

atomera

Investor Presentation

August 2022

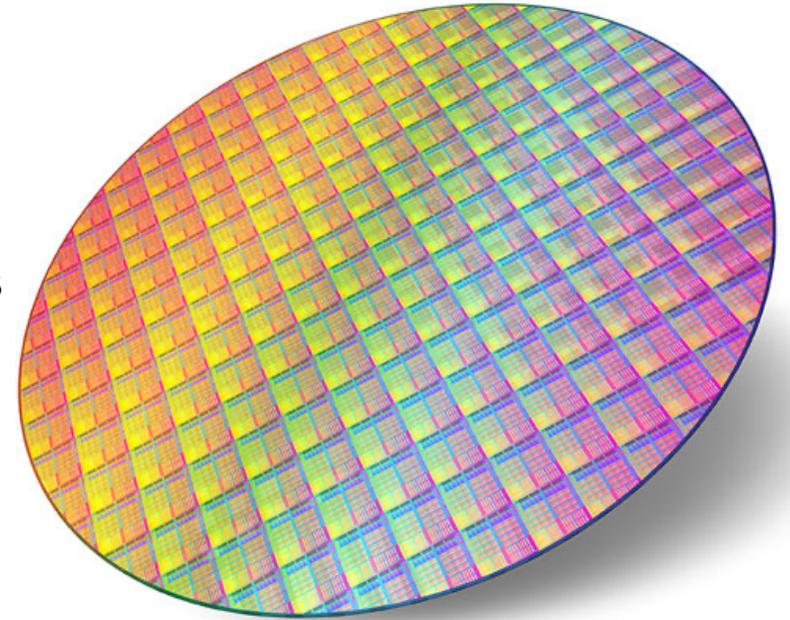
Safe Harbor



This presentation 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 are subject to a number of risks, uncertainties and assumptions, including those disclosed in the section "Risk Factors" included in our Annual Report on Form 10-K filed with the SEC on February 15, 2022. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this presentation 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.

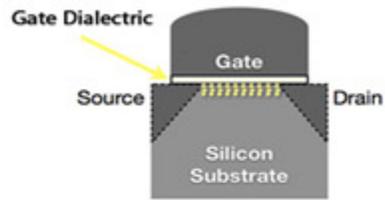
This presentation contains only basic information concerning Atomera. The Company’s filings with the Securities Exchange Commission, including the Prospectus Supplement , include more information about factors that could affect the Company’s operating and financial results. We assume no obligation to update information contained in this presentation. Although this presentation may remain available on the Company's website or elsewhere, its continued availability does not indicate that we are reaffirming or confirming any of the information contained herein.

- ▶ **Mears Silicon Technology (MST[®]) is a thin film used to enhance semiconductors**
 - Results in higher performance, lower power, and lower costs for ICs
- ▶ **Capital-light IP and technology licensing business**
- ▶ **Engaged with 50% of world's top semiconductor makers**
- ▶ **Licenses with five companies including two JDA**
- ▶ **Strong team to commercialize technology**



Potential Benefits

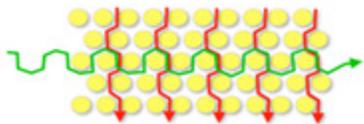
STANDARD SILICON TRANSISTOR



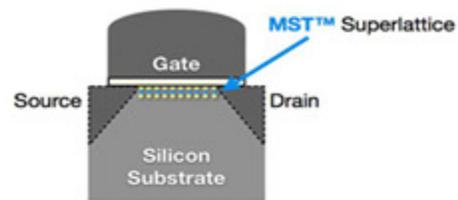
Standard Silicon Atomic Structure



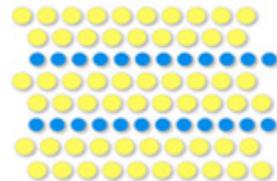
LIMITED Horizontal Current Flow +
EXCESSIVE Vertical Leakage



