

SYNOPSYS®

Silicon to Software™

Corporate Overview for Investors

May 2023

Forward-Looking Statements

This presentation contains forward-looking statements, including, but not limited to, statements regarding Synopsys' short-term and long-term financial targets, expectations and objectives; strategies related to our products, technology and services; business and market outlook, opportunities and strategies; the expected impact of U.S. and foreign government actions and regulatory changes, including export control restrictions, on our financial results; the potential impact of the macroeconomic environment on our financial results; customer demand and market expansion; our planned product releases and capabilities; industry growth rates; software trends; planned acquisitions and stock repurchases; our expected tax rate; and the impact and result of pending legal, administrative and tax proceedings. These statements involve risks, uncertainties and other factors that could cause our actual results, time frames or achievements to differ materially from those expressed or implied in such forward-looking statements. Such risks, uncertainties and factors include, but are not limited to: macroeconomic conditions and uncertainty in the global economy; uncertainty in the growth of the semiconductor and electronics industries; the highly competitive industry we operate in; actions by the U.S. or foreign governments, such as the imposition of additional export restrictions or tariffs; consolidation among our customers and our dependence on a relatively small number of large customers; risks and compliance obligations relating to the global nature of our operations; and more. Additional information on potential risks, uncertainties and other factors that could affect Synopsys' results is included in filings we make with the SEC from time to time, including in the sections entitled "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended October 31, 2022 and in our latest Quarterly Report on Form 10-Q. The financial information contained in this presentation should be read in conjunction with the consolidated financial statements and notes thereto included in Synopsys' most recent reports on Forms 10-K and 10-Q, each as may be amended from time to time. Synopsys' financial results for its second quarter of fiscal year 2023 are not necessarily indicative of Synopsys' operating results for any future periods. The information provided herein is as of May 17, 2023. Synopsys undertakes no duty to, and does not intend to, update any forward-looking statement, whether as a result of new information, future events or otherwise, unless required by law.

Regulation G

In addition to financial results prepared in accordance with Generally Accepted Accounting Principles, or GAAP, this presentation also contains certain non-GAAP financial measures. When possible, Synopsys provides a reconciliation of non-GAAP financial measures to their most closely applicable GAAP financial measures. Reconciliations of certain of the non-GAAP financial measures (either contained in this presentation or given verbally) to their most comparable GAAP measures are included in the table at the end of this presentation, along with the second quarter of fiscal year 2023 earnings release and financial supplement, dated May 17, 2023, and available on Synopsys' website at https://investor.synopsys.com/news/default.aspx. Synopsys is unable to provide a reconciliation of certain non-GAAP guidance measures to the corresponding GAAP measures on a forward-looking basis because doing so would not be possible without unreasonable effort due to, among other things, the potential variability and limited visibility of the excluded items. For the same reasons, Synopsys is unable to address the probable significance of the unavailable information.

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Synopsys: The Market & Technology Leader

Broad Product Portfolio

Electronic Design Automation (EDA)

Semiconductor Intellectual Property (IP)

Software Security and Quality

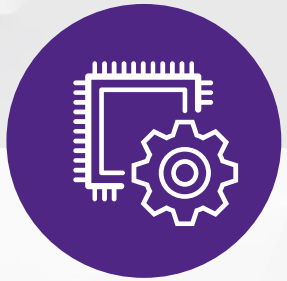
	FY22	FY23 Targets(1)(2)
Revenue:	$5.08B	$5.79B - $5.83B
Growth Rate:	*20.9%*	*14% - 15%*
Non-GAAP Operating Margin:	33.0%	~34.5%* **Midpoint of range*
Non-GAAP Diluted EPS:	$8.90	$10.77 - $10.84
Growth Rate:	*30.1%*	*21% - 22%*
Operating Cash Flow:	$1.74B	~$1.65B
Business Model:	Time-based, recurring revenue model; Non-cancellable backlog	

(1) These targets are being provided by Synopsys as of May 17, 2023.

(2) Assumes no further changes to export control restrictions or the current U.S. government "Entity List" restrictions.

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Synopsys: The Market & Technology Leader



Design Automation

~35 years of investment and execution

~65% of revenue

Market Leader



Design IP

~25 years

~25% of revenue

#2 IP Vendor, Broadest Portfolio



Software Integrity

~9 years

~10% of revenue

Industry Leader, Broadest Portfolio

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Long-term Financial Objectives[1]

While the results in any given period will vary due to timing of product deliverables, acquisitions or other near-term priorities, our long-term, multi-year objectives[2] are:

Revenue

Annual double-digit growth

- Design Automation: double-digits
  - Design IP: mid-teens
  - Software Integrity: 15-20%

