

The background of the slide features a dark blue field filled with glowing green and white binary code (0s and 1s) arranged in horizontal streams. Overlaid on this are intricate, glowing white and light blue geometric lines that form a complex, interconnected network resembling a circuit board or a data flow diagram. These lines crisscross the frame, creating a sense of depth and technological sophistication.

**PDF/SOLUTIONS™**

## **Investor Presentation**

**November 2023**

**John Kibarian, President & CEO, Co-Founder**

**Kimon Michaels, Executive VP, Products and Solutions, Co-Founder**

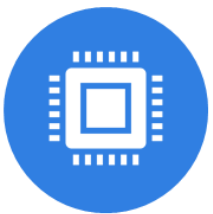
**Adnan Raza, Executive VP, Finance & CFO**



*Certain statements in this presentation, and statements that may be made when discussing it, regarding the Company's future expected business performance and financial results are forward looking and are subject to future events and circumstances. Actual results could differ materially from those expressed in these forward-looking statements. Risks and uncertainties that could cause results to differ materially include risks associated with: the effectiveness of our business and technology strategies; recent and future acquisitions; current semiconductor trends; continued adoption of the Company's solutions by new and existing customers; project milestones or delays and performance criteria achieved; cost and schedule of new product development; the impact of global economic trends and rising inflation and interest rates; the provision of technology and services prior to the execution of a final contract; the continuing impact of the coronavirus (COVID-19) on the semiconductor industry and on the Company's operations or demand for the Company's products; supply chain disruptions; the success of the Company's strategic growth opportunities and collaborations; our ability to successfully integrate acquired businesses and technologies; whether we can successfully convert backlog into revenue; customers' production volumes under contracts that provide Gainshare royalties; possible impacts from the evolving trade regulatory environment and geopolitical tensions; our ability to obtain additional financial if needed; and other risks set forth in PDF Solutions' periodic public filings with the Securities and Exchange Commission, including, without limitation, its Annual Reports on Form 10-K, most recently filed for the year ended December 31, 2022, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K and amendments to such reports. The forward-looking statements made herein or about this presentation are made as of the date hereof, and PDF Solutions does not assume any obligation to update such statements nor the reasons why actual results could differ materially from those projected in such statements.*

# PDF Solutions Overview

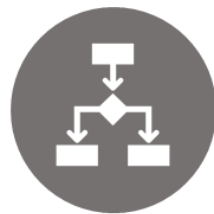
- PDF provides advanced data analytics, machine learning, and equipment connectivity products, services, and systems for the semiconductor supply chain
- PDF products improve process efficiency and product reliability:
  - Analytics software and services for the end-to-end needs of the semiconductor value chain
  - Connectivity and control software and services for factory equipment
  - Differentiated data from manufacturing, test, and in-field use based on IP integrated into semiconductor devices



**IC Design**



**Fab**



**Sort**



**Assembly**



**Test**



**System**

# Building a Platform for Success

## GROWTH

- Analytics revenue grew 22% Y/Y from TTM Q3'22 to TTM Q3'23
- Analytics at 90% of total revenue in TTM Q3'23

## PROFITABILITY

- GAAP gross margin of 66% for Q3'23
- Non-GAAP gross margin of 70% for Q3'23
- 70%+ non-GAAP gross margins target model

## VISIBILITY

- Greater than 100% Exensio® customers dollar-retention rate\*
- Strong ending backlog of \$218M, up 18% YoY vs. ending Q3'22

## DIVERSIFICATION

- No country outside the United States accounts for more than ~17% of revenue in TTM Q3'23
- Regions of North America and APAC grew by double-digit percentages on a Y/Y TTM basis

## STRENGTH

- \$135M in cash and short-term investment as of Q3'23
- No debt

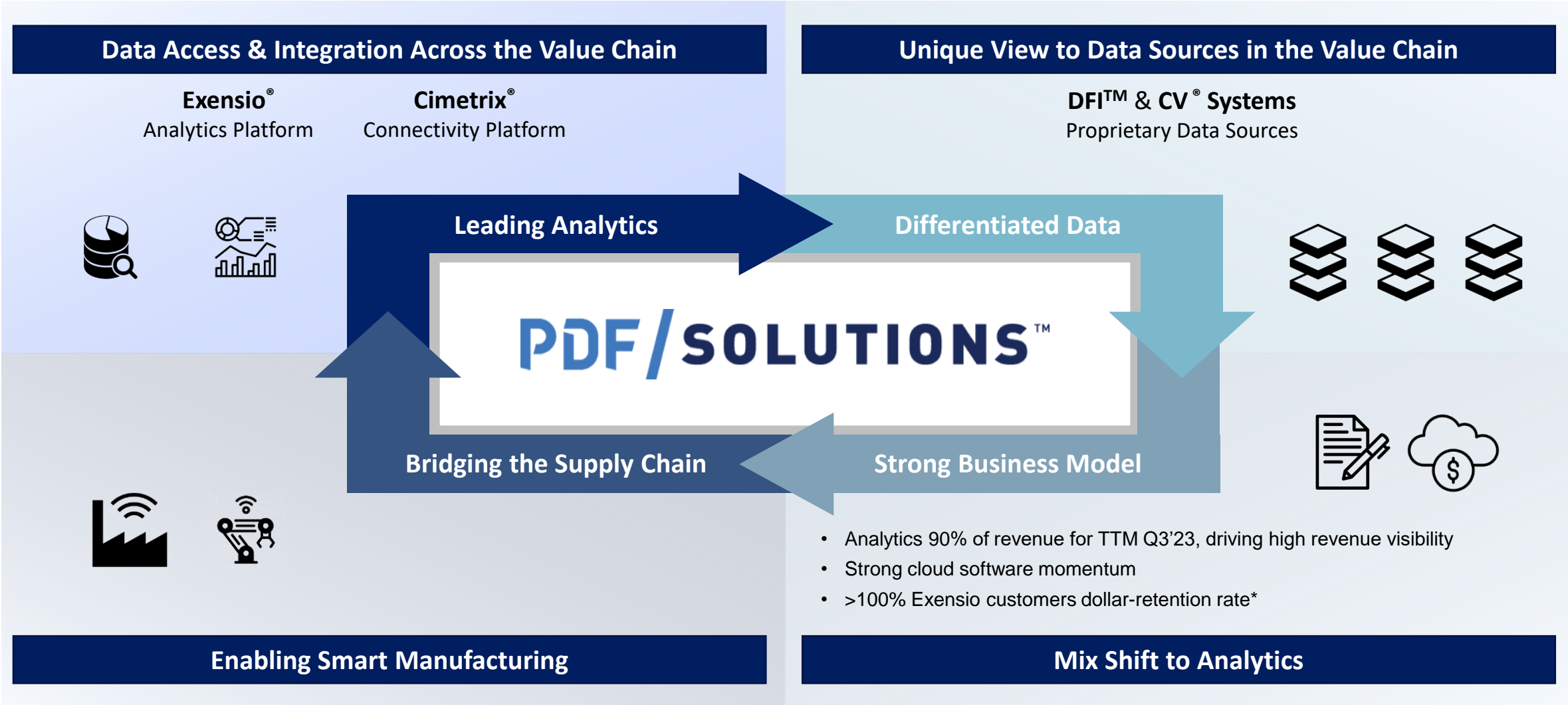
## COLLABORATIONS

- Expanding strategic collaboration across various sectors
- Partnering with industry-leaders, including Advantest, AWS, IBM, K&S, proteanTecs, SAP, Siemens, and Teradyne

