

Micro-X Limited, ABN 21 153 273 735

MICRO-X \$16.5M PRIVATE PLACEMENT

Funding for Nano commercialisation, launch of Rover and MBI development

Adelaide, Australia, 19 November 2019: Australian high-tech company Micro-X Ltd (ASX: MX1) (Micro-X or the Company) a leader in cold cathode x-ray technology for health and security markets globally, is pleased to announce that it has received commitments totalling approximately \$16.5 million (Placement), for new fully paid ordinary shares in the Company at 20 cents per share (Placement Shares).

The Placement was targeted to raise \$12 million to \$15 million and the Company reserved the right to accept oversubscriptions in the Placement. As the Placement was well oversubscribed the Company increased the Placement by 10% to \$16.5 million. The Company is pleased to welcome a number of new institutional and sophisticated investors as shareholders in addition to the support of a number of existing shareholders. Two of the Directors have also committed to subscribe for \$0.35 million of Placement Shares, with the allotment to Directors being subject to shareholder approval.

The Company intends to use the proceeds of the Placement to fund the ongoing commercialisation of the Nano product and the launch of the Rover for the military market targeted for 2020 with associated capex and inventory. Additionally, proceeds will be applied towards engineering development of the MBI product, working capital and costs associated with the Placement. Approximately \$2.81 million of the proceeds will be applied towards redemption of the April 2018 Convertible Notes.

The Company Presentation used in marketing for the Placement is attached.

Morgans Corporate was engaged as Lead Manager for the Placement with Hawkesbury Partners as Co-Arranger and Financial Advisor.

Details of the Placement

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The key terms of the Placement are as follows:

- Approximately 82.5 million Placement Shares at \$0.20 per Placement Share to raise approximately \$16.5 million.
- The issue price of the Placement Shares represents a:
 - 25.0% discount to the last traded price of 25 cents on 1 November 2019; and
 - 24.8% discount to the 5-day volume weighted average price (VWAP), 29.3% discount to the 15-day VWAP immediately prior to the date of the Placement.
- The Placement will take place in two tranches with:
 - approximately 12.4 million Placement shares (approximately \$2.5 million) to be issued under the remainder of the Company's 15% placement capacity under ASX Listing Rule 7.1, which will be issued on or about Monday 25 November 2019; and
 - approximately 70.1 million Placement shares (approximately \$14.0 million) to be issued subject to shareholder approval.
- Two of the Company's Directors have subscribed in the Placement, for a total of 1.75 million Placement Shares (\$0.35 million), which subscriptions are also subject to shareholder approval. These shares will fall into tranche two of the Placement.
- A majority of the holders of convertible notes issued in April 2018 (April 2018 Notes) have subscribed for a total
 of approximately 28.1 million Placement Shares (approximately \$5.6 million), with each holder subscribing for



Placement Shares equal to 200% of the face value of their Notes. The Placement, once approved by shareholders, will satisfy the requirement of a Future Capital Raising under the terms of the April 2018 Notes. Accordingly, the Company will effect a redemption of approximately \$2.8 million of Notes on closing the Placement. These Placement Shares will fall into tranche two of the Placement.

- Shareholder approval will be sought at an Extraordinary General Meeting that is scheduled to take place on or about 19 December 2019. The approval by shareholders of the convertible security issued to Thales in July 2019 pursuant to the Thales Loan Agreement (details of which were disclosed to the market on 15 November 2019), will also be sought at the same Extraordinary General Meeting.
- The Placement was available to investors in Australia who qualified as professional or sophisticated investors under the requirements of the Corporations Act 2001 (Cth) and sophisticated and professional investors in select other jurisdictions. Placement Shares will rank equally with existing ordinary shares of the Company.
- As the Company's shares have been suspended from trading on the ASX for more than 5 days in the last 12 months, a transaction specific Prospectus will be lodged with the ASX and ASIC on or about 19 November 2019, being a date prior to the proposed allotment of the first tranche of Placement Shares.