Margin

Annual non-GAAP operating margin expansion of more than 100 bps

Earnings

Annual non-GAAP EPS growth in the mid-teens range

Utilize our strong cash flow for organic investments, M&A and share buybacks

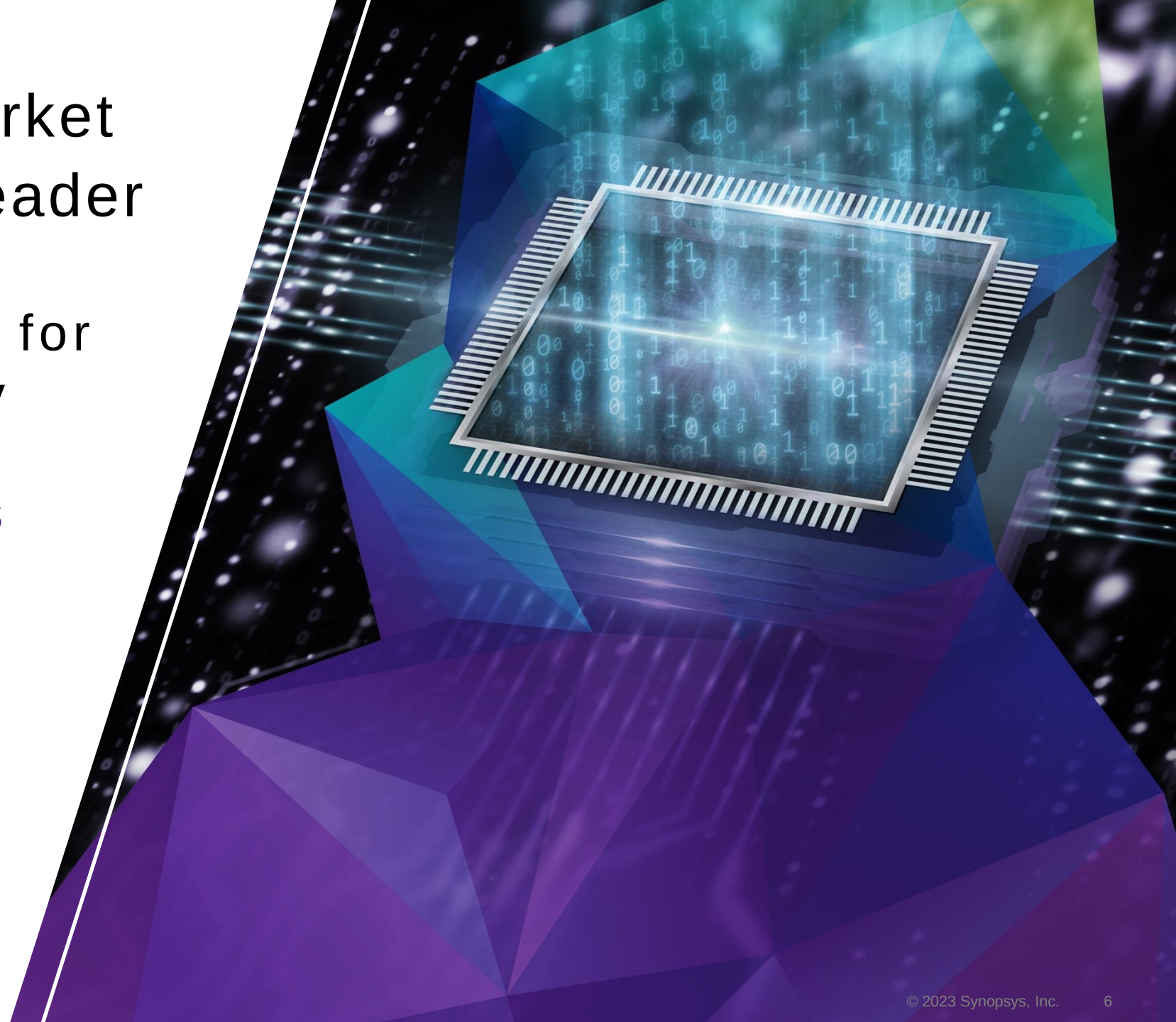
1. These multi-year objectives are provided as of May 17, 2023.
2. Period to period fluctuations are a normal element of our business, driven particularly by timing of hardware and IP deliveries. Variability, which increased as a result of Accounting Standards Code (ASC) 606 adoption, should be expected.

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Synopsys: The Market and Technology Leader

Uniquely Positioned for Growth and Stability

- Robust End Markets
- Clear Technology Leadership
- Financial Strength and Growth



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Global Value Chain – 2022

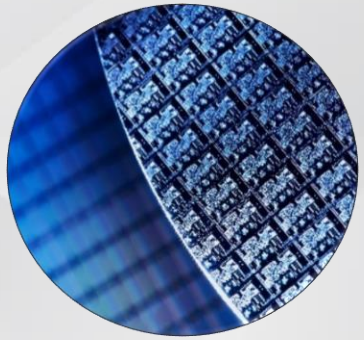
EDA & IP – At the Heart of Accelerating Electronics Innovation