\*TTM Q3'23 vs TTM Q3'22



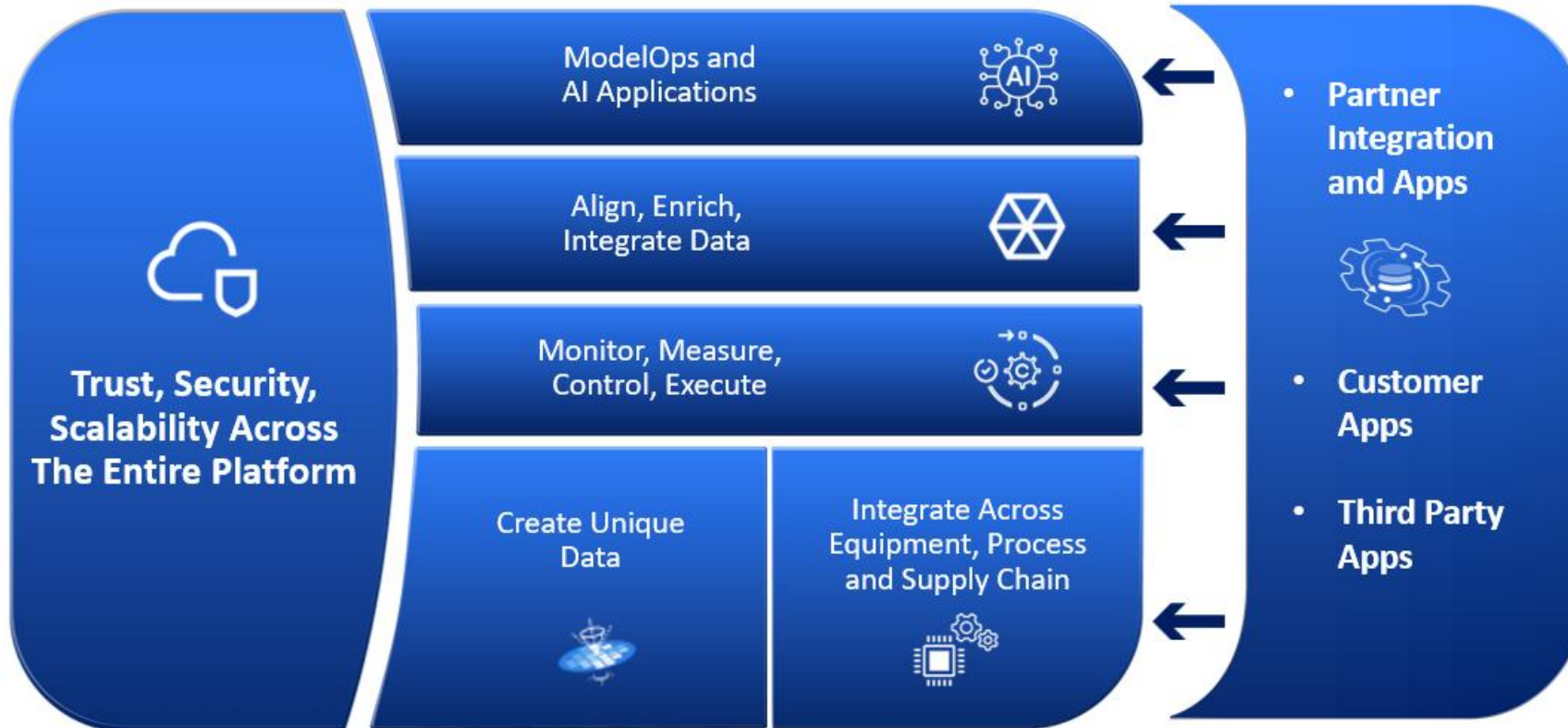
# PDF Solutions Platform Overview



\*TTM Q3'23 vs TTM Q3'22

# PDF Solutions Integrated Platform Architecture

Fully integrated solution to accelerate production ramp, improve overall yield and quality



## PDF platform revenue growth drivers:

- AI driven actionable insights
- New go-to-market paths via partnerships
- Transition to automotive electrification

# Well-Received 2023 User Conference and Analyst Day



- 300+ registered attendees
- 17 customer/partner presentations
- Over 80 companies and industry organizations represented

## Presenting Companies

**ADVANTEST**



**IBM**

**intel.**

**MULTIBEAM**

**proteanTecs**

**RENESAS**



**SIEMENS**

**TERADYNE**

**Vendia**

# The Opportunity For PDF Is Expanding



## Established strong presence:

- >125k equipment factory connections with over >40k process tools
- 350+ revenue generating customers in 32 countries through TTM Q3'23

## Strong product suite:

- #1 commercial solution for manufacturing yield and control with large cloud customer base
- Fastest growing commercial provider in manufacturing test operations leveraging DEX network
- Leading solution for die traceability through the supply chain

