3-8 year old children
- Psychostimulants reduced use and alternates such as **Atomoxetine** have FDA “black box warning” for suicide risk



How do we know it is working?

93% of users have demonstrated positive improvements in:

- a) Inattentive behaviour and b) Hyperactive behaviour

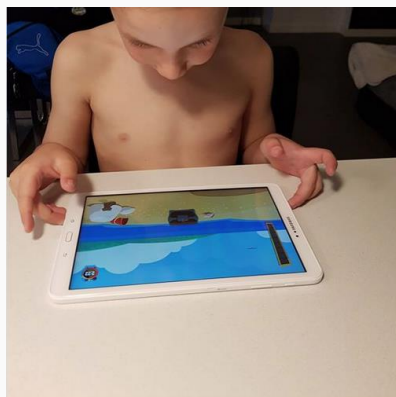
Average score and improvement*

	Before training	After training	Difference before-after
Total Score	27	9	-18
Inattentive Behaviour	14	4	-10
Hyperactive Behaviour	13	5	-8

**The lower the score the fewer difficulties in attention. Average score and improvement as recorded from children/parents who are users of Tali Train*



Not just attention results, but happy children



6 5 Comments Seen by 19

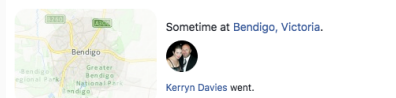
Like Comment

View 3 more comments

- Catherine Gibson** My boy became fixated on needing to plug it and charge it even though it had full charge Will plug it in tomorrow to remove the distraction.
Like · Reply · 6w
- New Born Baby** Hi Deana 'Moore' Azzopardi Training should be completed in a quiet area free from distractions such as television and radio. We recommend that your child uses headphones whilst completing the program and have a clear structure around when training will be completed.
Like · Reply · Commented on by Rachael Ferrari (?) · 6w

Kerryn Davies had a get-together.
September 19 at 6:29 PM

Harry is really enjoying the space themed games. We are seeing improvement every time he plays. We always have some food on hand to keep his focus at the table rather than searching for other things to do at the same time.



3 1 Comment Seen by 15

Like Comment

- New Born Baby** That's great! Kerryn Davies
Like · Reply · Commented on by Rachael Ferrari (?) · 4w
- Write a comment...

Kristine Henderson
September 6

The past two days, Jake has been keen to play with his Tali's before school. He has enjoyed the new content, and says that he is concentrating a little more in school. His class has gone through a bit of upheaval this year - his teacher left at the end of term 2 and it took until week 2 of term 3 to get a new teacher. Today the class has joined another, so hopefully this new focus will help him settle into the new classroom environment.

3 2 Comments Seen by 5

Like Comment

- Catherine Gibson** Good luck, hope he has a great day.
Like · Reply · 6w
 - New Born Baby** That's great Kristine Henderson that he is already feeling like he is able to concentrate more at school. Good luck with the new teacher.
Like · Reply · Commented on by Rachael Ferrari (?) · 5w
- Write a comment...

Catherine Gibson
September 19 at 5:43 PM

Really good session this morning - Hunter asked if he could play Tali's while eating his breakfast - was a bit hesitant but seeing as he was sitting still and seemed excited I figured I'd risk it. He was more focussed than usual and although there were a few pauses to shovel corn flakes in his mouth these time periods were actually shorter than his usual periods of distraction. He got through 3 games really focussed, lost it a bit on the last game but overall I was really, really happy with how he did.

4 2 Comments Seen by 4

Like Comment

- Kerryn Davies** Harry is the same. We now always have some form of food on hand for him.
Like · Reply · 4w
 - New Born Baby** Good to hear Catherine Gibson. Incentives really can help. Research shows that the support of the family or caregiver is integral in obtaining the best results from early intervention programs. By sharing the training time with your child, you are not only offering them your support and encouragement, you are modelling desired behaviours. An understanding of the program and the parts that stand out for your child offers you the opportunity to use examples to illustrate and highlight your child's skills and accomplishments in the real world.
Like · Reply · Commented on by Rachael Ferrari (?) · 4w
- Write a comment...