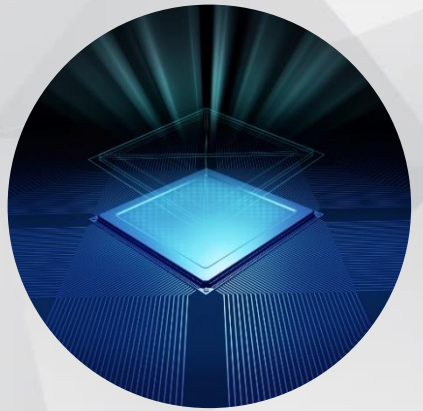
EDA & IP
$16.6B



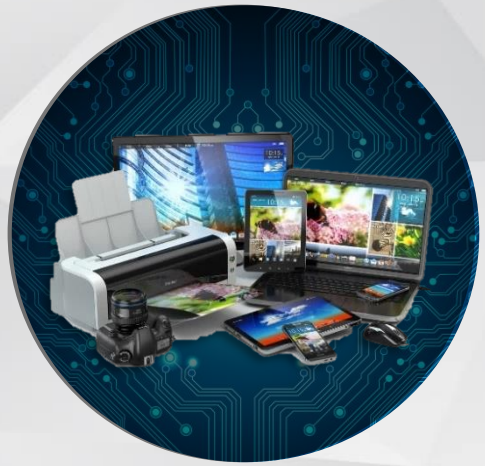
Embedded Software
$15.0B



Foundry
$142B



Semiconductors
$637B



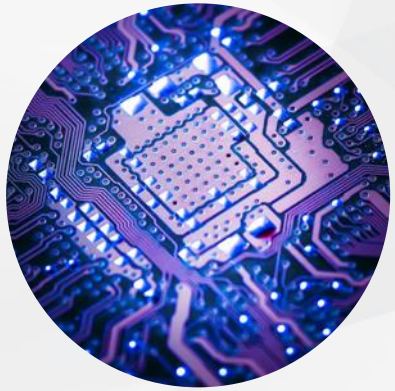
Electronic Systems
$1.86T

Sources: ESD Alliance, Ipnest, MarketsandMarkets, IC Insights

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Blue Chip, Diversified Customer Base

Semiconductors



- Semi R&D (including EDA) is a top investment priority for semi and system customers in all phases of the business cycle
- Consists of virtually all semiconductor companies in the world, including all of the top 20
- One >10% customer in FY22

Systems



- ~45% of our revenue comes from systems companies
- Systems companies develop chips as an input to an end product, rather than selling the chip itself
- Verification challenges are rapidly growing at the intersection of hardware and software

Software Developers



- Key function across all industries: semis and systems, to enterprises in segments such as financial services, medical devices, automotive, and industrial
- Targeting software developers, DevOps groups, corporate security teams

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Dynamic Change in Many Markets



Demand for Smart Everything seems limitless

Innovation is fueled by semiconductor and software advances

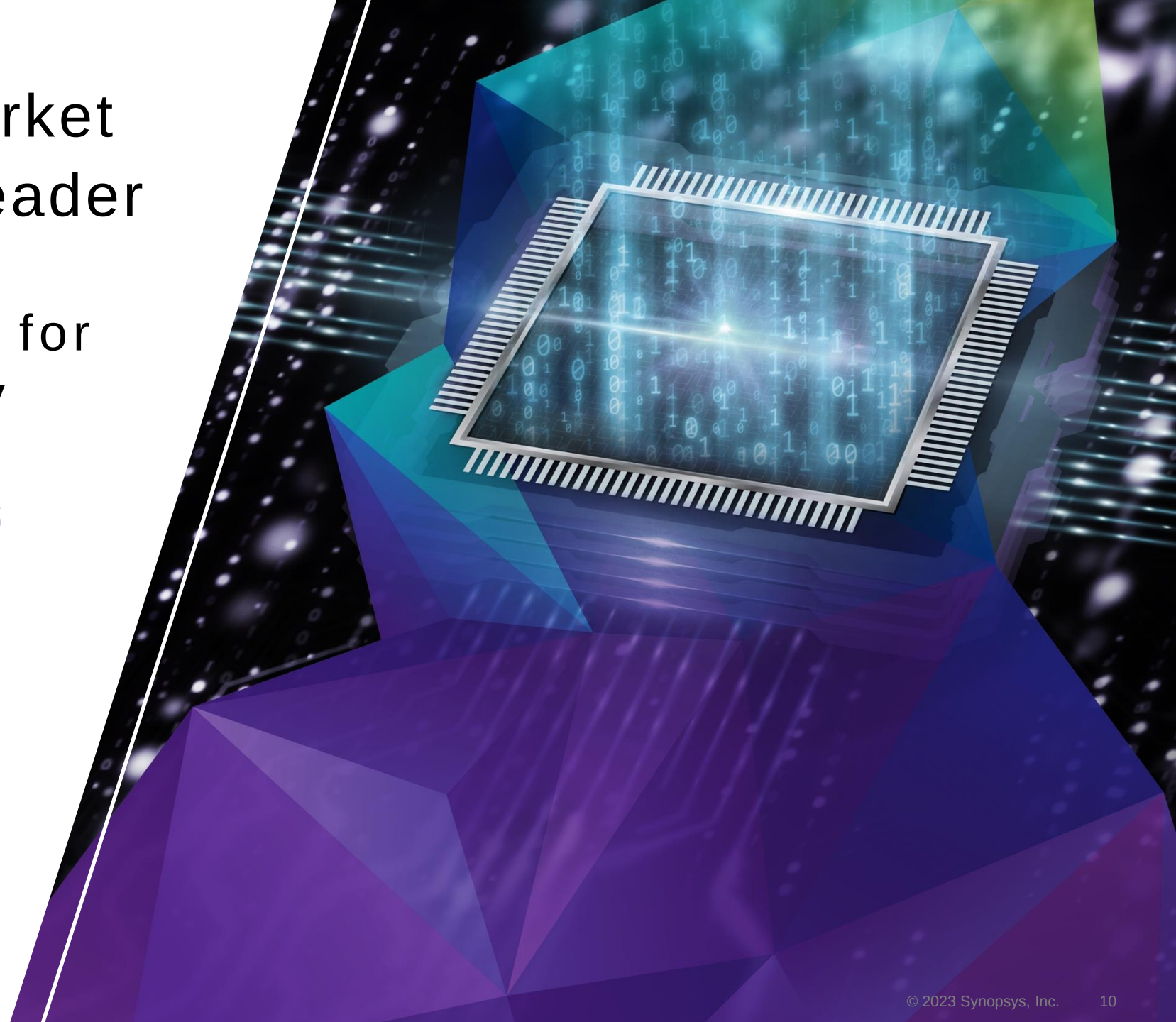
Driven by fusion of AI and machine learning