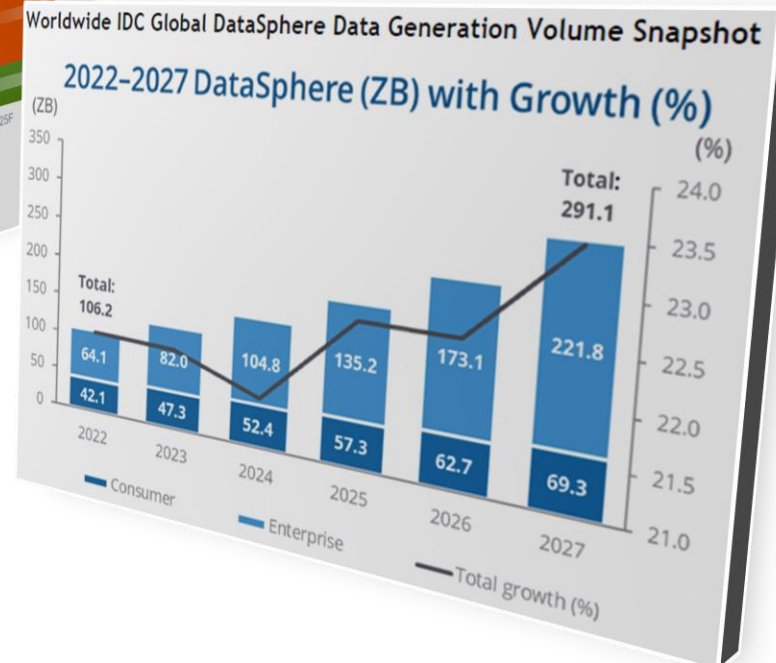
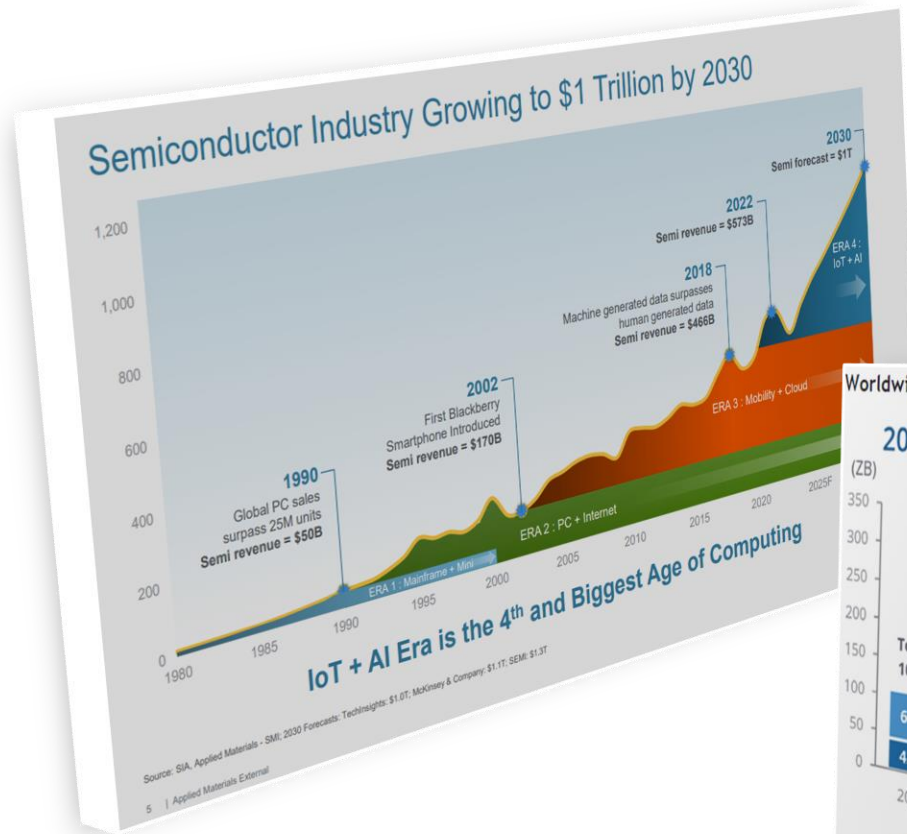
## Expansion opportunities increasing:

- Strong position within equipment, IP, Factory and Product companies, while expanding to additional Product and System companies

Representative industry participants; not indicative of actual customers. Logos are the property of the respective trademark owners.



# Strong Semiconductor End-Market Drivers



- AI is driving increasing data generation and data availability, which in turn is driving semiconductor revenue
- Driven by AI, semi revenue expected to reach \$1T+ by 2030

Sources: Applied Materials; IDC, April 2023

# Semiconductor Growth Inflection Points



<https://semiwiki.com/semiconductor-services/techinsights/316095-semicon-west-2022-and-the-imec-roadmap/>



<https://www.intel.com/content/dam/www/central-libraries/us/en/documents/2022-intel-investor-meeting-ifs.pdf>



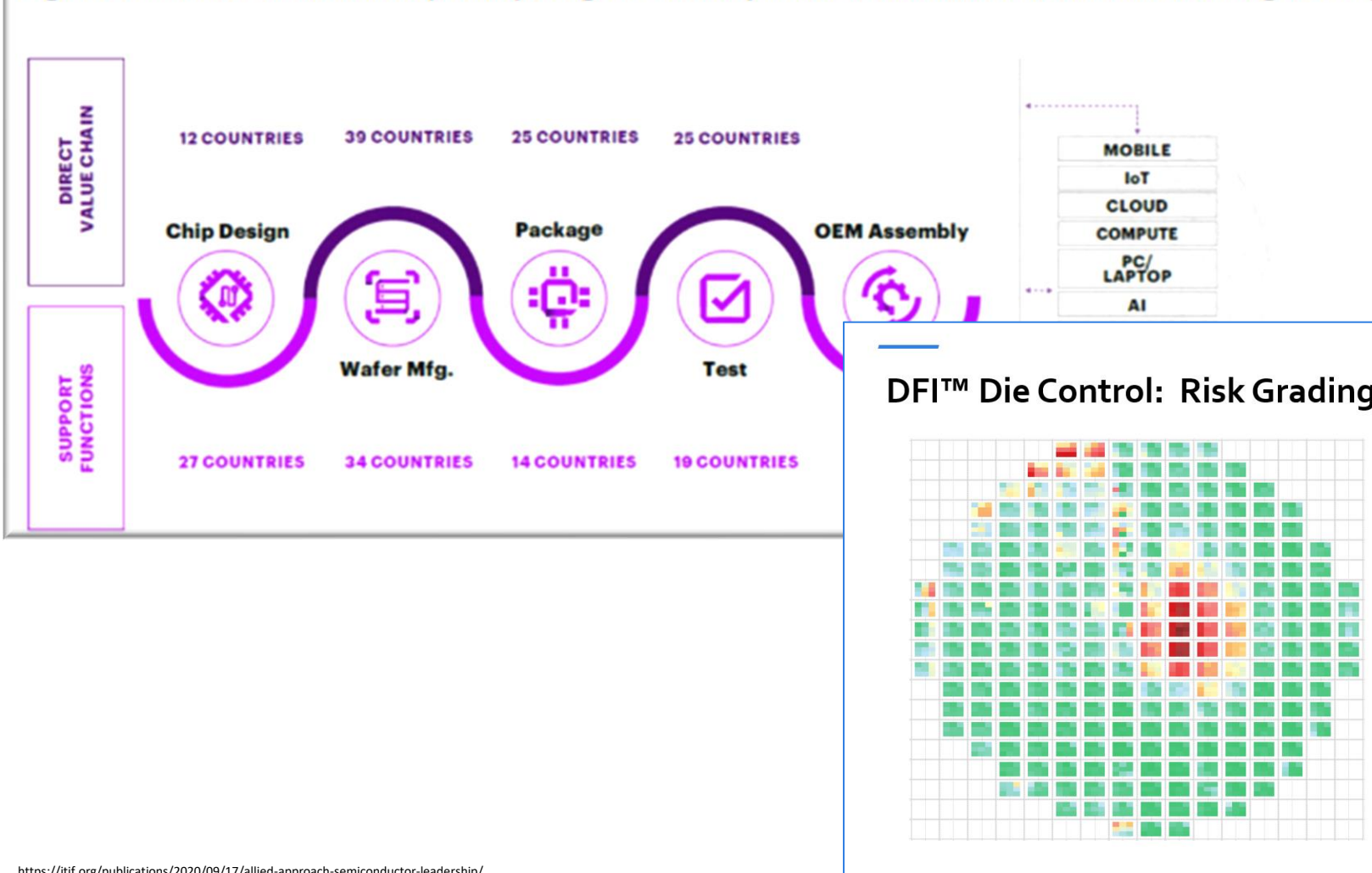
[https://www.semiconductors.org/wp-content/uploads/2022/02/Global-Semiconductor-Incentives\\_2-4-2022.pdf](https://www.semiconductors.org/wp-content/uploads/2022/02/Global-Semiconductor-Incentives_2-4-2022.pdf)

Achieving the necessary semi growth requires overcoming new inflection points

- New architectures & materials
- Chiplets
- Geographic disaggregation

# AI Is Enabler For Rapid Growth

Figure 9: Number of countries participating in various phases of semiconductor manufacturing activity