Peter Rowland, Managing Director of Micro-X commented:

"We are very pleased to have attracted this level of investor commitments and the number of new shareholders joining the share register is particularly pleasing as we transition into our next phase of ramping up commercialisation. This funding allows us to execute on our exciting plans without the need to be raising again in the short term. We have also tidied up our balance sheet with the redemption of almost all of the April 2018 Notes and the recently announced repayment of the \$3 million secured R&D Loan.

Our focus is on commercial achievements and the funds raised will allow us to push ahead with our Nano roll-out and deliver meaningful levels of sales in the coming year. We are also able to progress towards completing the first generation version of the Rover and attracting two key military customers within the next twelve months. We can also fully support our engagement with Thales on the MBI and future airport screening products"

Key dates

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The key dates related to the Placement are as follows:

19 November 2019 Placement announced

Transaction specific Prospectus lodged with ASX and ASIC Notice of Extraordinary General Meeting lodged with ASX

25 November 2019 First tranche of Placement Shares allotted

19 December 2019 Extraordinary General Meeting to approve Placement and Thales convertible security

23 December 2019 Second tranche of Placement Shares allotted

Redemption of April 2018 Notes held by holders who satisfied the redemption condition

- ENDS -

About Micro-X

Micro-X Limited (the **Company**) is an ASX listed hi-tech company developing and commercialising a range of innovative products for the global health and security markets, based on proprietary cold cathode, carbon nanotube emitter technology. The electronic control of emitters with this technology enables X-ray products with significant reduction in size, weight and power requirements, enabling greater mobility and ease of use in existing x-ray markets and a range of new and unique security and defence applications. The Company has its core R&D, engineering and production capability at its facility in Adelaide, Australia.

The Company's first product, the Carestream DRX Revolution Nano, is an ultra-lightweight digital medical x-ray system for the rapidly expanding mobile x-ray market in hospitals and healthcare. The Carestream DRX Revolution Nano holds 510(k) and CE Mark certifications and is sold



commercially in a number of global markets by the Company's exclusive distributor, Carestream Health, Inc. The Company has a portfolio of innovative products in development, aimed at customer solutions where there is little or no competition. This includes the Mobile Backscatter Imager or MBI which will image Improvised Explosive Devices for airport security, defence and counter-terrorism applications. The MBI is being jointly developed in partnership with Thales, a global supplier of defence and security technology systems, who are providing technical support and \$10 million of funding.

CONTACTS

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Micro-X Limited	Investor Enquiries		
Peter Rowland Managing Director Tel: +61 8 7099 3966 E: admin@micro-x.com	David Allen / John Granger		
	Hawkesbury Partners		
	Tel: +61 2 9103 9494		
	E: dallen@hawkesburypartners.com		
	jgranger@hawkesburypartners.com		



15th November 2019

Peter Rowland
Managing Director & CEO

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Next generation X-ray for global health and security markets

- ASX listed hi-tech X-ray company based in Tonsley, Adelaide
- Next generation, cold cathode, Carbon Nano Tube technology
 - X-ray products with significant reduction in size, weight and power
- **Platform technology** health and new security applications
- **Selling first product -** Carestream DRX Revolution Nano
 - Mobile ultra-lightweight digital x-ray system for hospitals
 - Sold into 10 countries including United States Available for sale in Australia
- Strategic partnerships and investors
 - Distribution of Nano Carestream (ex Kodak Medical, US\$2.5b sales)
 - Security collaboration Thales (technology giant, €16b sales)
- **Growth trajectory -** building **customer traction** and **sales**
 - Accelerated sales and marketing activities + sales infrastructure
 - Second product Rover product for military market first contract for sale 1H 2020



Carestream DRX Revolution Nano

Next generation X-ray technology

MICRO-X

Our carbon nanotube technology provides a revolution in X-ray products & functions