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Synopsys: The Market and Technology Leader

Uniquely Positioned for Growth and Stability

- Robust End Markets
- Clear Technology Leadership
- Financial Strength and Growth



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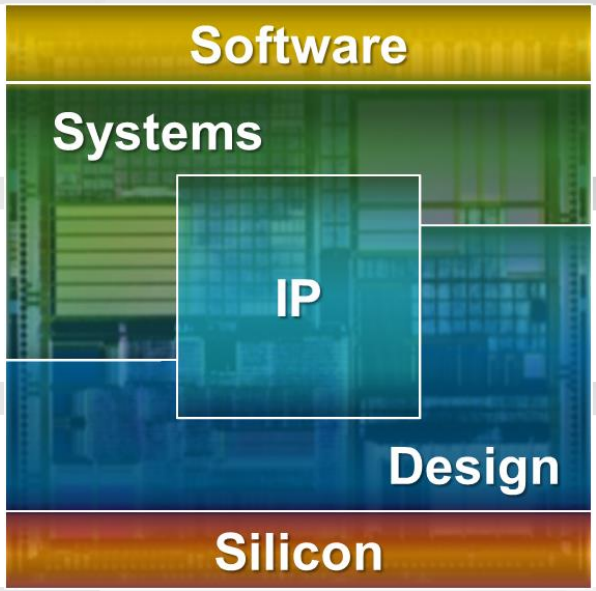
Synopsys Enables System Innovation, Silicon to Software

Comprehensive World-Class Technology

Software:
Application security testing & quality
Leader in Gartner's Magic Quadrant

Systems:
Leader in HW/SW verification, virtual prototyping, VIP and models

Design:
Digital & custom AMS solutions
Best QoR, highest productivity



IP:
Broadest portfolio, silicon-proven
#1 interface, analog, memories, physical

Silicon:
Reference tools for process optimization, CAD, lithography & yield optimization

Solutions:
Automotive, low power, 3DIC, DTCO, memory, silicon lifecycle management

PROCESS FUNDAMENTALS

Broadest System Design Coverage

DEPLOYED SYSTEM

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LEADER IN EDA

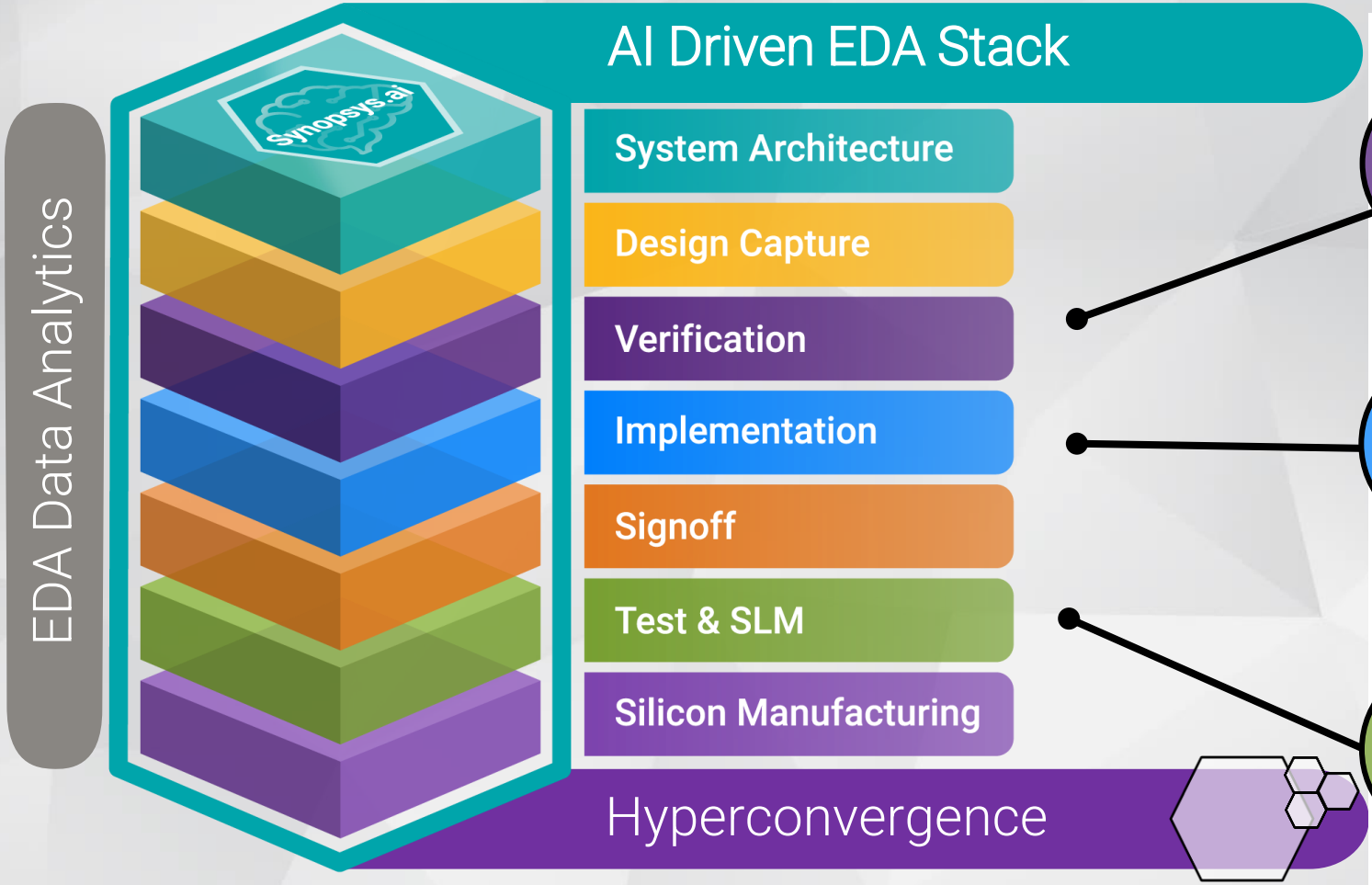
- Market and technology leader in design automation, the tools and technologies used to design semiconductor chips and systems
  - ~$9.9 billion market*; generally tracks semiconductor R&D spend over time
- Growth drivers: all aspects of chip & system complexity
- All leading semiconductor companies in the world use Synopsys technology
- State-of-the-art design and verification solutions with unmatched global support

