



Investor Presentation

November 2024

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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: expectations about the effectiveness of our business and technology strategies; expectations regarding global economic trends; expectations regarding recent and future acquisitions; current semiconductor industry trends; expectations of 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 provision of technology and services prior to the execution of a final contract; the impact of global inflation and changing interest rates; the continuing impact of macroeconomic conditions and other trends on the semiconductor industry, our customers, our operations, and supply and demand for our products; supply chain disruptions; the success of the Company's strategic growth opportunities and partnerships; the Company's ability to successfully integrate acquired businesses and technologies; whether the Company can successfully convert backlog into revenue; customers' production volumes under contracts that provide Gainshare; possible impacts from the evolving trade regulatory environment and geopolitical tensions; our assessment of the sufficiency of our cash resources and anticipated funds from operations; our ability to obtain additional financing if needed; our ability to use support and updates for certain open-source software, and other risks set forth in PDF Solutions' periodic public filings with the Securities and Exchange Commission, including, without limitation, its Annual Report on Form 10-K for the year ended December 31, 2023, 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.

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PDF Solutions overview

- PDF Solutions provides advanced AI, data analytics and equipment connectivity solutions for the semiconductor industry
- PDF Solutions improves Process Efficiency and Reliability
 1. Differentiated data from manufacturing, test and in-field use
 2. Analytics platform for the end-to-end needs of the semiconductor value chain
 3. Connectivity and control software for factory equipment



IC Design



Fab



Sort



Assembly

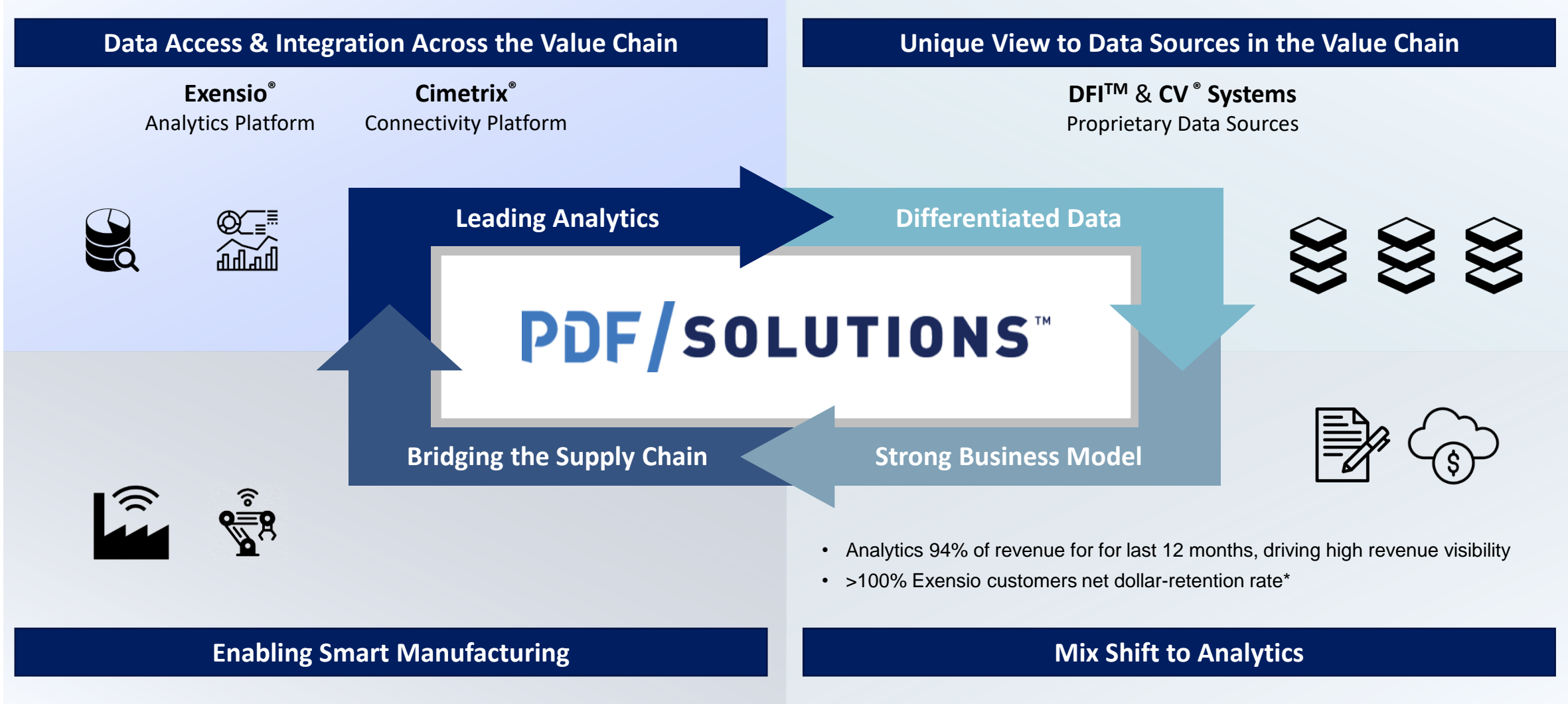


Test



System

PDF Solutions Platform Overview



*TTM Q3'24 vs TTM Q3'23

An open platform based on industry standards and integrated with leading solutions providers



Financial: Links business & supply chain data with E2E manufacturing data for automation/analysis of quality & cost



Test: Differentiated data and enhanced solutions for Test

SIEMENS

Design: E2E manufacturing data integration with Test Pattern layout & design



Collaboration with pT agents: and monitors integrated for Rapid Diagnosis of Chip Product Health



Cloud platform: analytics partner for Semiconductor supply chain solutions – over 78 products cloud ready.