Existing X-Ray Technology



Filament

Technology unchanged since 1896

Hot filament generates X-ray beam

X-ray still dominant form of diagnostic imaging

Mobile bedside X-ray – fastest growing segment

Siemens, GE, Canon, Philips, Carestream





CNT emitter + electronic control generates X-ray beam
Up to 10x smaller X-ray tube
Considerably more efficient with no heat
Significant increase in functionality
New security & military applications

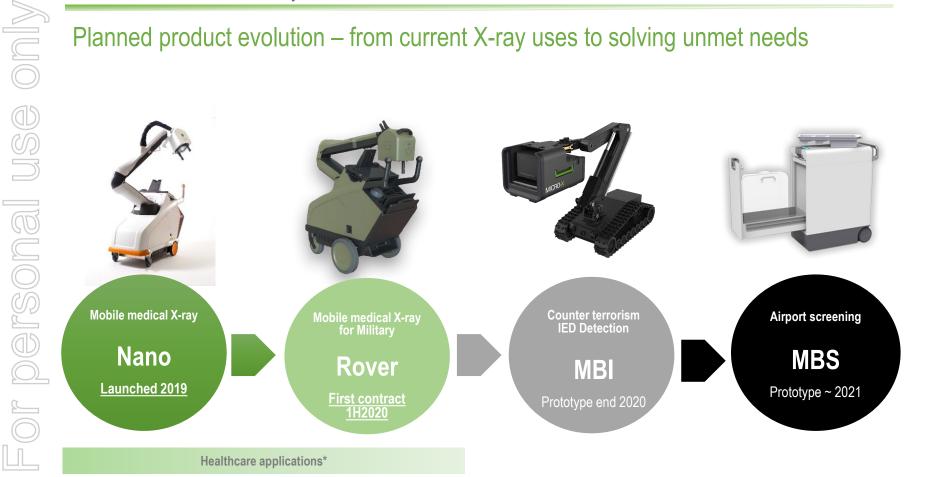
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Product roadmap



Planned product evolution – from current X-ray uses to solving unmet needs



Military & Counter terror applications

Security applications

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^{*} Additional healthcare opportunities

⁻ e.g. Mobile 3D CT imager for stroke diagnosis

Growth stage company with institutional and strategic investor support

Share & Trading Statistics (Closing Price on Friday 1 November 2019)				
Share Price	\$0.25 per share			
Total Shares On Issue	165.0 million			
Options Issued	11.6 million			
Convertible Notes	\$4.5 million – convert at 23 to 40 cps			
Market Cap	~\$41.3 million			

Key Financials & Shareholders				
Current Cash \$2.6 million (at 30 Sept 2019)				
Loan Facilities	SAFA \$3 million facility			
Strategic Investors	Carestream (5.7%), Thales (\$10m Con Notes)			
Institutional Investors	Thorney (approx. 7%) + Other Institutions (~6%)			
Board & Management	~ 10.4% shares			



Realigned financial resources to commercial outcomes – reducing FY2020 cash expenditure by \$3.1m