* 2022; Source: ESD Alliance, Internal estimates

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Synopsys.ai – Industry's First AI-driven Full EDA Suite

Delivers unmatched productivity & QoR boost



2 Verification Space Optimization (**VSO.ai**) - AI inferred faster & better coverage

1 Next-Gen Design Space Optimization (**DSO.ai**) – 2X faster TAT & 20% better QoR

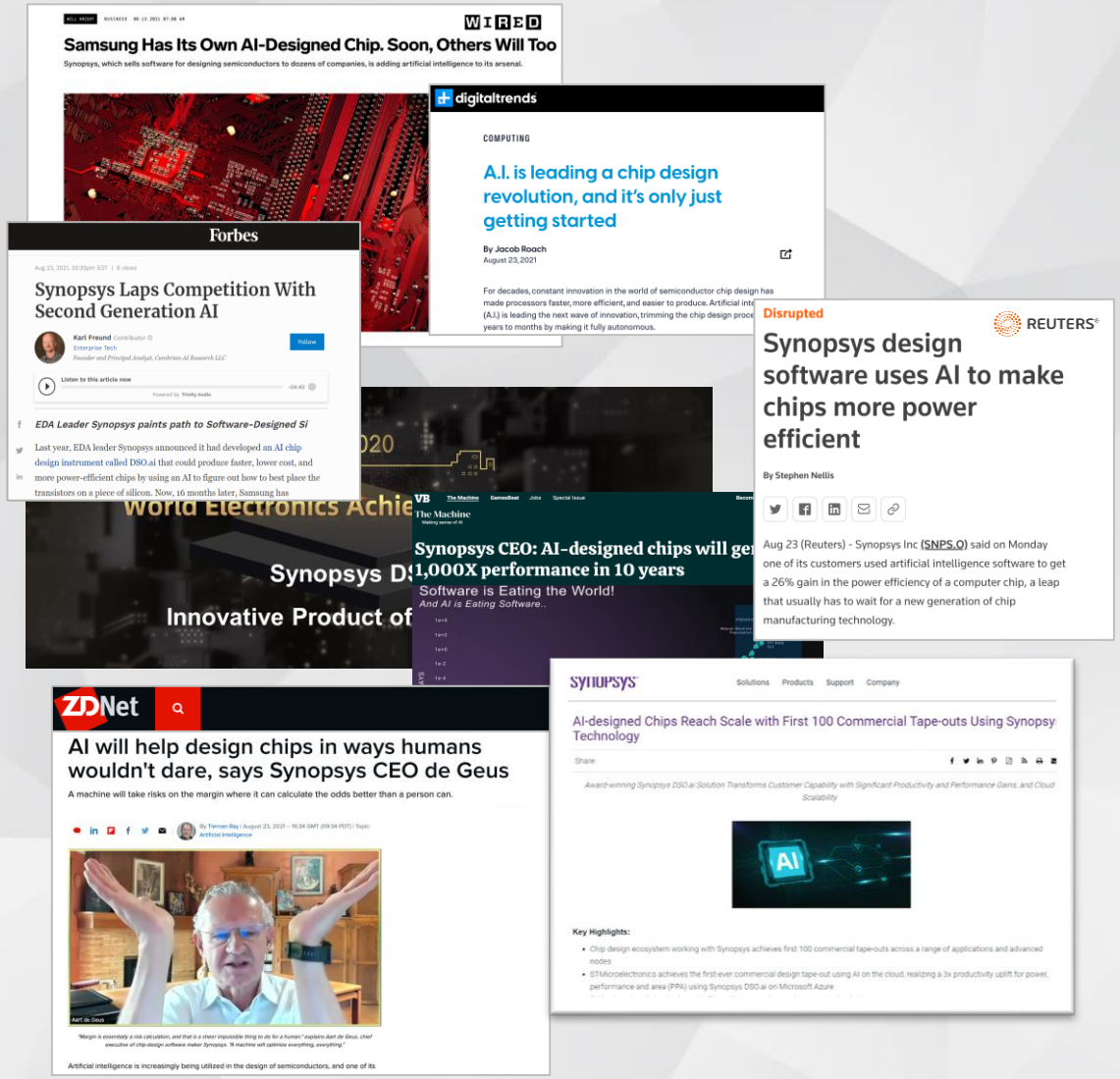
3 Test Space Optimization (**TSO.ai**) - AI Optimized ATPG QoR for fewer patterns

