

Issuer Free Writing Prospectus
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atomera

Initial Public Offering Briefing July 2016

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President and CEO

Note Regarding Forward-Looking Statements



This document contains forward-looking statements concerning Atomera Incorporated ("Atomera," the "Company," "we," "us," and "our"). The words "believe," "may," "will," "potentially," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect" and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements concerning the following:

- our future financial and operating results;
- our intentions, expectations and beliefs regarding anticipated growth, market penetration and trends in our business;
- the timing and success of our plan of commercialization;
- our ability to operate our royalty-based business model;
- our ability to have our technology solutions gain market acceptance;
- our ability to maintain, protect and enhance our intellectual property;
- the effects of increased competition in our market and our ability to compete effectively; and
- our expectations concerning our relationships with potential customers, partners and other third parties.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the "Risk Factors" section of Amendment 1 to the Registration Statement on Form S-1 filed by Atomera with the Securities and Exchange Commission on July 29, 2016. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this document may not occur and actual results could differ materially and adversely from those anticipated or implied in our forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur.

This document contains only basic information concerning Atomera. Because it is a summary it does not contain all of the information you should consider before investing.

The issuer has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC Web site at www.sec.gov. Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by calling National Securities Corporation toll-free at 1-800-742-7730.

Investment Overview

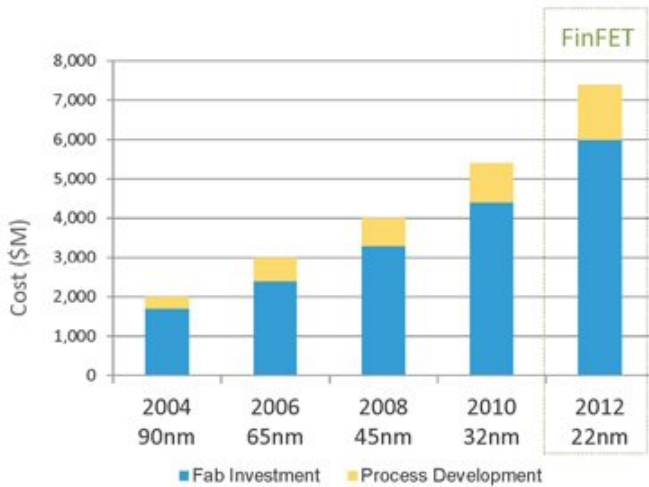


- Mears Silicon Technology (MST) is a platform technology
 - Improves electron mobility, resulting in significant power savings
 - Can also enable smaller circuit sizes and improved production yields
- Capital-light business model
 - Highly leverageable licensing strategy
 - Strong and growing patent portfolio to support licensing activities
- At an inflection point with customers
 - Invested 15 years and \$70M to bring MST to market
 - In process qualification programs with large semiconductor companies
- Strong team to commercialize technology
 - CEO ran \$1B+ divisions at Broadcom and Altera
 - Founder/CTO co-invented the erbium-doped fiber amplifier (enabling broadband)

The End of Moore's Law



The skyrocketing cost of new nodes



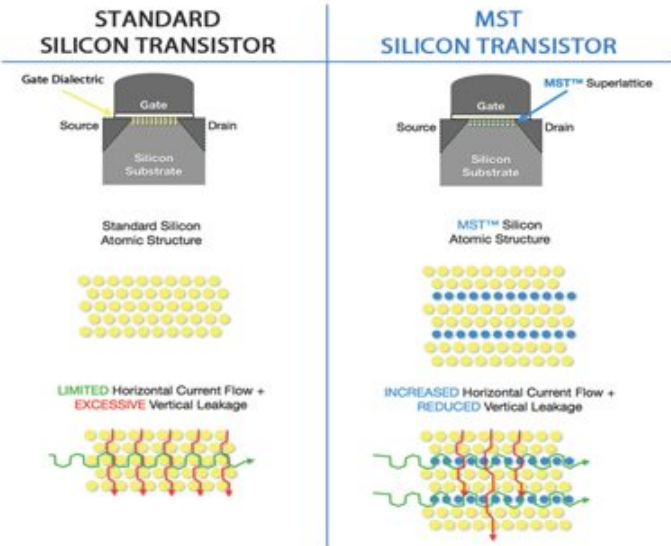
Source: McKinsey & Co, "On Semiconductors"

MST: A way out

- **MST can deliver a half-node to a full node of benefits**
 - Allows manufacturers to stay in depreciated foundries
 - Saves on new process development
 - May solve problems in geometries smaller than 22 nm
- **Cost to implement MST is tiny in comparison to developing a new node**
 - Process development/licensing is ~\$10M
 - Foundry equipment upgrades cost is ~\$30-50M
 - A new foundry to develop a new node costs billions

"From an economic standpoint, Moore's law is over."