Key terms of the Placement

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Placement	 Private Placement of A\$12 – A\$15 million via a two tranche Share Placement to Institutional and Sophisticated investors at A\$0.20 per share. Tranche 1: A\$2.48 million ~ 12.40 million shares Tranche 2: A\$9.52 million ~ 47.60 million shares up to A\$12.52 million of ~ 62.60 million shares. This second tranche of the Share Placement is subject to shareholder approval at an EGM The Company will be lodging a cleansing Prospectus with ASX and ASIC to enable shares in the Placement to be resold. The Company reserves the right to accept oversubscriptions Morgans Financial Limited have been appointed as Lead Manager. Hawkesbury Partners are Co-Arrangers and Advisers to Micro-X 							
Use of proceeds	USE OF FUNDS	\$12M OFFER	15M OFFER	Notes				
	Commercialisation on Nano; Rover work and launch*	\$3.00m	\$3.00m	Commercialisation for Nano is net of Gross Profit on Nano sales.				
	MBI R&D, Capex and Inventory	\$4.40m	\$6.40m	Convertible Note Redemption is an estimate based on current indications from Note holders.				
	Working Capital	\$1.32m	\$2.14m	MBI costs will be funded by proceeds from \$10m Thales facility.				
	Convertible Note Redemption*	\$2.56m	\$2.56m					
	Costs of the Offer	\$0.72m	\$0.90m					
	Total	\$12.0m	\$15.0m					
Pricing	The Placement will be undertaken at a Placement Price of \$0.20 per share which represents a discount of: 24.8% to the 5-day VWAP 29.3% to the 15-day VWAP 20.0% to the last traded price of \$0.25 per share on 1 November 2019							
Timing^ & Settlement	Market Update Announcement	15 November 20	19 EGM to	approve Tranche 2	~20 December 2019			
	MX1 Recommences Trading	19 November 20	19 DvP Set	ttlement of Tranche 2*	23 December 2019			
	Cleansing Prospectus filed	19 November 20		Allotment of Tranche 2 Shares* 24 Decei				
	DvP Settlement of Tranche 1	22 November 20		* Tranche 2 is only if shareholder approval is received				
	Allotment of Tranche 1 Shares	25 November 20	19 ^ Dates a	^ Dates are indicative and subject to change at the Company's discretion				
Approvals	Tranche 1 of the Placement Shares shall be issued in accordance with the Company's capacity under ASX Listing Rule 7.1 (15% rule). Tranche 2 of the Placement Shares will be issued subject to shareholder approval at an EGM to be held in December 2019							
Issued Capital	165 million ordinary shares + 11.6m options \$4.0m Convertible Notes (40c) and \$0.5m Convertible Notes (VWAP discount with 23c floor)							

Experienced leadership









Technical and commercial expertise to support our goals and objectives



Peter Rowland Managing Director & CEO

- Over 30 years' hi-tech engineering and management in military and industry
- Previously BAE Systems, Ellex Medical and Biolase Technology (NASDAQ)



Patrick O'Brien Non-Executive Chairman

- Over 25 years' business and finance experience in UK, Asia and Australia
- Former Executive Director at Macquarie Group; McKinsey; and Minter Ellison



Yasmin King Non-Executive Director

- Highly experienced in business, vocation and government
- Currently CEO of Skills IQ, formerly Associate Commissioner of ACCC



Dr Alexander Gosling, AM Non-Executive Director

- Over 40 years' business, technology and research experience
- A founding Director at Invetech (Vision Systems); strategy for Capstone



Georgina Carpendale Chief Financial Officer 10 years' experience in accounting and finance Former Auditor at BDO



Anthony Skeets Engineering Manager 20 years engineering experience in UK & Aust Lucent, Invetech, Hydrix



Alexander Blackburn **Programs Manager** Highly experienced in supply chain and quality GM Holden in Aust & China



Victoria Latham Quality & Reg Manager 20 years Quality in medical devices and auto industry Ellex and Carl Zeiss Vision

Global search underway to add an experienced Sales and Marketing executive to Leadership team

Business model & Strategies



Commercialise our proprietary technology products with selected global partners

- **Dual Market strategy** in healthcare and defence/security based on **proprietary technology**
- Maintain world leading in-house design and technology development capabilities
- Expand highly robust quality manufacturing capability
- Enter markets in partnership with globally recognised brands
- First product in healthcare builds credibility before entering new markets without competition
- Earn attractive margins as a highly differentiated technology manufacturer in large global markets
 - seek opportunities to move up the value chain

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DRX Revolution Nano

Our first commercial product - Healthcare

New solution in mobile X-ray for healthcare



Carestream Health is a world leader in mobile X-ray for the healthcare market

- Carestream Health appointed global distributor
- Premium positioning

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- Already sold into 10 countries including U.S.
 - · Now available for sale in Australia
 - · New geographies underway
- Strong customer feedback
- High reliability proven
- \$1.25M sales in June & Sept Quarters
- Sales expected to grow materially in Dec Quarter after Adelaide Tube approval
- Addressable market: First Tier: \$300M, Second tier: \$200M