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DSO.ai Success & Momentum

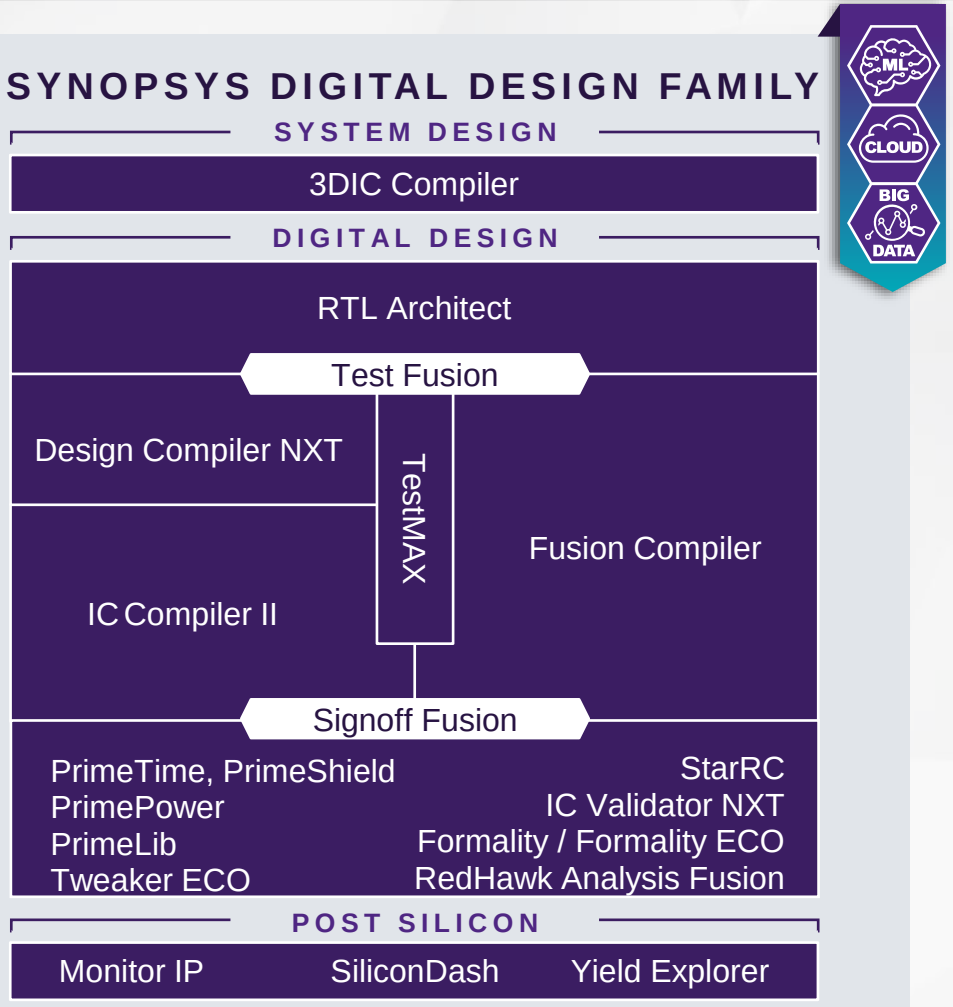
AI driven EDA Innovation

- Industry first AI App for Implementation
- Deployed in 9 out of top 10 semi logos
- 200+ production tape-outs & counting



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#1 in Digital Design: Synopsys Digital Design Family



Fusion Architecture	#1 Anchors: Synthesis, P&R, Signoff Fusion of algorithms, engines, data model
Innovative Products	Industry Unique Fusion Compiler DC NXT, Synopsys TestMAX, IC Validator NXT
Market Leadership	ML-enhanced tools, AI-driven apps Cloud-ready

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Verification Hardware: ZeBu® Server 5

Highest performance for large workloads

Performance and throughput 2X higher than prior generation

Ready for largest, multi-die designs

Unmatched reliability

99.9+% projected uptime

Best datacenter scalability through power and footprint

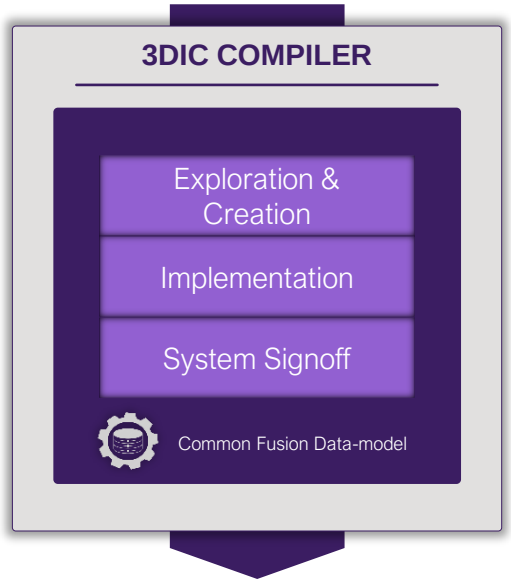


ZeBu Server 5

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Efficient Design Implementation for Multi-Die Systems