Battery intelligence platform

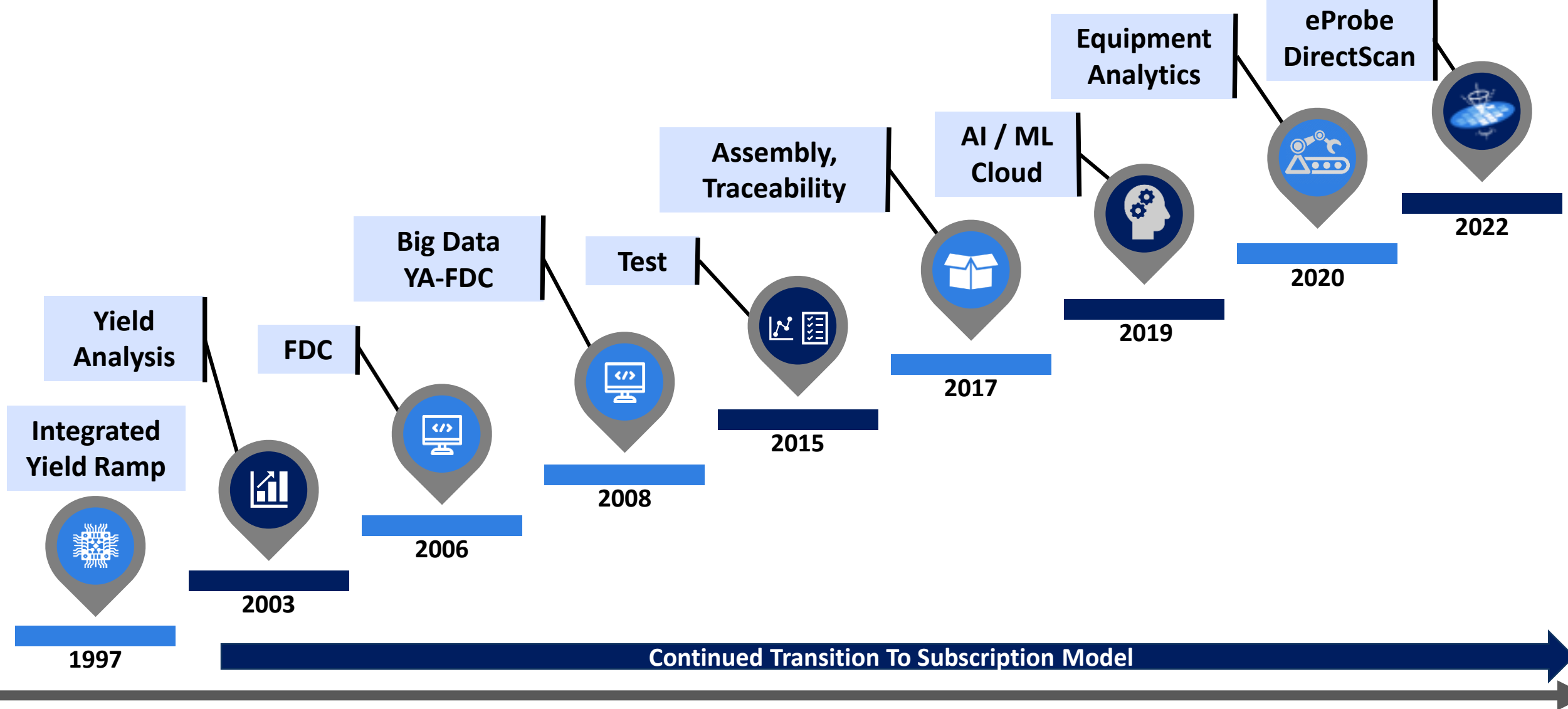


Assembly: Differentiated data and enhanced solutions for Assembly



MES: Integrated offering with PDF Analytics

PDF Solutions Platform Continues to Expand Over Time for Data Analytics



Enhancing Yield Ramp

Semi Supply Chain Analytics

Building a Platform for Success

GROWTH

- Analytics revenue grew 8% Y/Y from TTM Q3'23 to TTM Q3'24
- Analytics at 94% of total revenues in TTM Q3'24

PROFITABILITY

- GAAP gross margin of 73% for Q3'24
- Non-GAAP gross margin of 77% for Q3'24
- 75%+ Non-GAAP gross margin target model

VISIBILITY

- Greater than 100% Exensio® customers net dollar-retention rate*
- Strong ending backlog of \$239.2M as of Q3'24

DIVERSIFICATION

- No country outside the United States accounts for more than ~16% of revenue in TTM Q3'24
- APAC Region grew by double-digit percentages on a Y/Y TTM basis

STRENGTH

- \$120.2M in cash and short-term investment as of Q3'24
- \$6.9M of share buyback completed so far during 2024

COLLABORATIONS

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

*TTM Q3'24 vs TTM Q3'23

Recent events where PDF Solutions participated

SAP High Tech Executive Advisory Council

October 8-9th, 2024 | Bellevue, WA



PDF Solutions invited to present on Sapience Manufacturing Hub solution and LLM enabled joint SAP and PDF use cases.

Advantest Voice

June 3 to 5th, 2024 | San Diego, CA



PDF Solutions presented on “A comprehensive system for Machine Learning and end-to-end ModelOps at the Edge”

Global Semiconductor Alliance – US Executive Forum

June 3 to 5th, 2024 |



PDF Solutions led the panel discussion “Transforming Semiconductor Manufacturing” along with Samsung Semiconductor and SAP

Semicon Taiwan

Sep 3 to 6th, 2024 | Taipei



PDF Solutions presented on “Bringing AI to scale in Semiconductor Manufacturing”

PDF Solutions AI Executive Conference - Dec 12, 2024



EXPLORE THE POWER OF AI TO
TRANSFORM SEMICONDUCTOR
DESIGN & MANUFACTURING.

DECEMBER 12, 2024

ST. REGIS HOTEL 125 3RD ST
SAN FRANCISCO, CA 94103

<https://go.pdf.com/AI-Conference-2024>

The Opportunity For PDF Is Expanding

SYSTEM	
EMS	
Product (Fabless, Fab-lite)	
FACTORY (Foundry, OSAT)	
Equipment & IP	

Established strong presence:

- >140k equipment factory connections with over >40k process tools
- 350+ revenue generating customers in 31 countries in TTM Q3'24

Strong product suite:

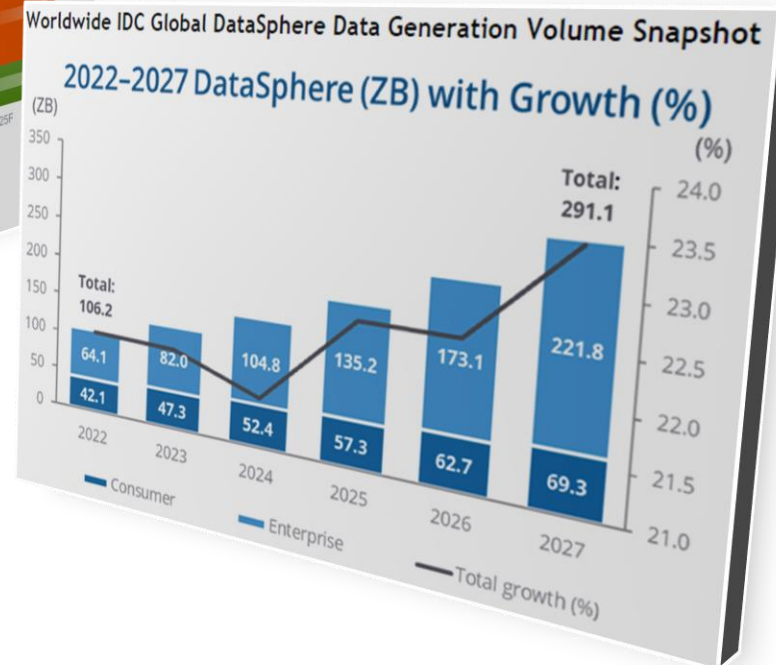
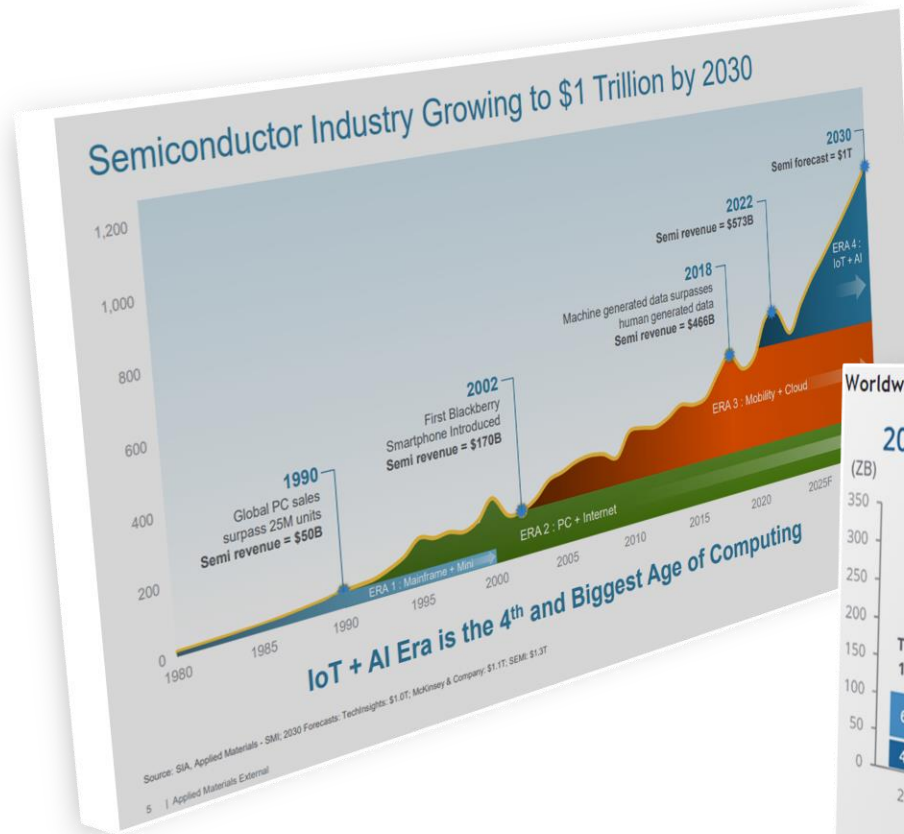
- Leading commercial provider of Lab to Fab optimization solutions: yield, test, OEE
- Leading commercial manufacturing Analytics and AI platform for the semiconductor industry
- Long history as an integration provider of semiconductor equipment

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>



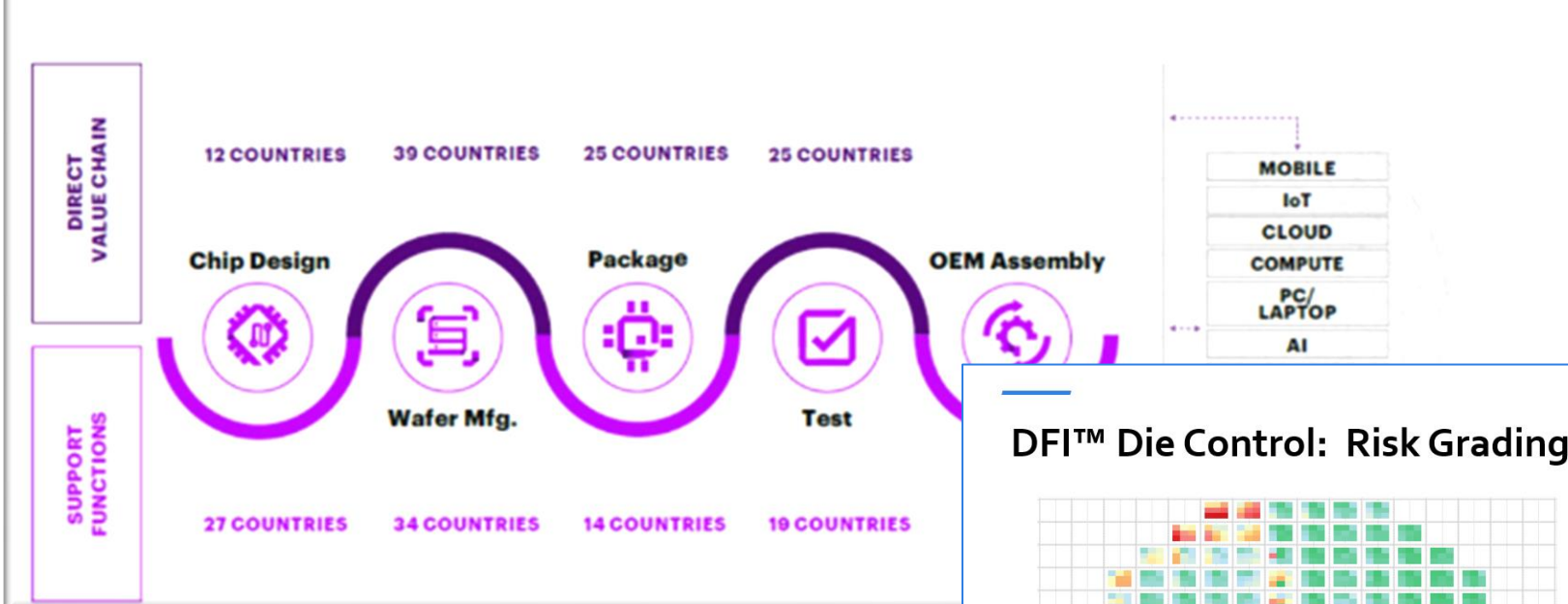
https://www.semiconductors.org/wp-content/uploads/2022/02/Global-Semiconductor-Incentives_2-4-2022.pdf

Achieving the necessary semi growth requires overcoming new inflection points

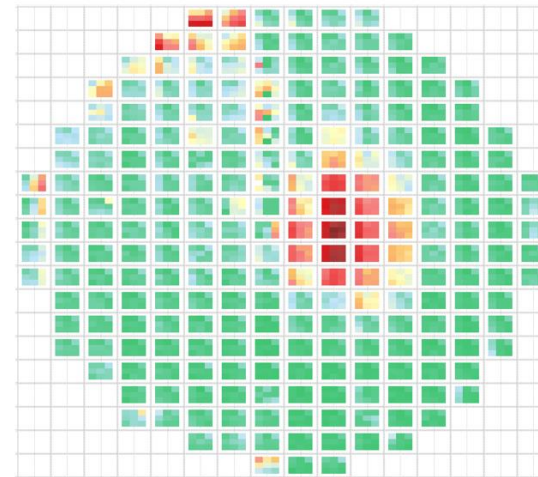
- New architectures & materials
- Chiplets
- Geographic disaggregation