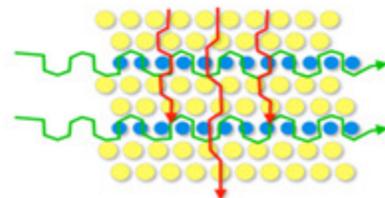
MST SILICON TRANSISTOR



MSTTM Silicon Atomic Structure



INCREASED Horizontal Current Flow +
REDUCED Vertical Leakage



► Improved Efficiency

- Higher transistor performance
- Lower power consumption
- Better reliability

► Lower cost

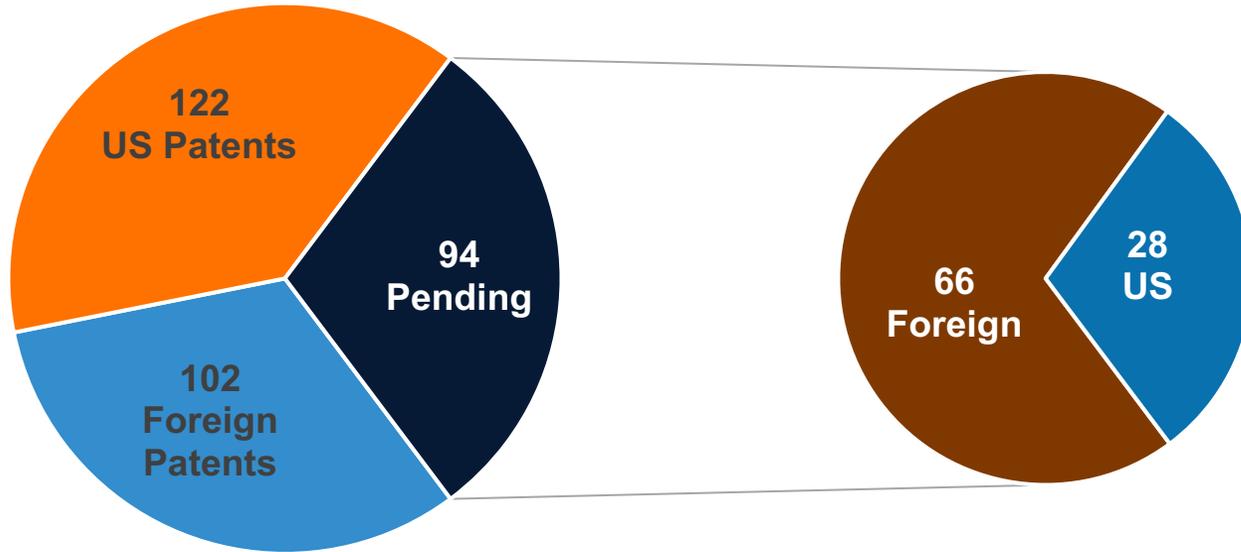
- Reduced die size
- Improved yield
- Higher throughput