UNIFIED EXPLORATION-TO-SIGNOFF



Complete architecture-to-signoff solution in a consolidated user environment

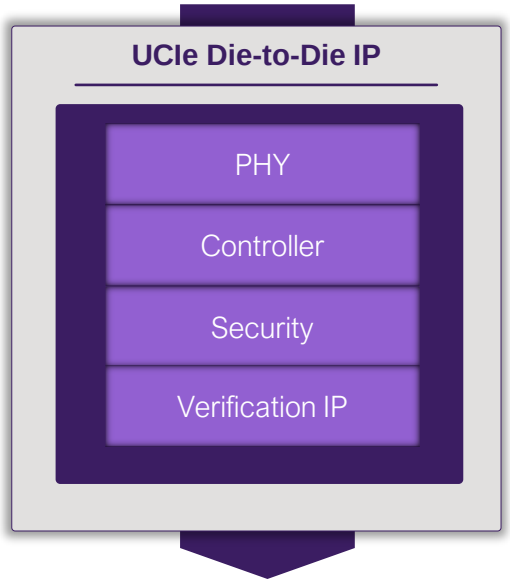
End-to-end solution for efficient, 2.5D, and 3D multi-die system integration

Scalable
100s of billions of transistors

Productive
Fast exploration & design

Golden Signoff
Convergence to optimal PPA/mm^3

DIE-TO-DIE IP



Delivers up to 4Tbps bandwidth in a multi-module configuration

Enables ultra-low latency link between two dies

Complete
PHY, Controller, VIP

Secure
Opt. Authentication Engine

Robust
Based on Proven IP

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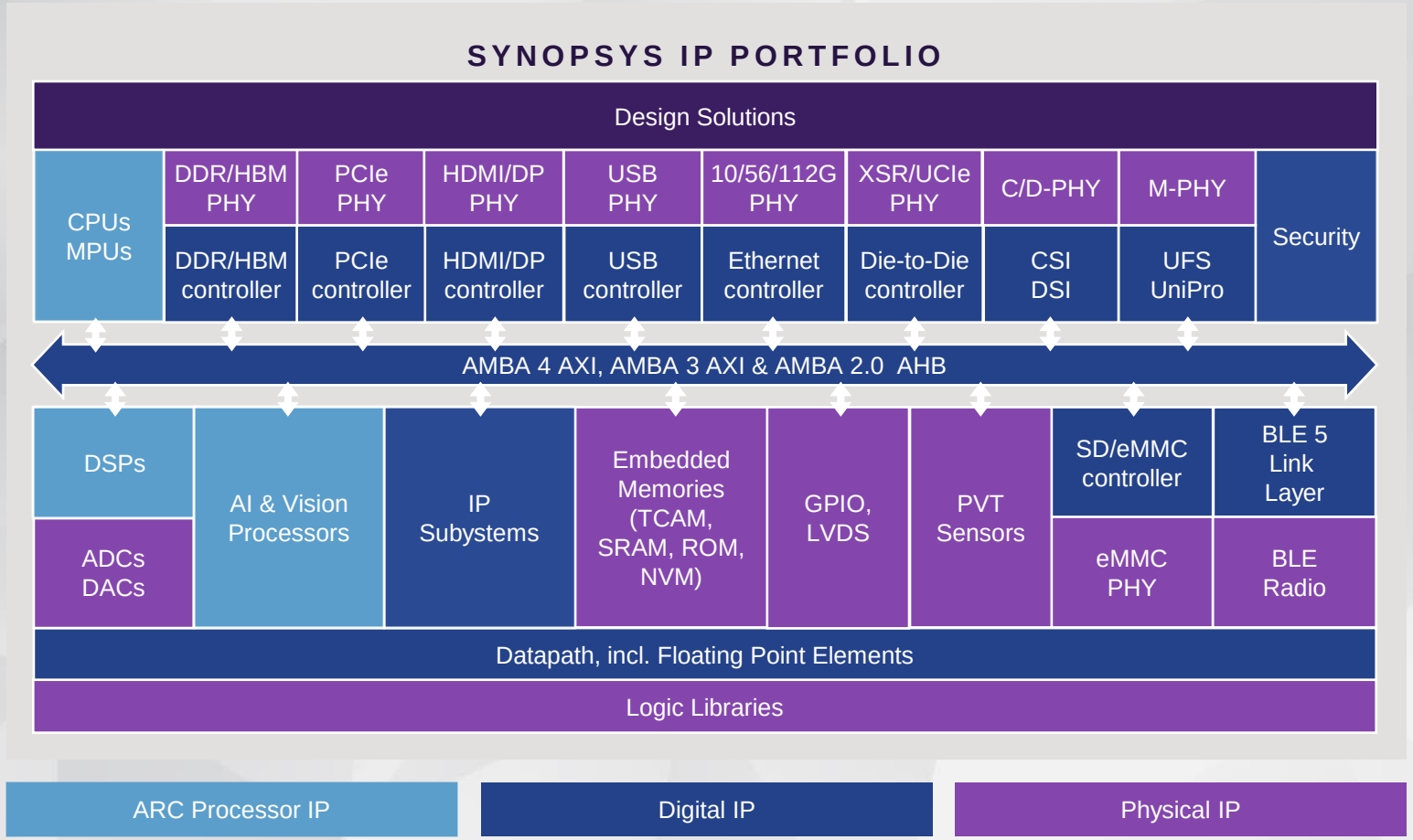
Leader in Design IP