<https://itif.org/publications/2020/09/17/allied-approach-semiconductor-leadership/>

- AI adoption across the semiconductor supply chain is a key component to efficiently achieving semi growth

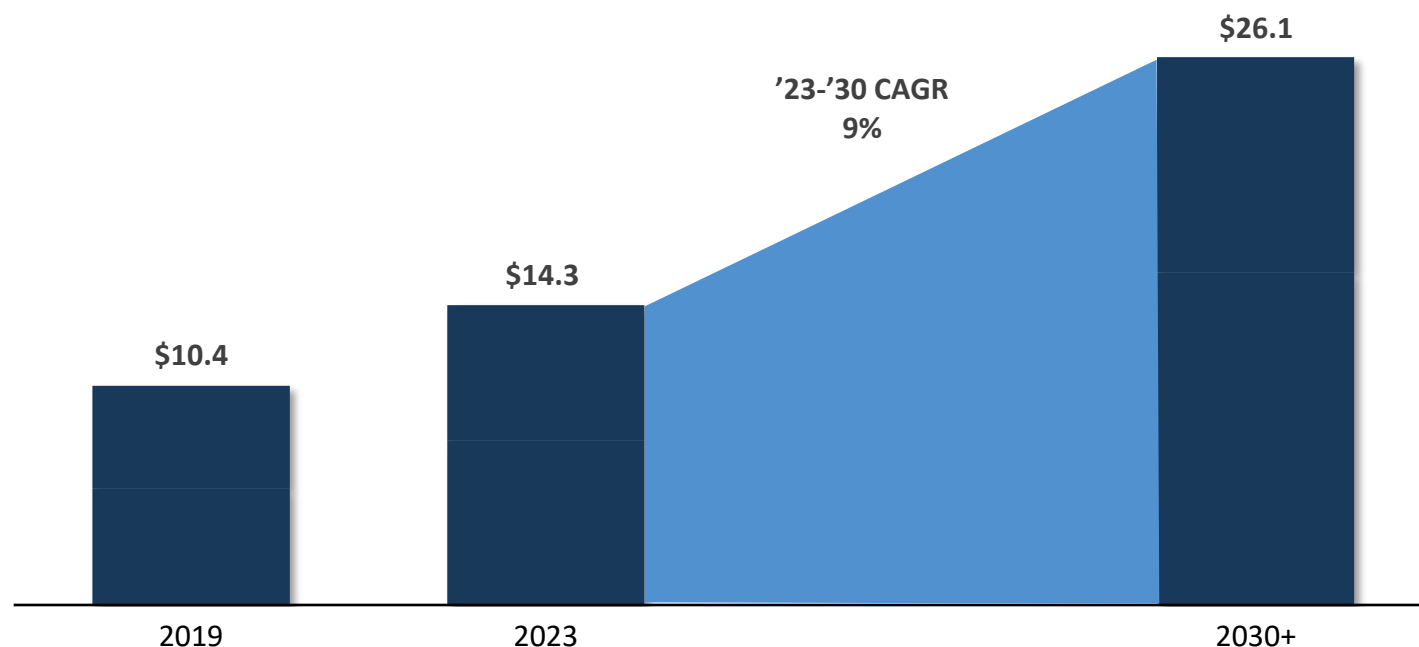
- Successful AI application requires:
  - Cross-supply chain data integration
  - The right data, not just more data
  - AI/ML model operations



# Total Semiconductor Analytics TAM

## Potential value capture of analytics in Semiconductors

(\$ in billions)

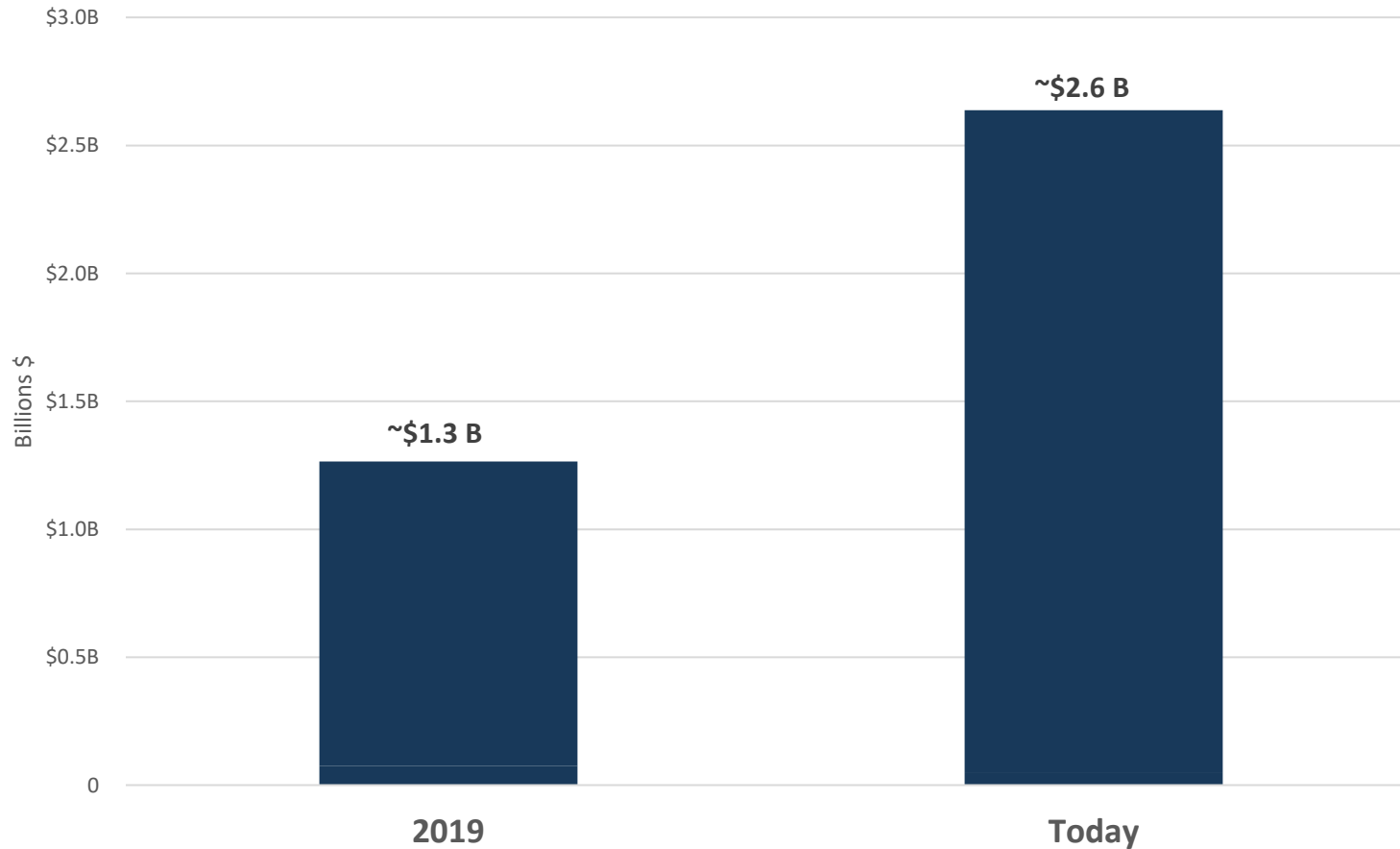


## Methodology

- Analytics as a portion of total R&D and COGS spending by Semiconductor Companies across three categories:
  - Fabless-Logic
  - IDM
  - Memory/Storage
- Estimated % of spending attributable to analytics based on each company type – Fabless-Logic, IDM, Memory/Storage
- Based on FactSet consensus spending estimates for 2023 for individual companies and industry experts projecting a \$1T market for semiconductor revenue by 2030+

Source: FactSet and Wall Street estimates.