► Same benefits as a node shrink

Strong and Growing IP Portfolio



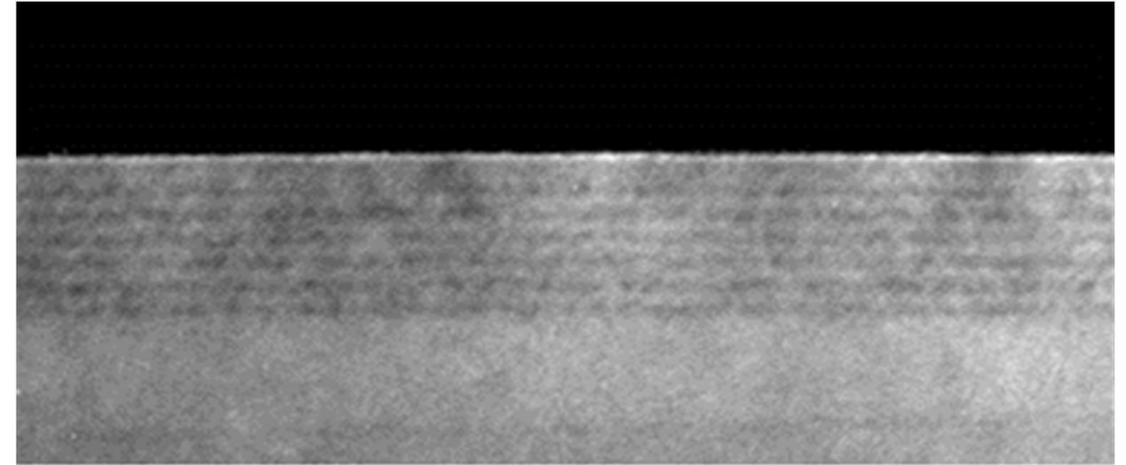
318 Patents Granted and Pending



Core MST Method and Device
MST Enabled Devices/Architecture
Next-Gen Architectures using MST

Discoverable

These distinctive layers are visible on products using MST



Extensive know-how

Extends life and value of patents

Target Customers & Partners



Integrated Device Manufacturers



Foundry



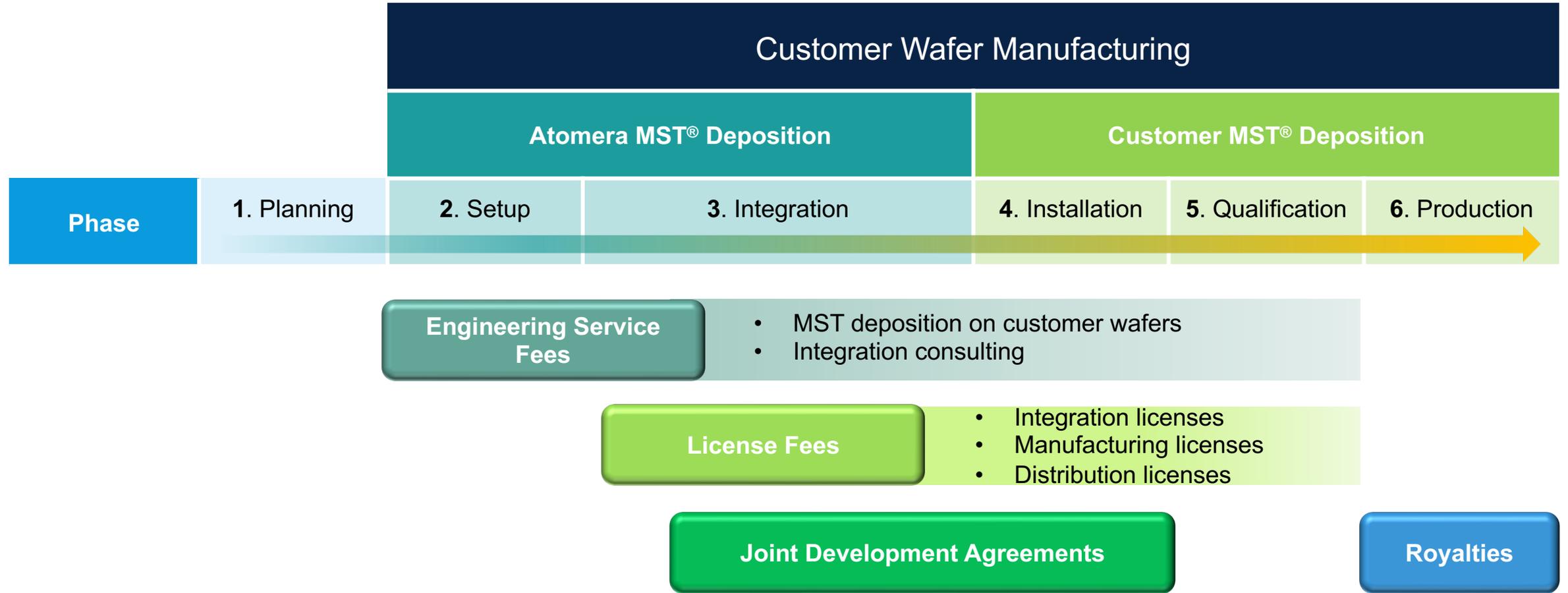
Fabless



Tool Suppliers (Partners)