Silicon Valley analyst Lynley Gwynnap, quoted in "After Moore's Law," *The Economist*, 12 March 2016



- Potential Benefits
- Improved Efficiency
 - Improved performance
 - Lower power consumption
 - Some combination of the two
 - Reduced Die Size
 - Lower power needs
 - Lower bottom line cost
 - Improved Yield
 - Less waste
 - Easier design parameters

Potential Benefits



- Overall Improved Efficiency: Smartphone
 - 45%-52% added battery life (depending on usage)
 - Increased cost to add MST expected to be insignificant to total phone cost
 - Opportunity to increase performance instead of saving power
- Reduced Die Size: Power Management Integrated Circuit (IC)
 - Die size reduction of 15-21%
 - Would result in lower power draw
 - Would also reduce total cost per device
- Product Enablement: Mobile Double Data Rate (DDR) Memory
 - Could create a whole new class of memory for mobile devices
 - Would enable low-power wearables and Internet-of-Things devices
 - May provide significant improvements to standby power



Sources: Smartphone power consumption papers (Carrol & Geisser)
3rd party consultant simulations
Atomera analysis

Semiconductor Ecosystem



Foundries

Integrated Device Manufacturers (IDM)

Fabless

Vertically Integrated Firms

Supporting Ecosystem

Semiconductor Equipment Manufacturers

Electronic Design Automation Tools

Addressable Market



Product	2018 Projected TAM (wafers) ¹	2018 Projected TAM ²
Digital Logic (Lagging)	10,500,000	\$460,000,000
Digital Logic (Leading)	8,000,000	\$576,000,000
Digital Processors	3,000,000	\$270,000,000
Digital Memory (DRAM)	22,000,000	\$1,023,000,000
Digital Memory (Flash)	23,000,000	\$1,070,000,000
Analog	8,000,000	\$278,000,000

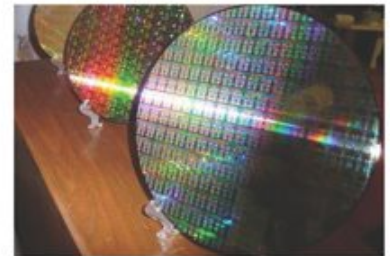
¹ Source: VLSI Research 2012, IC Knowledge 2011

² Calculated based on midpoint of potential royalty and wafer price ranges based on Atomera estimates (300 mm equivalent wafers)

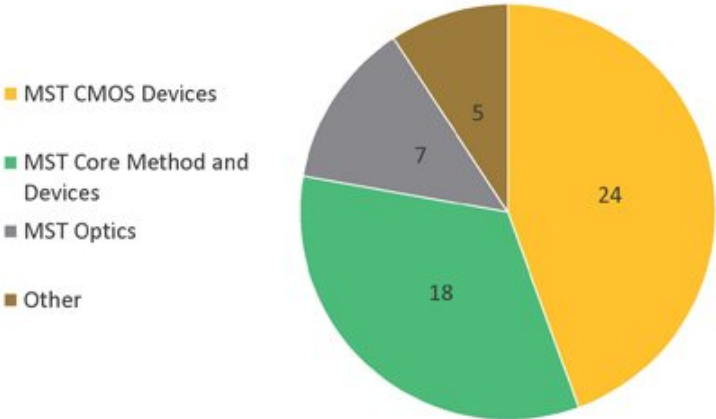
Initial Customers / Partners



- **Asian Foundry (\$1+ Billion in Sales)**
 - In commercial negotiations
 - First product focus area is analog and power management ICs
 - In negotiations to jointly market MST to customers worldwide
 - Completion of MST evaluation expected as early as 2017
- **US Analog / Digital IDM (\$1+ Billion in Sales)**
 - In product evaluation
 - Working on power management IC (large business segment)
 - Engagements underway with other business segments
 - Completion of MST evaluation expected as early as 2017
- **Asian Analog IDM (Parent has \$10+ Billion in Sales)**
 - In early commercial negotiations
 - High-performance power management and audio processing
 - Completion of MST evaluation expected as early as end of 2016