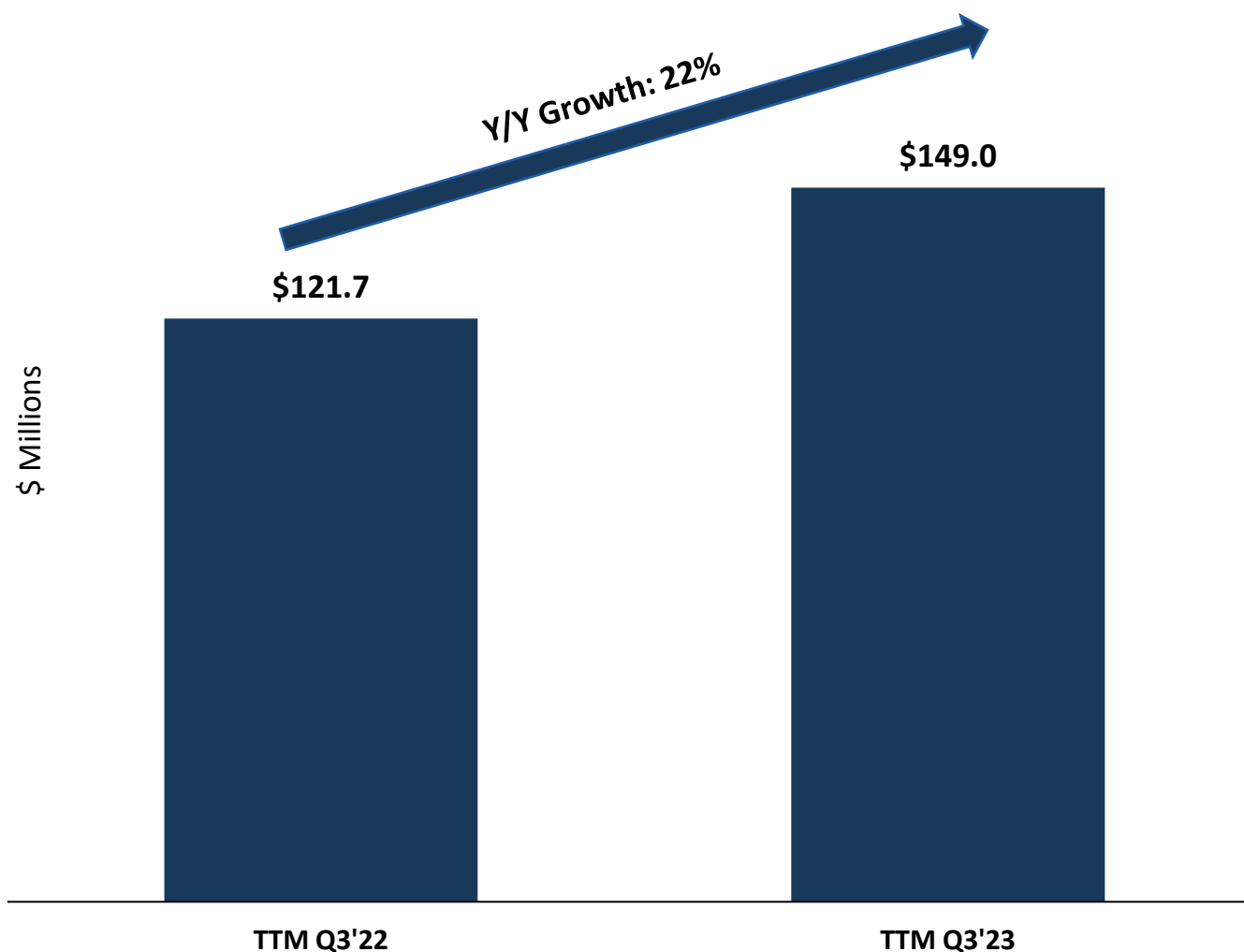
# Market Opportunity – PDF SAM



Source: PDF Solutions estimates

- Today, market size is 2.0x vs. 2019
- Growth drivers:
  - Adoption across supply chain
  - ML & advanced solutions
  - DFI for quality & reliability
  - Transition to cloud