Catherine Gibson shared a link.
October 11 at 11:13 AM

<https://www.heraldsun.com.au/.../ae5cfaac783c41bf78168c5158bb...>



HERALDSUN.COM.AU
Attention-grabbing plan to give every prep best start
EVERY prep child would be tested for their attention and concentration...

8 4 Comments Seen by 9

Love Comment

- View 2 more comments
- Jenn Jenkins** Kaye Finnin Counsellor
Like · Reply · 6d
 - New Born Baby** Awesome photo and interview Catherine Gibson
Like · Reply · Commented on by Rachael Ferrari (?) · 6d
- Write a comment...

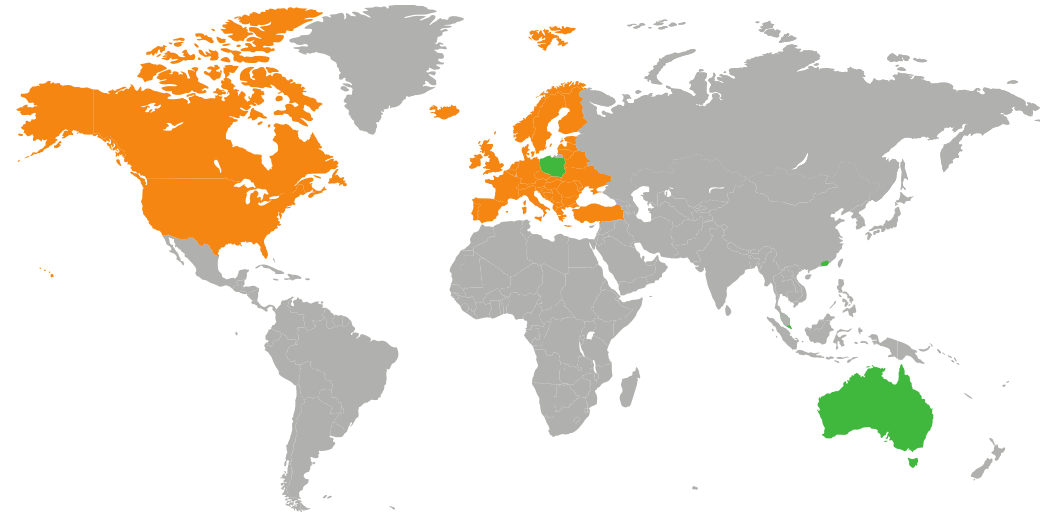
Near term milestones in next 3-6 months

- ✓ Publication of clinical trial results from CRC-P: TALi Detect project
- ✓ Update on **screening and conversion to paid training** through Schools
- ✓ **Reimbursement** – rollout into USA and partner acquisition update
- ✓ Update on **“other potential channel partners” globally** to drive awareness, recognition and sales of TALi

WHERE ARE WE HEADING IN 2020 AND BEYOND?

Global from day one means delivering our apps to a global audience via multiple channels
– e.g. direct to parent via app store, schools, healthcare professionals, channel partners

- **Continue to grow in market:**
 - Australia (now)
- **Expansion into:**
 - North America (now)
 - UK and Europe (2020)
- **Expansion into:**
 - Asian markets (mid-late 2020)



THE COMPANY – Your Board and team



Sue MacLeman

- Sue has more than 30 years' experience as a pharmaceutical, biotechnology and medical technology executive
- Sue has served as CEO and Board member of several ASX and NASDAQ listed companies in the sector



Glenn Smith

- Over twenty years experience in leading customer-centric businesses in periods of rapid growth
- Seasoned executive who has held senior roles in strategy, investment, R&D, marketing, sales and operations



Jefferson Harcourt

- Founder of Grey Innovation, significant product development and commercial expertise
- Sits on a number of private technology company boards in medical device and security markets



Mark Simari

- Significant experience on boards in privately held and ASX-listed companies
- Responsible for driving growth strategies including acquisitions, capital raising, restructuring, and driving strategic and business planning processes

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