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1 May 2017

## March 2017 Quarter Update

### Highlights

- **Appointment of Robert Beachler, a 30-year technology veteran with prior public and private company experience in marketing, business development and operations.**
- **Acquired an Exclusive License to JAST, a Next-Generation Spiking Neural Networking technology.**
- **Achieved the integration of the Spikenet Technologies Neural Network in an FPGA Hardware Platform.**
- **Accelerated Momentum in Commercial Surveillance with deployment of Game Outcome at Mohegan Sun.**
- **Accelerated Momentum in Civil Surveillance with the French Department of Homeland Security.**

BrainChip Holdings Ltd (ASX: BRN) ("**BrainChip**" or "**the Company**"), a leading developer of software and hardware accelerated solutions for Advanced Artificial Intelligence and Machine Learning applications, is pleased to provide an update on the quarter ended 31 March 2017 to accompany the Company's quarterly cash flow report.

Significant developments for the quarter include the appointment of Robert Beachler as Senior Vice President of Marketing and Business Development, the acquisition of an exclusive license to the JAST Neural Networking technology, the integration of Spikenet Technologies software solution in an FPGA hardware platform, and the deployment of Game Outcome at the independently operated Mohegan Sun Casino and Resort.

The Company will host a webcast update on Thursday 4 May 2017 at 9:00 a.m. (EST) Australia. Please refer to the Company's web site at [ir.brainchipinc.com](http://ir.brainchipinc.com) on Tuesday 2 May 2017 to register for participation.



## OPERATIONS

### Appointment of Robert Beachler

The Company announced the appointment of Silicon Valley Veteran Robert Beachler as Senior Vice President of Marketing and Business Development during the quarter.

Mr. Beachler is a Silicon Valley veteran with over 30 years of success in developing and marketing cutting-edge technologies. His background includes more than 16 years of experience in a variety of engineering and marketing roles at Altera Corporation, a leading provider of Field Programmable Gate Arrays (FPGA) products which was acquired by Intel Corporation in 2015 for over US\$16 billion. He has also served as Vice-President of Marketing, Operations, and Systems Design at Stretch Inc, a provider of embedded video processing solutions up until its acquisition by Exar Corporation (NYSE:EXAR) in 2014. While at Exar, Mr Beachler was appointed Vice President of Corporate Marketing and Business Development. Most recently, he served at Xilinx Corporation (NASDAQ: XLNX), the leading worldwide independent provider of FPGA products and led the marketing of imaging, video and machine learning solutions for Xilinx's industrial, scientific, and medical markets.

### Business Development

The appointment of Robert Beachler positions the Company to capitalise on targeted large addressable markets in artificial intelligence. Mr. Beachler has a proven track record of success in bringing products to market and driving growth. He will build a marketing and business development team in Europe and the United States this year followed by Asia and Australia in 2018. Mr. Beachler's initial effort will be to drive revenue growth in markets where the Company has demonstrated success, expand the number of customers in these markets and introduce the Company's hardware accelerated products to further enhance its position in large-scale deployments.

- **Commercial Surveillance** this market is highlighted by engagements in the gaming industry. The worldwide gaming industry includes approximately 2,600 casinos and over 50,000 gaming tables. In addition to existing deployments, the Company is currently in discussions or trials with 17 casinos including the MGM Group in the United States, the Crown Casino Group in Australia, a Sands China operated casino in Macau and a number of independently operated Native American Tribal casinos including Mohegan Sun in Connecticut, Pechanga in California and Pocono Downs in Pennsylvania.



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The Company's business model in the gaming industry is based on a fee paid for each active table on a daily basis, thereby creating an ongoing revenue stream from a potentially large and diverse customer base.

**The Company is in the process of signing another evaluation protocol with the CISCO Innovation Centre of Perth.** The CIIC will perform the evaluation of BrainChip's advanced video analytic technologies, aiming at boosting the reliability of access authorization around sensitive areas. This is in addition to the ongoing trials by the CIIC of advanced video analytics for transport safety which are currently expanding to a national level.