Carestream trade booth - DRX Revolution Nano

Product Overview

- FDA approved Class II Medical device
- True mobile X-ray device overcoming limitations of competing mobile X-ray
- Light & manoeuvrable 90kg v 350 600kg
- Battery operation 12 hour endurance
- Unique "tusks" for alignment with controls
- Bar code reader for patient-image association
- Small footprint narrow hospital corridors/lifts
- Exceptional visibility for operator & patient safety
- Sold as the Carestream DRX Revolution Nano



Responding to slower than anticipated ramp up

- Early quality/yield and reliability issues resolved with insourcing
 - Micro-X has insourced and proven a proprietary and superior emitter
 - Lack of tubes from previous supplier severely impacted Sept 2019 Quarter sales
- Sales and Marketing strategies adapted for breakthrough technology
 - Reset marketing approach with Carestream
- Customer head to head demonstrations prove technology benefits
 - Carestream have dedicated technical sales team actively running
- U.S. reference Hospitals and KOLs strong customer endorsement
 - Broadens awareness and credibility for potential hospital customers
- Australian market now open for sales with ARTG and Quantum Health

The sales pipeline is now growing and traction is building – this December Quarter should see continued growth







Manufacturing Nano units to meet demand - Tonsley, Adelaide

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Next stage Expansion and vertical integration of tube supply





Capacity of **85 Nano or Rover units p.m.** Increases with weekend or second shift

Tonsley Facility, Adelaide

- $> 1,000 \text{ m}^2$
- Capacity for medium term needs
- **Dedicated Rover production**
- Test facilities for MBI project
- Mechanical & electrical lab space
- Shielded rooms for customer demos
- ISO 13485
- **Tonsley Innovation District**
 - SA Government initiative





Rover mobile military x-ray

Planned sales 2020

Rover - Second Product in final development







Mobile X-Ray for NATO Role 2-E Deployed Military Medical Facilities

- Currently deployable weight limits restrict choice to smallanimal veterinary X-ray
- Completed imaging tests for **Australian Defence Force**
- Australian DoD negotiating with preferred tenderer for JP2060
- US Army interest strong
- Addressable global market ~\$170M in NATO countries
- No competition & unmet need means higher gross margins





Top – ADF deployed medical facility at Shoalwater Bay Bottom - ADF demonstration at exercise Giant Viper

Product Overview

- Based on key elements of Nano FDA approved Class II Medical device
- Higher energy X-ray exams used in trauma
- Light & manoeuvrable 90kg
- Hard reusable shell for military transport
- Easy battery change
- Operates on uneven surfaces
- Full performance digital imager in deployed medical facilities - War, Natural disasters
- Sales contracts mid 2020 with first gen Rover - delivery for customer testing after passing military risk management framework

First generation Rover – on sale mid-2020

MICRO-X

Responding to US military interest to buy the product

- U.S. Army Medical Materiel Agency (medical procurement)
 - Recent demonstrations at Fort Detrick, Maryland
 - Interest for all three services supporting deployments and domestic Base and DVA hospitals
 - Planning a Low Rate Initial Production order small batch of Rover without tender



- Design complete and testing underway
- Regulatory pathway 510(k) filing early 2020 approval mid 2020
- First sales contracts U.S. Army in mid-2020 six months ahead of plan
 - Delivery for customer testing after passing military risk management framework
 - Revenue recognised on final product acceptance by end 2020
- Australian Defence Force sales end 2020
 - Micro-X part of successful tender for JP2060 project completing final pricing

We aim to be selling to two major defence customers by the end of 2020 - building customer interest for larger follow-on orders







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Other products in development