AI Is Enabler For Rapid Growth

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



DFI™ Die Control: Risk Grading

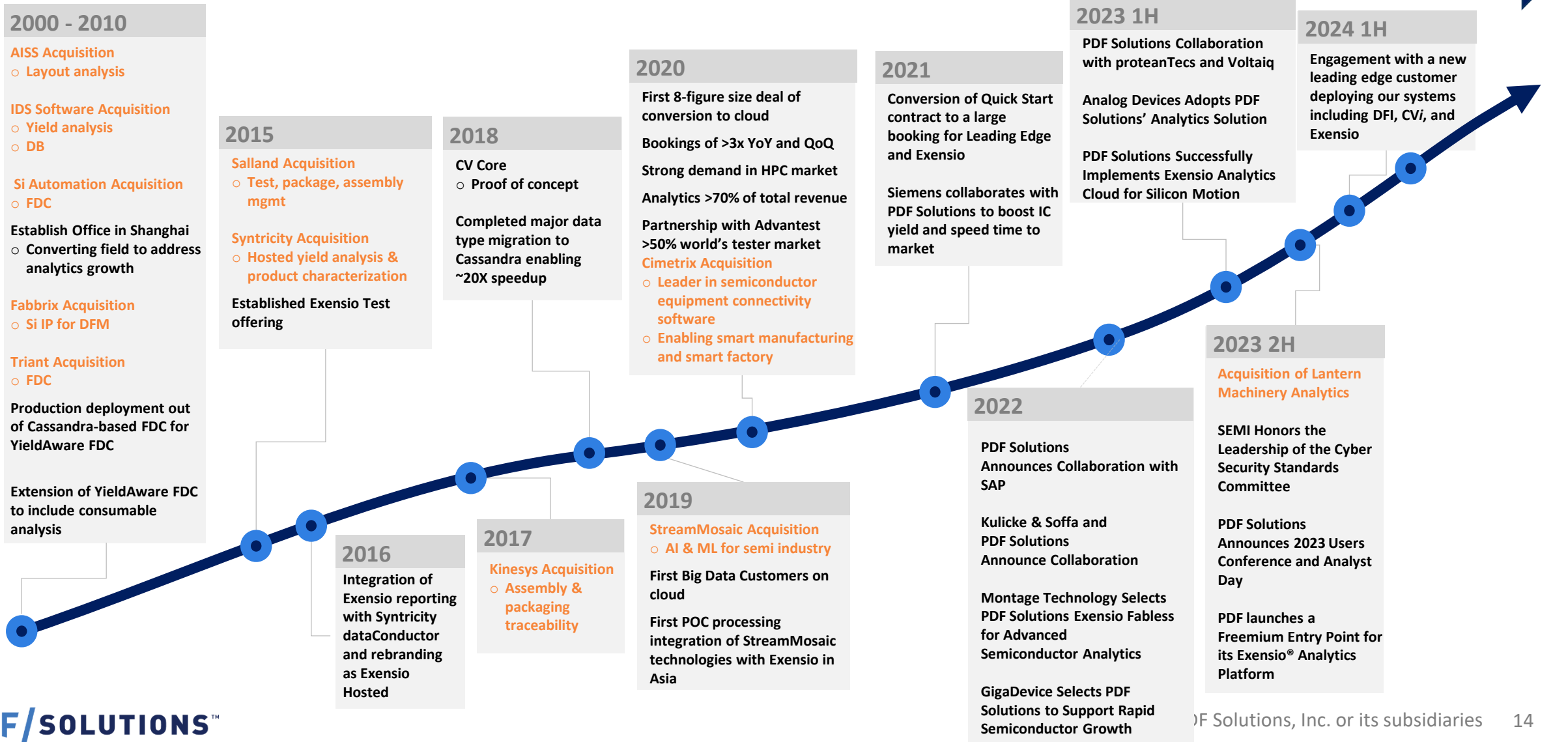


- AI adoption across the semiconductor supply chain is a key component to efficiently achieving semi growth

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

Corporate Timeline of Key Milestones and Acquisitions

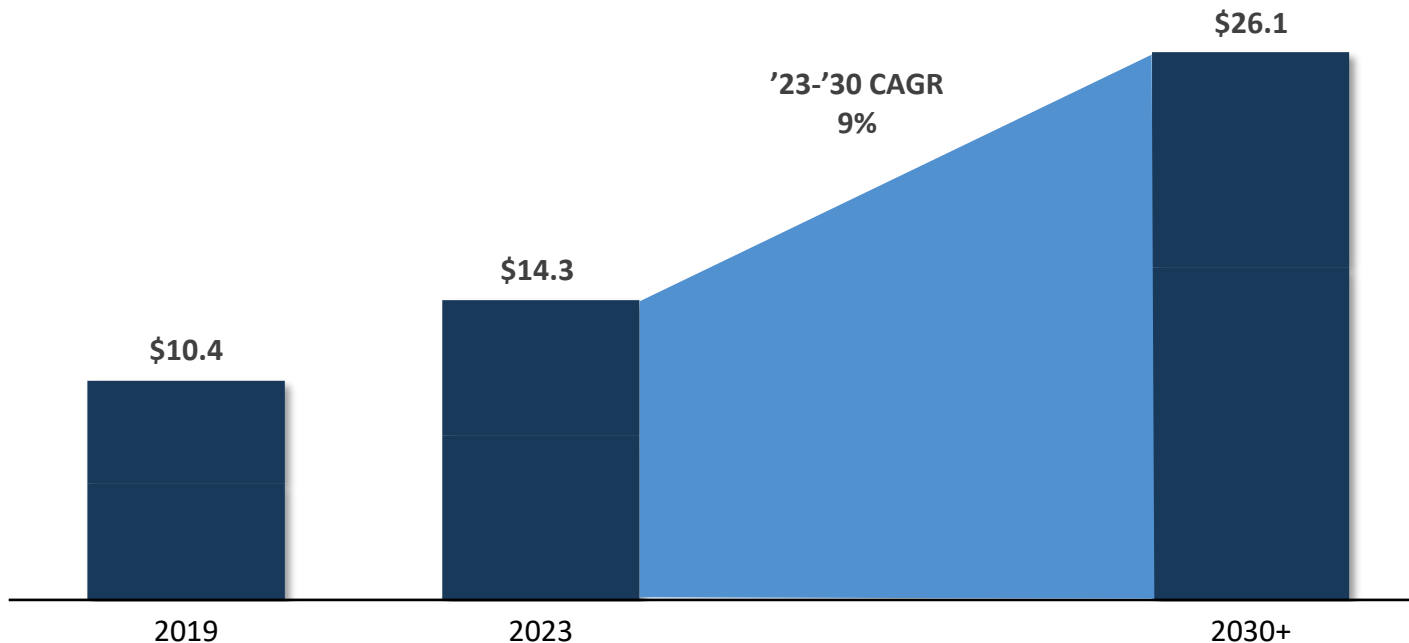
Continued Transition To Subscription Model



Total Semiconductor Analytics TAM

Potential value capture of analytics in Semiconductors

(\$ in billions)