- **Civil Surveillance** the growing threat of terrorism and violent crime is driving demand for real-time video analytics. This is a large and growing market which includes Homeland Security, Metropolitan Law Enforcement, Airports and Mass Transit.
  - The market for Civil Surveillance is large, well-funded and geographically diverse. The Company serves the challenging requirements for video analytics, including facial and pattern recognition. The Company continues to work closely with the French Department of Homeland Security and Paris municipal law enforcement. Drawing on the success of these relationships, **a new trial is set to begin in June with the law enforcement agency in Toulouse, France**, which will further inform the Paris municipal law enforcement agency regarding the compelling benefits of the BrainChip video analytic solutions. **Additionally, there is another new trial planned in the third quarter of 2017 with the Toulouse passenger rail authority.**
  - The Company has opportunities with multiple schools in the United States and is currently in discussions with a School District in the state of New York for a deployment that represents potential revenue of US\$600,000. The Company has already been selected as their vendor for video analytics and the school district is in a funding process that will enable them to begin deployment.



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- **Machine Vision** the desire for highly accurate visual inspection methods is driving demand for artificial intelligence. The Company has partnered with companies such as SAFRAN in Paris, France, which is developing an innovative inspection system for a mission critical manufacturing application. As well, at Airbus in Toulouse, France, the Company has collaborated on a variety of video analytic projects. Other applications include vehicle identification and infrastructure inspection.
- - The Machine Vision market is most notably represented by the automotive industry. As Autonomous Driver Assisted Systems (ADAS) and fully autonomous vehicles become more prevalent the requirements for real-time video analytics become more critical. BrainChip's Spiking Neural Network represents a best-in-class solution for this demanding application. The Company is currently engaged with IniLabs in Switzerland, a developer of DVS cameras that are applicable in autonomous vehicle applications. The Company is also engaged in discussions with Volkswagen.

### **JAST Technology License**

In March of 2017 the Company acquired an exclusive license to a next-generation neural networking technology developed by CERCO (Brain and Cognition Research Center) in Toulouse, France. The technology has been developed specifically for use with Spiking inputs. The advanced Spiking Neural Network and learning rules maximizes processing speed while minimizing power consumption. The JAST technology will be implemented on the Company's proprietary SNAP core. This solution will provide compelling advantages in systems where autonomous real-time learning is critical including but not limited to autonomous vehicles and drones, ADAS and financial technology aimed at improving the speed of trading algorithms.

### **Integration of Spikenet Technologies in an FPGA Hardware Platform**

In March of 2017 The Company made a major achievement by integrating the field proven Spikenet algorithms and software with a hardware core developed specifically for visual applications. The FPGA hardware solution will provide a fast, low-power solution that can run a large number of video streams simultaneously for video analytics including facial and pattern recognition. A multi-core FPGA hardware solution is expected during the second quarter and the Company plans to engage early adopter customers in the third quarter of 2017. The hardware solution will reduce the total cost of ownership in



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large deployments of surveillance systems and is expected to drive significant revenue growth for the Company.

### **CORPORATE**

#### **Option and Performance Rights Issue**

The Company issued 27,100,000 unlisted options during the quarter to newly appointed staff as a part of its incentive program and in order to appropriately align the interests of staff and shareholders.

The Company issued 1,500,000 performance rights to Robert Beachler as part of his appointment which vest subject to various time and performance based hurdles.

1,000,000 unlisted options lapsed in accordance with their terms during the quarter.

#### **Quarterly Expenditure**

Expenditures in the quarter were materially higher than in the previous quarter primarily due to staffing in marketing and engineering and legal and financial expenses associated with Company's evaluation of domicile and exchange listing. The Company has made no decision as yet on re-domiciling the Company.

The Company had approximately US\$1.9M in cash at the end of the quarter. The Board is closely monitoring its funding needs and expects to initiate a capital raise to support future cash requirements including continued engineering on the SNAP technology and staffing in engineering, and sales and marketing to further the Company's engagement with customers and support revenue growth.

**END**



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**About BrainChip Holdings Ltd (ASX:BRN)**

BrainChip is a leading provider of software and hardware accelerated solutions for Advanced Artificial Intelligence and Machine Learning applications. The Company's Spiking Neural Adaptive Processor (SNAP) can learn autonomously with a small sample set and provide real-time information, data analytics and knowledge in image and video processing applications, high frequency data streams for financial analysis and event, speech, and speaker recognition from audio sources. BrainChip's SNAP technology can quickly learn, recognize, and track events in real time from multiple sources and identify repeating patterns in complex data streams.

The Company currently provides software and hardware accelerated solutions that address high-performance requirements in Civil Surveillance, Facial Recognition, and Visual Inspection systems. Future solutions include audio analytics and deep learning for financial and other data intensive applications. [www.brainchipinc.com](http://www.brainchipinc.com).



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### **Forward Looking Statements**

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