Mobile Backscatter Imager – Security applications







Unmanned assessment of potential *Improvised Explosive Devices*

- Bomb disposal technicians face life threatening harm when placing X-ray detector behind the IEDs
- MBI takes x-ray images without separate detector- one sided
- Australian Defence Force proof of concept imaging completed
- Customer support military and FBI / bomb disposal interest
- Addressable market ~\$1.8B
- No competition & unmet need means high gross margins



Above - Illustration of MBI carried by EOD* Robot



Above - Current bomb disposal X-ray imaging technique * EOD – Explosive Ordnance Disposal

Product Characteristics

- Multi-beam CNT imaging with Backscatter detector – enables one-sided X-ray image
- Thales collaborating on new tube development
- Light and able to be carried by any EOD* robot maintaining distance of bomb technician
- Resolution of better than 0.5mm
- Ideal in a wide range of counter-terrorism scenarios

Future aviation security concepts



Next Generation Airport X-Ray screening – 'high speed' and 'self service'

High speed – Airport 3D X-ray conveyor*

- Latest ECAC Detection Standards 3 & 4
- Screen up to 1,200 bags p/h (currently 200)
- Concept uses backscatter and 3D imaging to provide low false alarm rate
- Automated threat detection software
- Thales to fund development and take to market
- Large and growing addressable market

Self service checkpoint X-ray model*

- Secondary screening at boarding gate
- Completed Proof of Concept imaging test for UK Government Future Airport Security Solutions
- Enables next-generation checkpoint protocols- self service for check-in and X-ray screening
- Another large and growing market



* These Programmes are subject to funding being available by the Company. MX1 has a small U.K. Govt. funded project.



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Thales partnership & \$10m investment



Technology partnership with a global leader in defence and aircraft security

- \$10M investment via loan facility
 - \$5m cash already received July 2019 on completion
 - Subject to EGM approval (to be sought by end 2019), Thales has option to convert loan to shares after July 2024
 - Micro-X can elect to repay loan rather than issue shares to Thales
- Contract design and licensing of Airport Checkpoint Security Imaging
- Distribution for MBI in Defence/ security outside Five-Eyes countries
 - Australia, US, UK, Canada and New Zealand
- Contract manufacture of future miniature X-ray tubes

"....we are at the birth of a new technology evolution. CNT is a game changer in so many fields but none offer such practical and quantifiable benefits as in the X-ray imaging market. From airport checkpoints to counter terrorism activities to future medical imaging devices, Thales and Micro-X are at the cusp of an historical moment. This partnership will give us a technological leap that no one else in this industry has." Jean Jacques Guittard, Thales Vice-President, Electron Devices



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Goals & Objectives

We are now setting course

Milestones - setting our new course



Focused on delivering commercial outcomes for all stakeholders

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Early US sales of Nano
Thales Partnering deal & \$5m
Next Stage Facility expansion
CNT in-sourcing complete
First Nano sales with MX1 tube
Patent published - CNT emitter
Reference hospitals + KOLs
UK Airport security grant award

Q4 – Build sales + pipeline

Q4 - Nano sold in Australia

Q4 – Japan entry strategy

Q4 – Rover tube built & tested

CY 2020

1H – Rover 1st gen 510(k)

1H - Building Nano sales

1H – Japanese reg process

2H - Rover 1st gen U.S. Army sales

2H – MBI first imaging demo

2H – Rover 2nd gen 510(k)

2H – Rover 2nd gen ADF contrac

Beyond

Significant Rover & Nano sales

Japan reg clearance – Nano

MBI customer demo / testing

MBI launch in ~ 2022

Airport security prototype

The above forecast dates are estimated and indicative and may change

Conclusions

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Building commercialisation of next generation X-ray technology

- Next generation X-ray platform health and security markets
- Significant technology advantages
 - smaller, lighter, more mobility, new applications
- Strategy and focus on technology development & manufacture
- Commercial sales via partnerships with global leaders
 - Carestream (Healthcare) + Thales (Security & defence)
- First product in sales and now growing + second product in sales < 12 months
 - New products in larger markets with increased financial returns



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Company Presentation – 15 November 2019