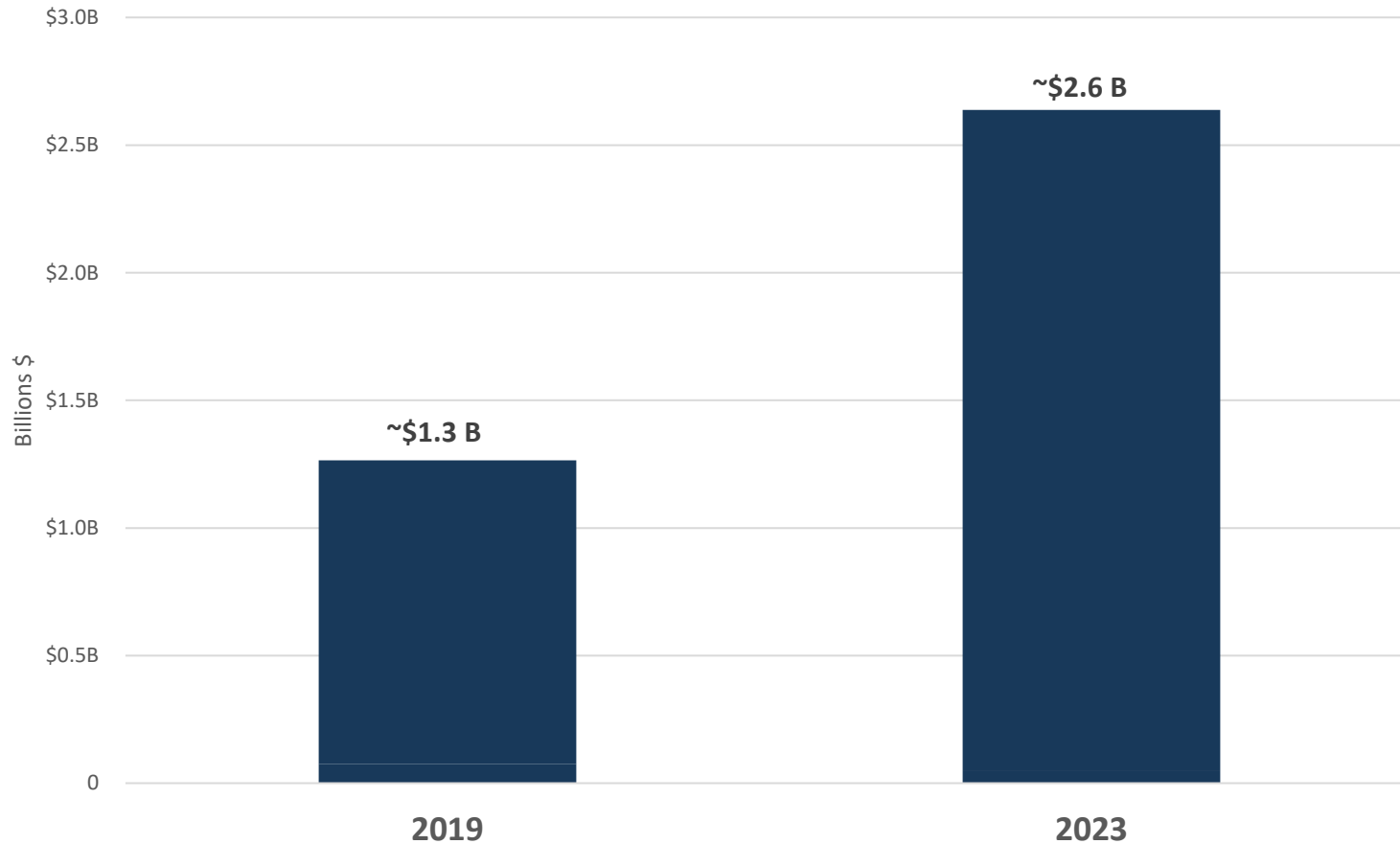


Methodology

- 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.