54 Issued US Patents



- **Strong Patent Portfolio**
 - Covers core elements of MST
 - First CEO was a patent attorney and built foundation of filing strategy
- **International Strategy**
 - Including foreign counterparts, portfolio has over 110 granted patents
 - Filing in customers' jurisdictions first
- **Continuous Improvement**
 - Have many more patents pending
 - Constantly working to turn inventions into patent applications

Management and Board



Scott Bibaud	Dr. Robert Mears	Erwin Trautmann
CEO, President and Director	Founder and CTO	EVP of Business Development and Director
<ul style="list-style-type: none"> ■ 23 years experience growing large, successful semiconductor businesses ■ SVP/GM - Altera's \$1.2B Communication division ■ EVP/GM - Broadcom's Mobile Platforms Group ■ B.S., Electrical Engineering, Rensselaer Polytech. Inst. ■ M.B.A., Harvard Business School ■ Joined Atomera in October 2015 	<ul style="list-style-type: none"> ■ Pioneer in nanoscale material science /engineering ■ In the late 1980s, expanded bandwidth of fiber optic cable by co-inventing the Erbium Doped Fiber Amplifier ■ B.A. / M.A., Physics, Oxford University ■ Ph.D., Physics, University of Southampton ■ Emeritus Fellow, Pembroke College, U. of Oxford ■ Founded Atomera in 2001 	<ul style="list-style-type: none"> ■ 30+ years in semiconductor space, with Fortune 500 executive experience ■ SVP - KLA-Tencor, the leading supplier of Yield Enhancement Solutions ■ VP - Texas Instruments (TI); P&L responsibility for product lines with sales of \$1.6B+ ■ B.S., Chemical Engineering, FH Mannheim, Germany ■ Joined Atomera in September 2011
John Gerber	Dr. Rinn Cleavelin	Rolf Stadheim
Chairman	Non-Executive Director	Non-Executive Director
<ul style="list-style-type: none"> ■ Managing Partner of Four Points, a specialty investment group with \$1.8B+ transaction experience ■ Former Director / CEO of two tech startups ■ B.S.E, Princeton University ■ M.A., Harvard University ■ Founding shareholder & Atomera director since 2001; Chairman since 2011 	<ul style="list-style-type: none"> ■ 34 years of experience in the semiconductor industry ■ Former Manager for Devices and Manufacturing for External R&D at TI ■ Former COO of International SEMATECH ■ B.S., University of Central Oklahoma ■ M.S. / Ph.D., Texas Tech University ■ Atomera director since 2011 	<ul style="list-style-type: none"> ■ Extensive licensing and intellectual property experience ■ Founder and Managing Partner of Stadheim & Grear, a leading patent and intellectual property licensing and enforcement practice ■ B.A., University of Wisconsin ■ J.D., University of Chicago ■ Atomera director since 2008

Capitalization Table



Security	Current	Post-IPO
Common stock outstanding (1)	1,617,313	2,057,677
Common stock issuable upon conversion of promissory notes (2)	6,065,549	6,065,549
Options outstanding (3)	538,014	538,014
Options reserved for future issuance	75,312	2,516,041
Warrants outstanding (4)(5)	398,965	718,965
Common stock issued in IPO (5)		3,200,000
Fully-diluted share total	8,695,153	15,096,246
Common stock + in-the-money portion of derivatives (6)	8,061,396	11,701,760
Common stock	7,682,862	11,323,226
Company valuation @ \$7.50 / share	\$57,621,465	\$84,924,195

(1) Increase reflects issuance of bonus stock to be awarded to certain management and directors as deferred compensation.

(2) Reflects accrued interest through 3/31/16.

(3) Post-IPO, options outstanding will have a weighted average strike price of \$6.98.

(4) Post-IPO, warrants outstanding will have a weighted average strike price of \$5.59; it will be higher if the underwriter exercises its overallotment option.

(5) Does not include underwriter's overallotment option (480,000 shares) and related warrants (with 48,000 shares underlying).

(6) Assumes cashless conversion of in-the-money derivatives.