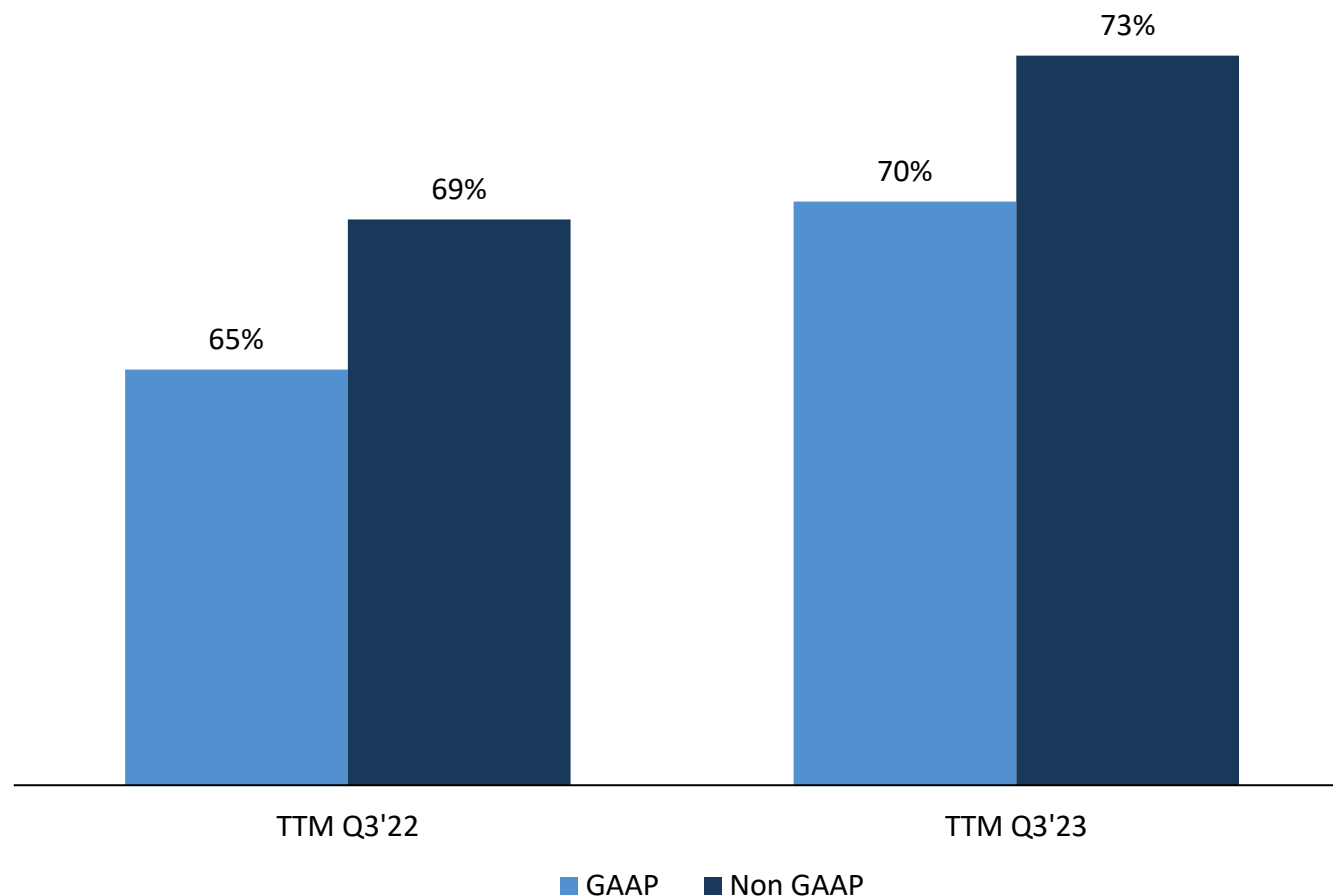
# Analytics Revenue



- Y/Y Analytics Growth of 22% from TTM Q3'22 to TTM Q3'23
- Average Analytics revenue per customer, excluding Cimetricx, \$881K in TTM Q3'23, a 19% increase from \$743K in TTM Q3'22

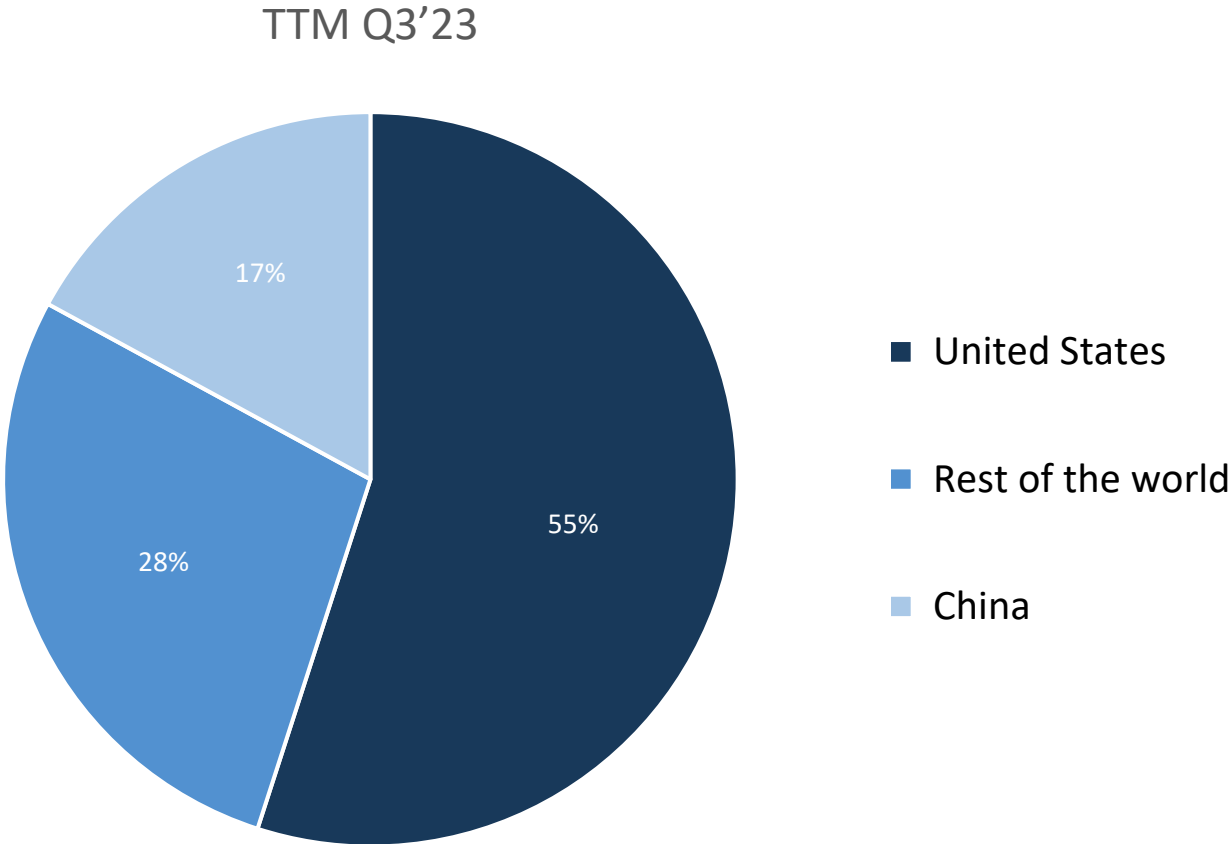


# Gross Margins



- Achieved our long-term target Non-GAAP gross margin of 70%+ in TTM Q2'23
- Analytics customers transitioning to subscription and cloud over time
- First monetization of technology was IYR engagements with associated royalties
- Second wave of monetization consists of growing the Analytics business