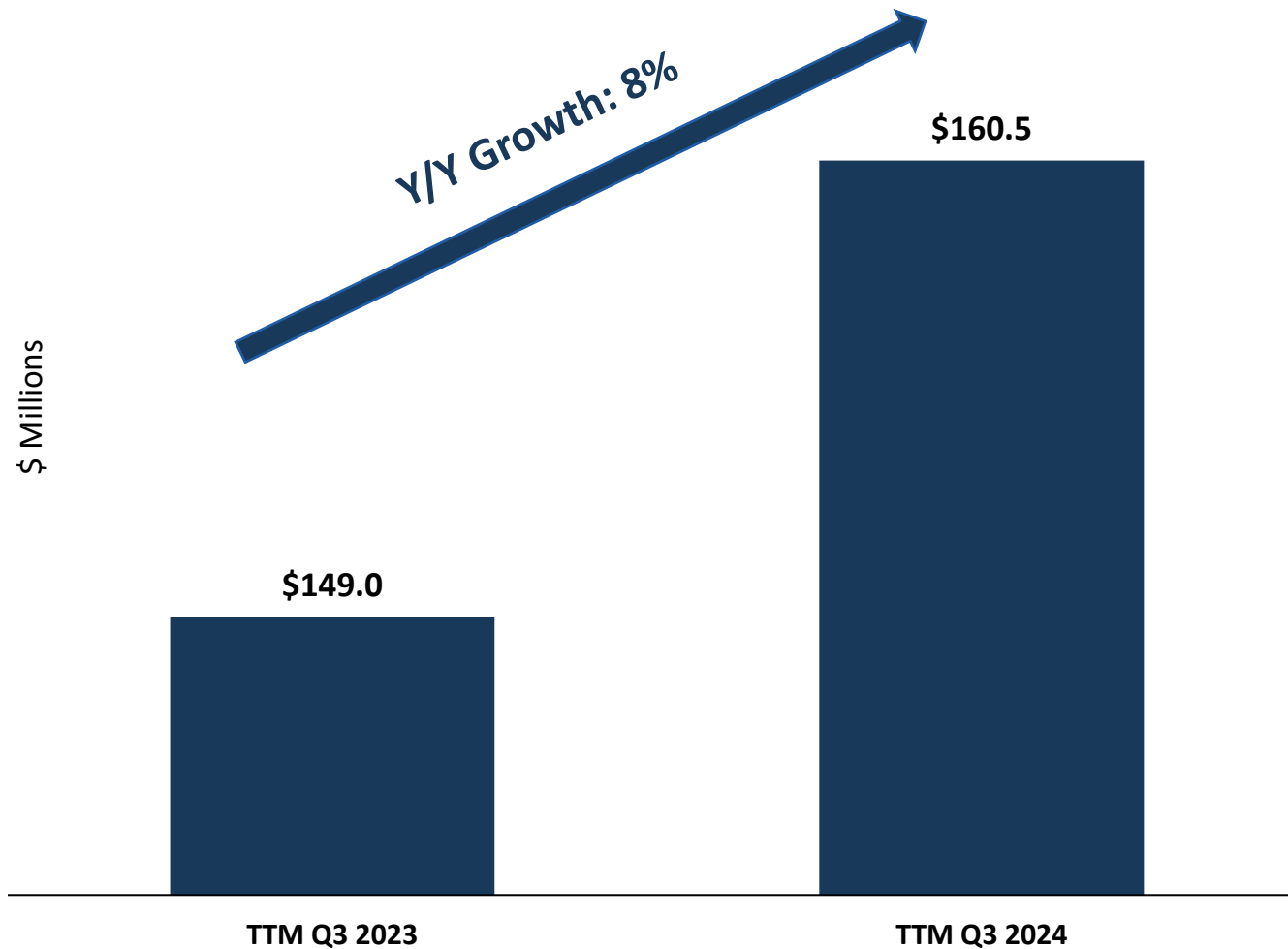
Market Opportunity – PDF SAM



Source: PDF Solutions estimates

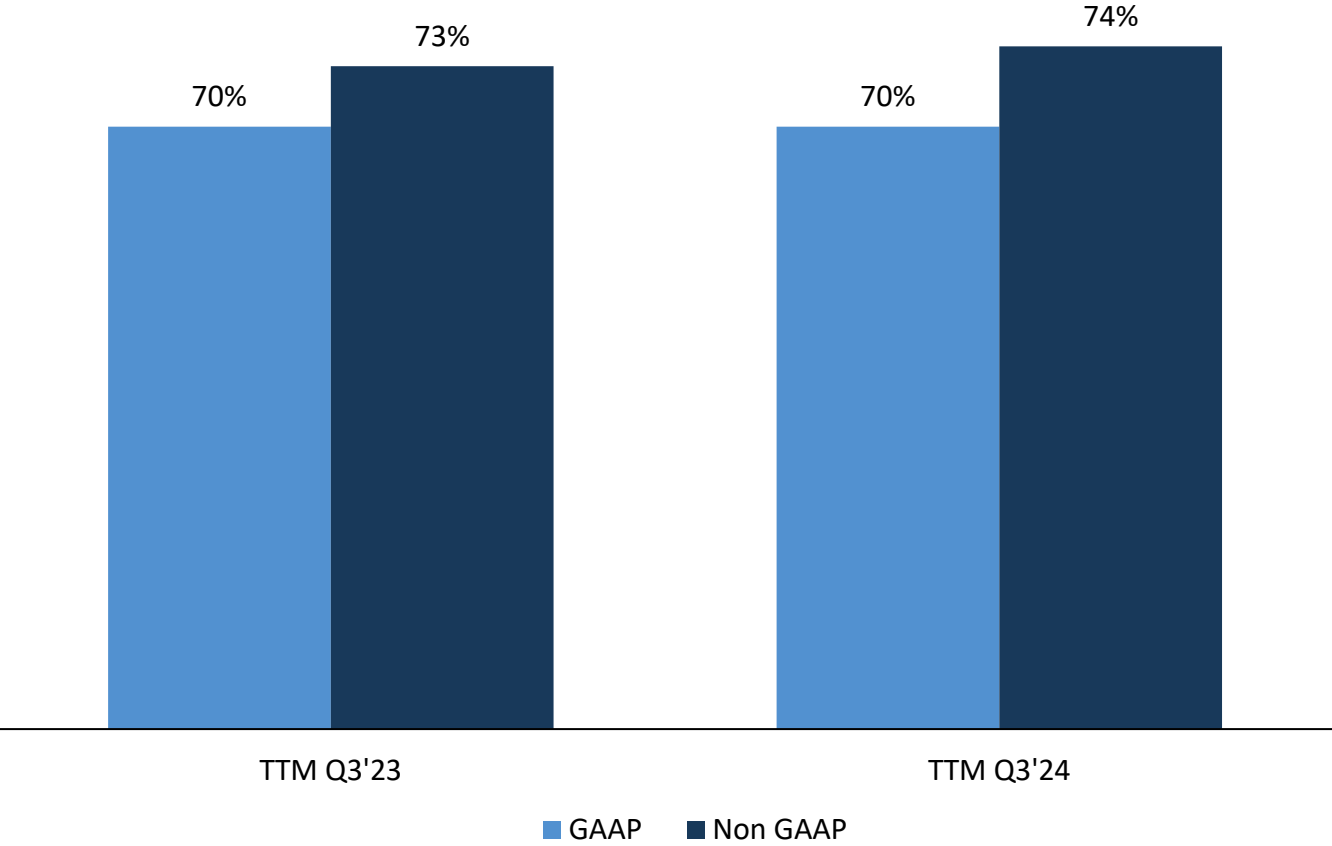
- SAM of more than \$2B (based on 2023 data)
- Growth drivers:
 - Adoption across supply chain
 - ML & advanced solutions
 - DFI for quality & reliability
 - Transition to cloud

Analytics Revenue



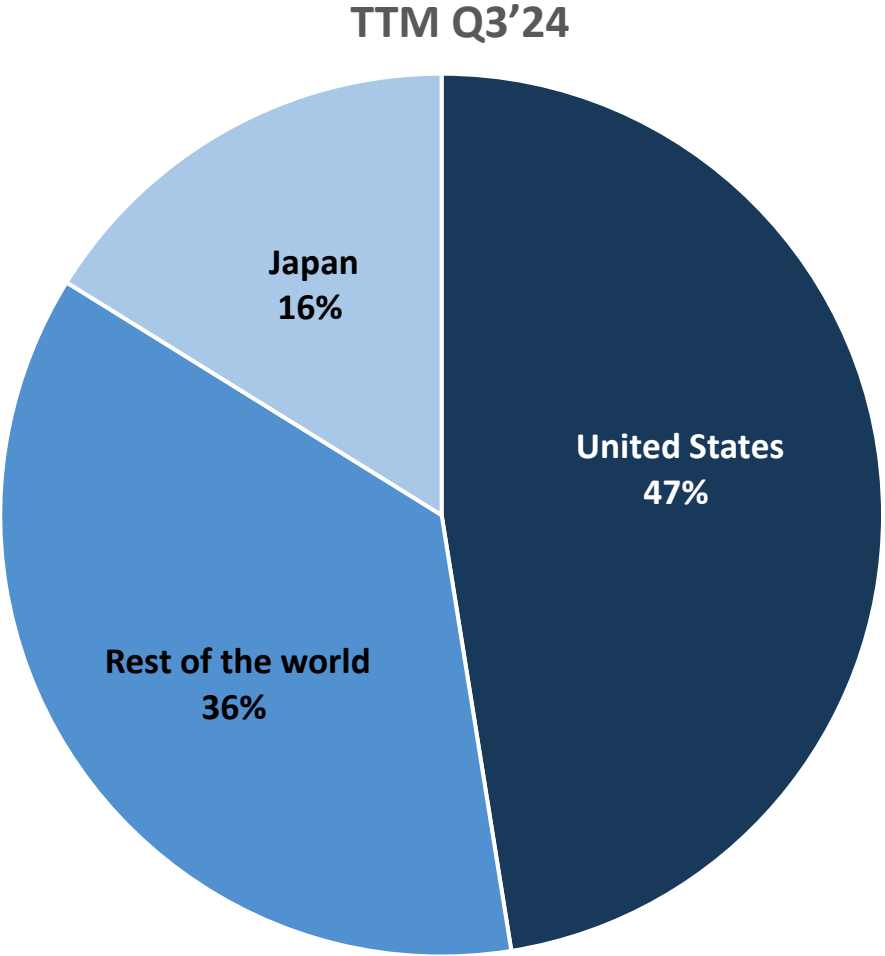
- Y/Y Analytics Growth of 8% from TTM Q3'23 to TTM Q3'24
- Average Analytics revenue per customer, excluding Cimatrix, \$910K in TTM Q3'24, a 3% increase from \$881K in TTM Q3'23