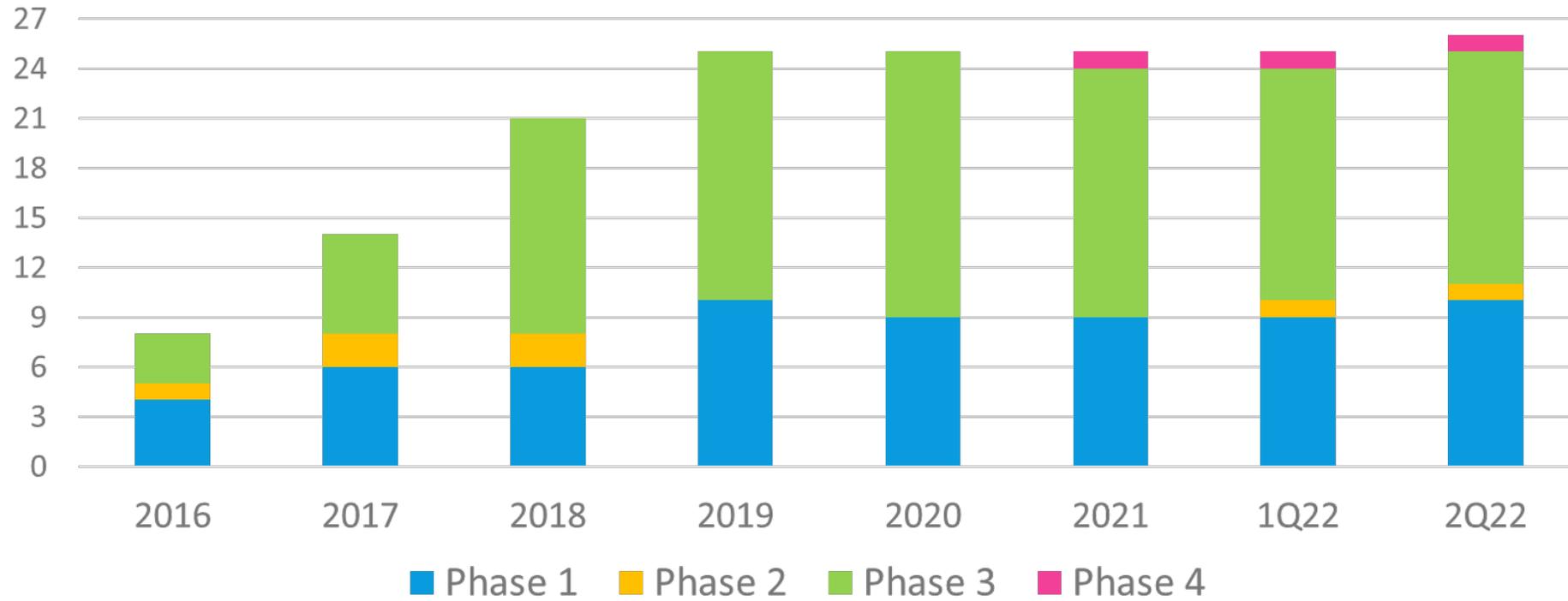
Customer Engagement & Revenue Model



Customer Pipeline



Number of Customer Engagements



- 20 customers, 26 engagements
- Working with 50% of the world's top semiconductor makers*

* 10 of the top 20 (IC Insights, McClean Report 2021)

^ End of year engagement count, plus CY quarters

MST Key Benefits Across Nodes



Mobility	8%	20%	25%	10%	15+%
Dopant Engineering	20%	15%	15%	15%	20%
Reliability (TDDDB/BTI)		25%	25%	25%	25%