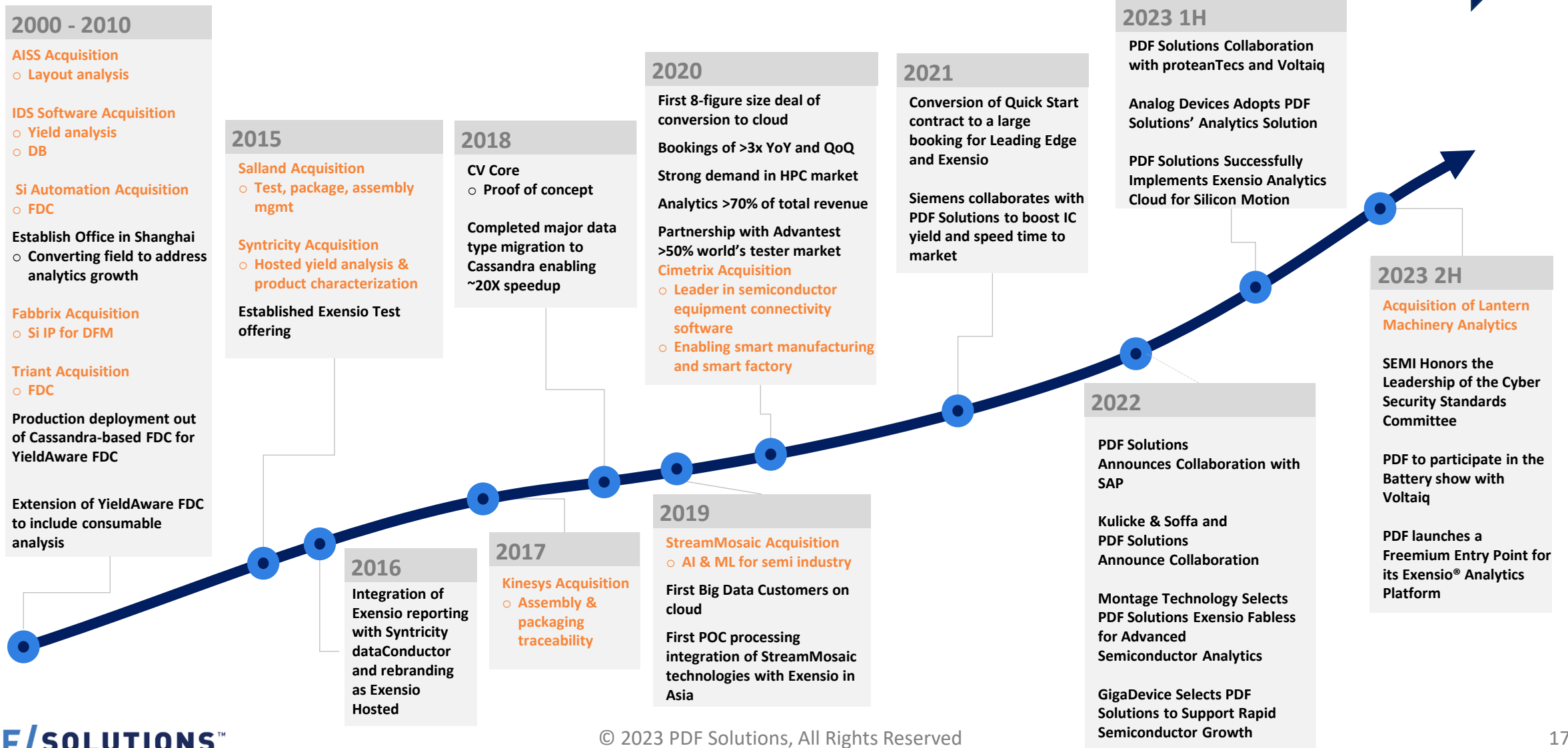
# Global Geographic Revenue Distribution



- Globally diverse geographic distribution
- No country outside the United States accounts for more than ~17%
- United States largest market at 55% of revenues

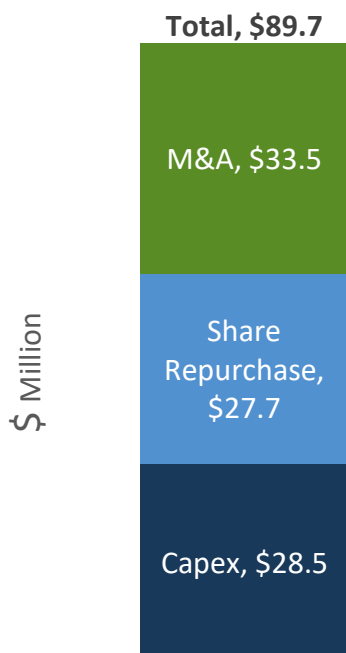
# Acquisitions and Product Releases Expanded Scope

## Continued Transition To Subscription Model





# Disciplined Capital Allocation



(\$ Millions)	End of 2019	End of 2020	End of 2021	End of 2022	Q3 2023
Cash and ST invt	\$97.6	\$145.3	\$140.2	\$139.2	\$135.4
Debt	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Share Repurchase	\$9.6	\$0.0	\$4.5	\$22.5	\$0.7

2020 thru Q3'23

- Capex investments include DFI/eProbe, CVi, IP, DEX network, and infrastructure
- Cash balance has increased while PDF:
  - Invested in Capex
  - Returned capital to stockholders through stock buyback
  - Made acquisitions
  - Received strategic investment

# Long-Term Target Financial Model

Total Revenue Growth	>20%
Non-GAAP Gross Margins	>75%
Non-GAAP Operating Margin	20%

# Summary – PDF Solutions



# Thank You

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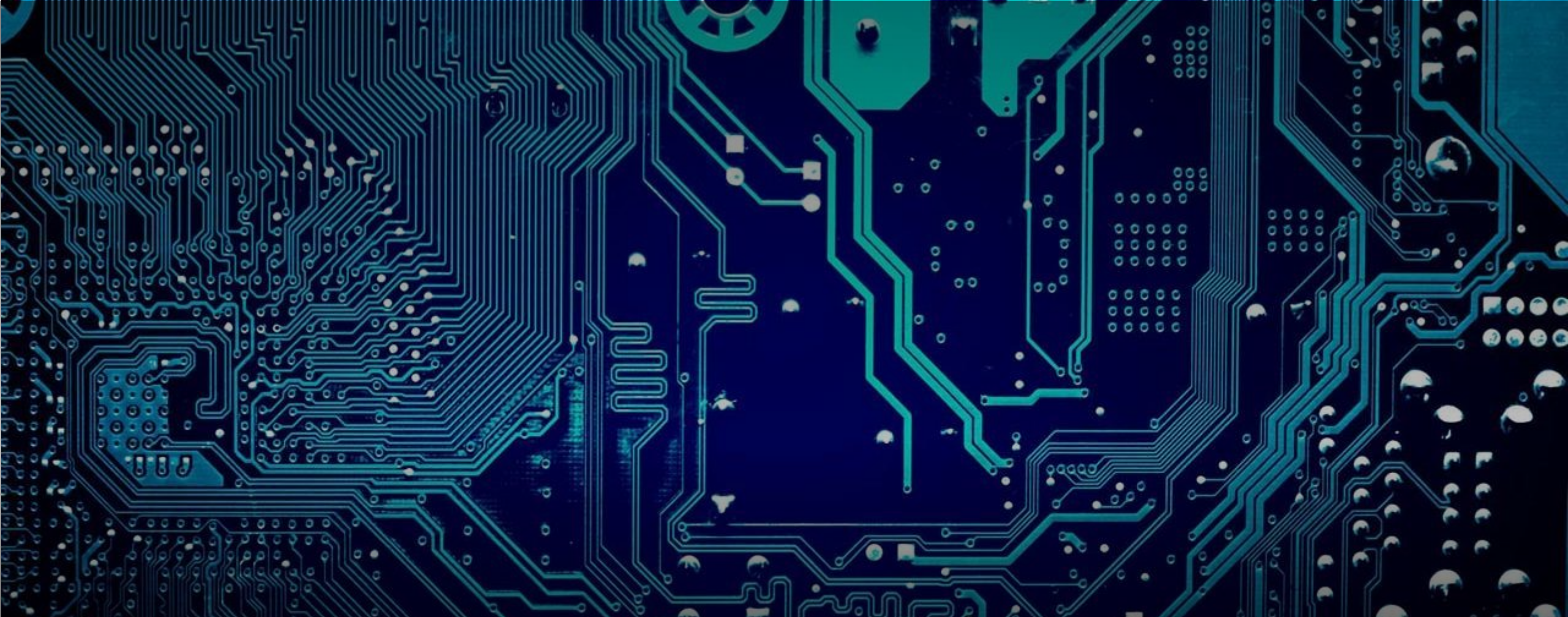