Gross Margin



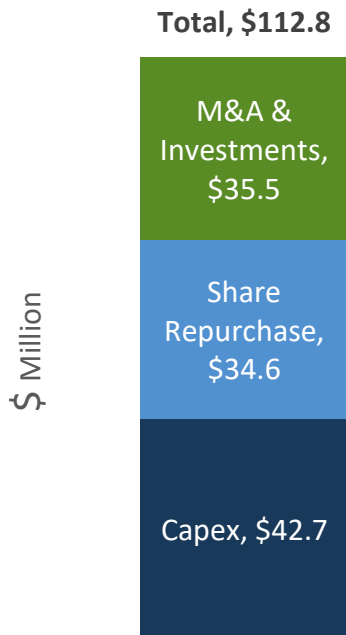
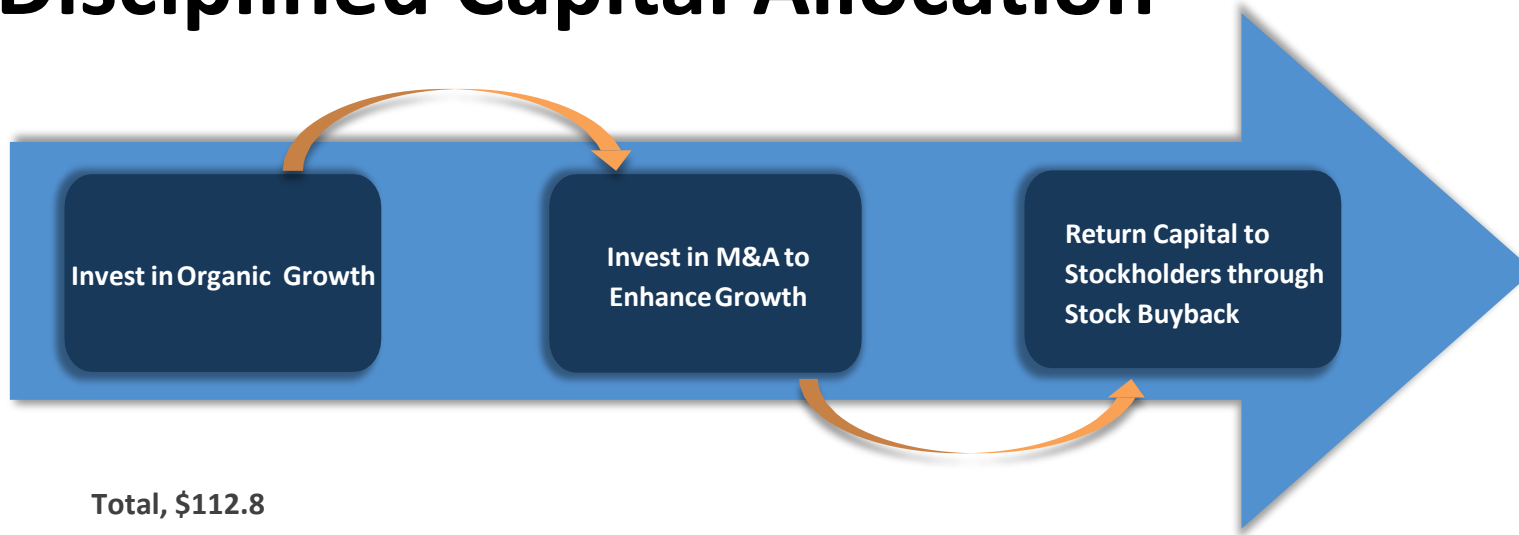
- Analytics customers transitioning to subscription and cloud over time
- First monetization of technology was IYR engagements with associated royalties
- Second wave of monetization consists of growing the Analytics business

Global Geographic Revenue Distribution



- Globally diverse geographic distribution
- No country outside the United States accounts for more than ~16%
- United States largest market at ~47% of revenues

Disciplined Capital Allocation



(\$ Millions)	End of 2019	End of 2020	End of 2021	End of 2022	End of 2023	Q1 2024	Q2 2024	Q3 2024
Cash and ST invt	\$97.6	\$145.3	\$140.2	\$139.2	\$135.5	\$122.9	\$117.9	\$120.2
Debt	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Share Repurchase	\$9.6	\$0.0	\$4.5	\$22.5	\$0.7	\$6.9	\$0.0	\$0.0

- 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

2020 thru Q3'24

Long-Term Target Financial Model

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

Summary – PDF Solutions



Thank You

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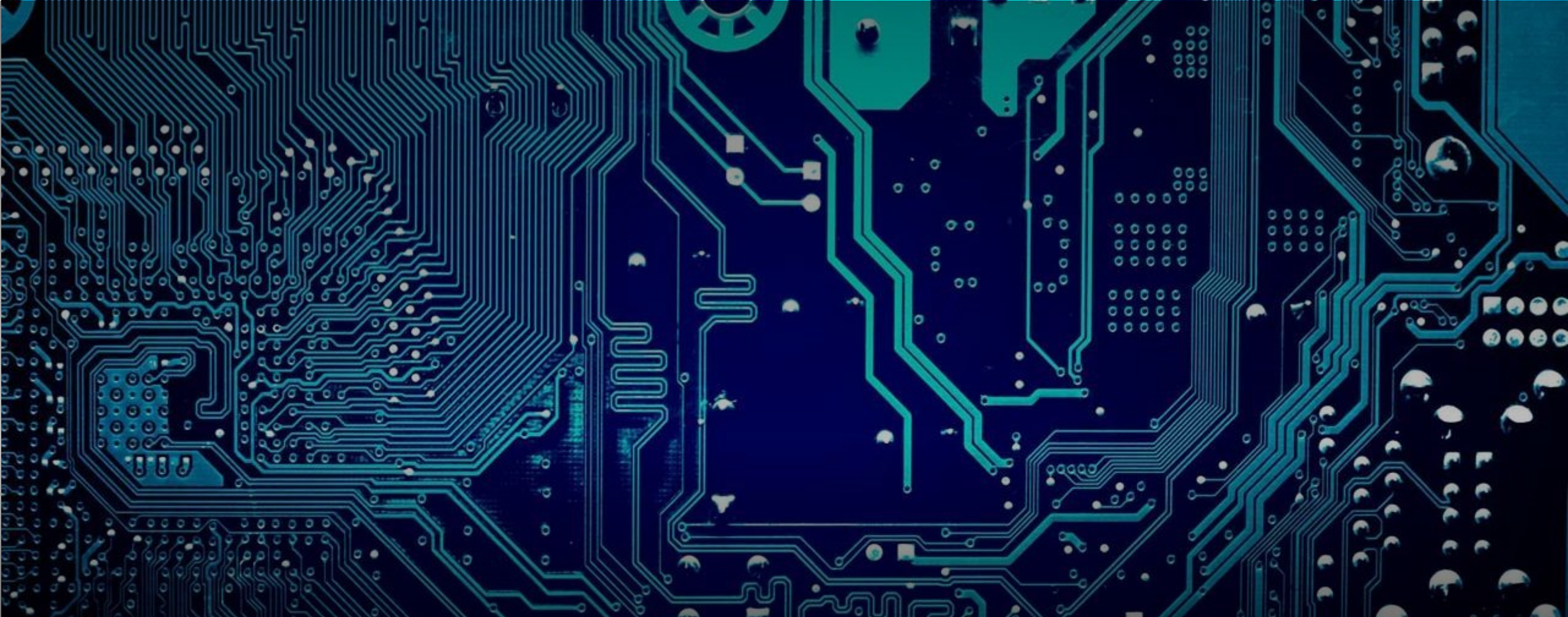
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Financials - Appendix