180nm 130nm 90nm 65nm 40nm 28nm 22nm 16/14nm 10nm 7nm 5nm 2nm

These Benefits are ADDITIVE & COMPLEMENTARY to other enhancement technologies



MST technology focus areas



MST-SP

MST for
Advanced
Nodes

MST for
RF-SOI



Royalty Opportunity



- ▶ ~410 wafer fabs operating worldwide
- ▶ Adoption of MST in one fab can make Atomera profitable from royalties alone
 - 2022 non-GAAP OPEX guidance is \$14.75M - \$15.25M

Example 1 Worldwide Average Fab	
Monthly Fab Capacity ¹ (wafers/month)	46,240
Industry average wafer ASP - 2018	\$1,365
Annual Revenue Potential²	\$15.1M
Annual Revenue at 50% of ramp ²	\$7.6M

Example 2 Leading Foundry, 28nm Fab	
Monthly Fab Capacity (wafers/month)	80,000
Industry average 28nm wafer ASP	\$3,300
Annual Revenue Potential²	\$63M
Annual Revenue at 50% of ramp ²	\$31.7M

1. Represents wafers starts per month (200mm equiv) – 227.5M starts in 410 fabs

2. Assumes 2% royalty rate

Source: IC Insights Global Wafer Capacity 2021-2025 report, McClean Report 2021, 2022

MST Customer Business Opportunity



► Foundry economics

	Wafer Price	GM%	GM\$ Increase	MST Royalty	Wafer Cost	
28nm HP wafer	\$ 3,300	45%	\$ -	\$ -	\$ 1,815	
28nm HP+ wafer	\$ 3,450	45%	\$ 68	\$ -		5% higher price for +15% performance boost
28nm HP wafer with MST	\$ 3,600	47.0%	\$ 208	\$ 72	\$ 1,907	30% performance boost=10% higher price (+ \$20 MST cost)
28nm HP wafer with MST	\$ 3,713	48.6%	\$ 318	\$ 74	\$ 1,909	25% die shrink=12.5% price increase (+ \$20 MST cost)

- *Gross margin increases by \$200-\$300 per wafer after foundry pays Atomera royalties*

► Fabless semiconductor economics

	Chip sales/ wafer	GM%	GM\$ Increase	Product ASP	Die/wafer	
28nm HP wafer	\$ 9,233	50%	\$ -	\$ 4.86	2,235	Baseline business for 30mm ² chip
28nm HP wafer with MST	\$ 12,398	59%	\$ 3,165	\$ 4.86	3,001	Improved financials with 25% size reduction

- *Sales and profit both increase by over \$3000 per wafer for fabless manufacturer*

► Everyone in the value chain benefits from MST technology

Financial Review



Income Statement

(\$ in thousands, except per-share data)

	Three Months Ended		
	June 30, 2022	March 31, 2022	June 30, 2021
REVENUE	\$ -	\$ 375	\$ -
Gross Profit	-	294	-
OPERATING EXPENSES			
Research & Development	2,433	2,339	2,069
General and Administration	1,667	1,648	1,506
Selling and Marketing	347	325	137
TOTAL OPERATING EXPENSES	4,447	4,312	3,712
OPERATING LOSS	(4,447)	(4,018)	(3,712)
Other Income (Expense)	(102)	(68)	3
Provision for income tax	-	-	(17)
NET LOSS	\$ (4,549)	\$ (4,086)	\$ (3,726)
Net Loss Per Share	\$ (0.20)	\$ (0.18)	\$ (0.17)
Weighted average shares outstanding	22,936	22,853	22,492
ADJUSTED EBITDA (NON-GAAP)	\$ (3,549)	\$ (3,272)	\$ (2,852)
ADJUSTED EBITDA PER SHARE	\$ (0.15)	\$ (0.14)	\$ (0.13)
Cash	\$ 21,838	\$ 24,451	\$ 34,341
Debt	-	-	-

Balance Sheet Information

Summary



- ▶ High margin, recurring revenue financial model
- ▶ Strong technology, patent position, and balance sheet
- ▶ Traction with many top industry players and growing licensee base
- ▶ Ramping commercial license revenues



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Thank You