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# Financials - Appendix

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# Non-GAAP Presentation

In addition to providing results that are determined in accordance with Generally Accepted Accounting Principles in the United States of America (GAAP), the Company also provides certain non-GAAP financial measures. Non-GAAP net income (loss) excludes the effects of non-recurring items (including adjustment to contingent consideration related to acquisition, restructuring charges and severance payments, and expenses related to an arbitration proceeding for a disputed contract with a customer), stock-based compensation expense, amortization of acquired technology and other acquired intangible assets, and their related income tax effects, as applicable, as well as adjustments for the non-cash portion of income taxes and tax impact of the CARES Act. These non-GAAP financial measures are used by management internally to measure the Company's profitability and performance. PDF Solutions' management believes that these non-GAAP measures provide useful supplemental measures to investors regarding the Company's ongoing operations in light of the fact that none of these categories of expense has a current effect on the future uses of cash (with the exception of certain non-recurring items) nor do they impact the generation of current or future revenues. These non-GAAP results should not be considered an alternative to, or a substitute for, GAAP financial information, and may be different from similarly titled non-GAAP measures used by other companies. In particular, these non-GAAP financial measures are not a substitute for GAAP measures of income or loss as a measure of performance, or to cash flows from operating, investing and financing activities as a measure of liquidity. Management uses these non-GAAP financial measures internally to measure profitability and performance; these non-GAAP measures are presented here to give investors an opportunity to see the Company's financial results as viewed by management. A detailed reconciliation of the adjustments made to comparable GAAP measures is included herein.

# GAAP to Non-GAAP Income Reconciliation

in thousands (except share amounts, percent of revenue, and EPS)

	2020	2021	2022	Q1'23	Q2'23	Q3'23
<b>GAAP net income (loss)</b>	<b>\$ (40,363)</b>	<b>\$ (21,488)</b>	<b>\$ (3,429)</b>	<b>\$ 355</b>	<b>\$ 6,835</b>	<b>\$ (4,972)</b>
Adjustments to reconcile GAAP net income (loss) to non-GAAP net income (loss):						
Stock-based compensation expense	12,463	12,931	19,648	4,884	4,678	5,999
Amortization of acquired technology	705	2,079	2,213	553	553	574
Amortization of other acquired intangible assets	741	1,255	1,270	325	326	328
Write-down in value of property and equipment	490	3,183	-	-	-	-
Acquisition costs & adjustment to contingent consideration related to acquisition	752	-	-	-	176	33
Legal arbitration/litigation *	1,098	1,951	1,895	2,133	166	226
Proceeds from sale of previously written-off property and equipment	-	-	-	-	-	(105)
Tax Impact of Adjustments	23,309	3,091	1,326	(980)	(5,238)	5,904
<b>Non-GAAP net income (loss)</b>	<b>\$ (805)</b>	<b>\$ 3,002</b>	<b>\$ 22,924</b>	<b>\$ 7,270</b>	<b>\$ 7,496</b>	<b>\$ 7,987</b>
<b>GAAP net income (loss) per diluted share</b>	<b>(1.17)</b>	<b>(0.58)</b>	<b>(0.09)</b>	<b>0.01</b>	<b>0.17</b>	<b>(0.13)</b>
<b>Non-GAAP net income (loss) per diluted share</b>	<b>(0.02)</b>	<b>0.08</b>	<b>0.60</b>	<b>0.19</b>	<b>0.19</b>	<b>0.20</b>
<b>Shares used in diluted shares calculation (in millions)</b>	<b>34.4</b>	<b>37.9</b>	<b>38.1</b>	<b>38.9</b>	<b>39.1</b>	<b>39.0</b>

\* Represents the expenses related to an arbitration proceeding over a disputed contract with a customer, which expenses are expected to continue until the arbitration is resolved.



# GAAP to Non-GAAP Gross Margin Reconciliation

in thousands

**GAAP Gross Margin**

*GAAP Gross Margin %*

Adjustments to reconcile GAAP gross margin (loss) to non-GAAP gross margin:

Stock-based compensation expense

Amortization of acquired technology

**Non-GAAP gross margin**

*Non-GAAP gross margin %*

	2020	2021	2022	Q1'23	Q2'23	Q3'23
<b>GAAP Gross Margin</b>	<b>\$ 51,281</b>	<b>\$ 66,867</b>	<b>\$ 100,642</b>	<b>\$ 28,855</b>	<b>\$ 29,232</b>	<b>\$ 28,067</b>
<i>GAAP Gross Margin %</i>	<i>58%</i>	<i>60%</i>	<i>68%</i>	<i>71%</i>	<i>70%</i>	<i>66%</i>
Adjustments to reconcile GAAP gross margin (loss) to non-GAAP gross margin:						
Stock-based compensation expense	3,454	2,563	2,974	965	939	1,121
Amortization of acquired technology	705	2,079	2,213	553	553	574
<b>Non-GAAP gross margin</b>	<b>\$ 55,440</b>	<b>\$ 71,509</b>	<b>\$ 105,828</b>	<b>\$ 30,374</b>	<b>\$ 30,724</b>	<b>\$ 29,762</b>
<i>Non-GAAP gross margin %</i>	<i>63%</i>	<i>64%</i>	<i>71%</i>	<i>75%</i>	<i>74%</i>	<i>70%</i>



# Balance Sheet

(\$ '000)

## ASSETS

### Current assets:

	2020	2021	2022	Q1'23	Q2'23	Q3'23
Cash and short-term investments	145,296	140,226	139,181	133,528	124,038	135,364
Accounts receivable, net	34,140	40,087	42,164	47,048	61,451	40,959
Prepays and other current assets	13,944	8,194	12,063	12,565	18,864	18,001
Total current assets	193,380	188,507	193,408	193,141	204,353	194,324
Property, plant and equipment, net	39,242	35,295	40,174	41,723	42,990	37,833
Operating lease right-of-use assets	6,672	5,408	6,002	5,712	5,389	5,069
Other assets	48,286	44,558	39,087	38,712	37,540	45,227
<b>Total Assets</b>	<b>287,580</b>	<b>273,768</b>	<b>278,671</b>	<b>279,288</b>	<b>290,272</b>	<b>282,452</b>

## LIABILITIES AND STOCKHOLDERS' EQUITY

### Current liabilities:

Accounts payable	4,399	5,554	6,388	6,289	2,279	2,633
Accrued liabilities	14,648	12,823	22,529	19,737	16,491	16,274
Operating lease liabilities - current portion	1,926	1,758	1,412	1,572	1,538	1,504
Deferred revenue and billing in excess of revenue	21,232	23,691	27,871	26,664	31,769	29,507
Total current liabilities	42,205	43,826	58,200	54,262	52,077	49,919
Non-current operating lease liabilities	6,516	5,258	5,932	5,597	5,260	4,921
Deferred revenue - noncurrent portion		2,443	1,905	2,267	5,358	2,313
Tax and other long-term liabilities	4,353	2,656	2,622	3,737	3,407	3,736
Total liabilities	53,074	54,183	68,659	65,863	66,102	60,889

Total stockholders' equity	234,506	219,585	210,012	213,425	224,170	221,564
<b>Total liabilities and stockholders' equity</b>	<b>287,580</b>	<b>273,768</b>	<b>278,671</b>	<b>279,288</b>	<b>290,272</b>	<b>282,452</b>

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