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. NonGAAP gross profit and margin exclude stock-based compensation expense and the amortization of acquired technology under costs of revenues. Non-GAAP net income excludes stock-based compensation expense, amortization of acquired technology under costs of revenues, amortization of other acquired intangible assets and the effects of certain non-recurring items, such as expenses related to an arbitration proceeding for a disputed contract with a customer, acquisition-related costs, proceeds from the sale of previously written-off property and equipment, and their related income tax effects, as applicable, as well as adjustments for the valuation allowance for deferred tax assets and reconciling items. 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 information 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 expenses related to an arbitration proceeding for a disputed contract with a customer and acquisition-related costs) 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 differ 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. Since management uses these non-GAAP financial measures internally to measure profitability and performance; PDF Solutions has included these non-GAAP measures to give investors an opportunity to see the Company's financial results as viewed by management. A reconciliation of the comparable GAAP financial measures to the non-GAAP financial measures is included herein.

GAAP to Non-GAAP Income Reconciliation

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

	2020	2021	2022	2023	Q1'24	Q2'24	Q3'24
GAAP net income (loss)	\$ (40,363)	\$ (21,488)	\$ (3,429)	\$ 3,105	\$ (393)	\$ 1,705	\$ 2,206
Adjustments to reconcile GAAP net income (loss) to non-GAAP net income (loss):							
Stock-based compensation expense	12,463	12,931	19,648	21,484	6,110	5,700	6,730
Amortization of acquired technology under costs of revenues	705	2,079	2,213	2,266	584	584	584
Amortization of other acquired intangible assets	741	1,255	1,270	1,285	259	259	196
Write-down in value of property and equipment	490	3,183	-	-	-	-	-
Acquisition costs & adjustment to contingent consideration related to acquisition	752	-	-	209	-	-	-
Legal arbitration/litigation *	1,098	1,951	1,895	2,600	-	-	-
Proceeds from sale of previously written-off property and equipment	-	-	-	(105)	-	-	(55)
Tax Impact of Adjustments	23,309	3,091	1,326	(2,374)	(813)	(1,159)	262
Non-GAAP net income (loss)	\$ (805)	\$ 3,002	\$ 22,924	\$ 28,470	\$ 5,747	\$ 7,089	\$ 9,923
GAAP net income (loss) per diluted share	(1.17)	(0.58)	(0.09)	0.08	(0.01)	0.04	0.06
Non-GAAP net income (loss) per diluted share	(0.02)	0.08	0.60	0.73	0.15	0.18	0.25
Shares used in diluted shares calculation (in millions)	34.4	37.9	38.1	38.9	39.1	38.9	39.1

* 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	2023	Q1'24	Q2'24	Q3'24
GAAP Gross Margin	\$ 51,281	\$ 66,867	\$ 100,642	\$ 114,086	\$ 27,781	\$ 29,431	\$ 33,925
<i>GAAP Gross Margin %</i>	<i>58%</i>	<i>60%</i>	<i>68%</i>	<i>69%</i>	<i>67%</i>	<i>71%</i>	<i>73%</i>
Stock-based compensation expense	3,454	2,563	2,974	4,169	1,200	1,185	1,366
Amortization of acquired technology	705	2,079	2,213	2,266	584	584	584
Non-GAAP gross margin	\$ 55,440	\$ 71,509	\$ 105,828	\$ 120,521	\$ 29,565	\$ 31,200	\$ 35,875
<i>Non-GAAP gross margin %</i>	<i>63%</i>	<i>64%</i>	<i>71%</i>	<i>73%</i>	<i>72%</i>	<i>75%</i>	<i>77%</i>

Balance Sheet

(\$ '000)

	2020	2021	2022	2023	Q1'24	Q2'24	Q3'24
ASSETS							
Current assets:							
Cash and short-term investments	145,296	140,226	139,181	135,522	122,884	117,875	120,152
Accounts receivable, net	34,140	40,087	42,164	44,904	47,267	56,410	46,668
Prepays and other current assets	13,944	8,194	12,063	17,422	17,165	19,007	24,575
Total current assets	193,380	188,507	193,408	197,848	187,316	193,292	191,395
Property, plant and equipment, net	39,242	35,295	40,174	37,338	36,088	40,707	46,019
Operating lease right-of-use assets	6,672	5,408	6,002	4,926	4,742	4,424	4,360
Other assets	48,286	44,558	39,087	50,023	58,677	59,576	65,577
Total Assets	287,580	273,768	278,671	290,136	286,823	297,999	307,351
LIABILITIES AND STOCKHOLDERS' EQUITY							
Current liabilities:							
Accounts payable	4,399	5,554	6,388	2,561	5,729	4,219	7,504
Accrued liabilities	14,648	12,823	22,529	19,433	14,454	17,462	19,701
Operating lease liabilities - current portion	1,926	1,758	1,412	1,529	1,625	1,609	1,706
Deferred revenue and billing in excess of revenue	21,232	23,691	27,871	27,320	29,988	32,174	28,819
Total current liabilities	42,205	43,826	58,200	50,843	51,796	55,464	57,730
Non-current operating lease liabilities	6,516	5,258	5,932	4,657	4,363	4,003	3,870
Deferred revenue - noncurrent portion		2,443	1,905	1,802	1,426	2,819	1,599
Tax and other long-term liabilities	4,353	2,656	2,622	3,888	3,825	3,560	3,687
Total liabilities	53,074	54,183	68,659	61,190	61,410	65,846	66,887
Total stockholders' equity	234,506	219,585	210,012	228,946	225,413	232,153	240,464
Total liabilities and stockholders' equity	287,580	273,768	278,671	290,136	286,823	297,999	307,351

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