- #2 market share in IP, the reusable building blocks that are used for chip designs
  - Leading supplier of interface, memory, analog and physical IP
  - ~$6.7 billion market*, benefitting from our customers' move to outsourcing more and more complex IP
- IP reuse reduces our customers' chip design costs, lowers risk and speeds time-to-market
- Serving high-impact, growing markets (IoT, Automotive, Security, Cloud Computing), advanced processes & protocols
- ~25 years of investment and commitment resulting in unmatched portfolio breadth, quality and reliability

* 2022; Source: IPnest, Internal estimates

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Broadest and Most Comprehensive IP Platform



Growing IP Demand	>20% growth in FY22
Broadest Portfolio	Interfaces, Analog, Foundation IP, Memories, Security, Processors
Competitive Differentiation	Unmatched global engineering team Dedicated to quality

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High-Impact Markets: Increasing Technology Complexity

Driving Growth in Third-Party IP Demand



AI

Machine Learning, Deep Neural Networks



AUTOMOTIVE

ADAS, Infotainment, Connected Vehicle



CLOUD

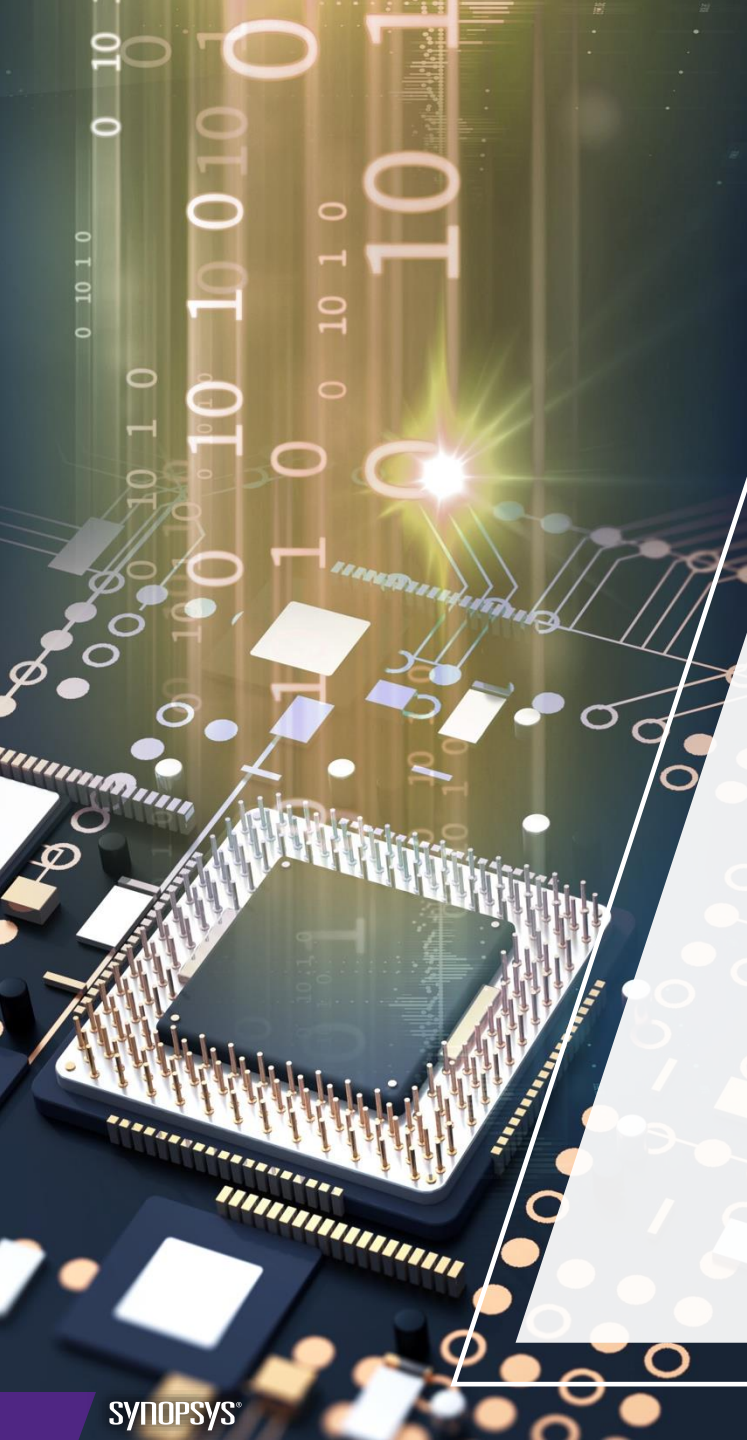
Networking, Servers AI Accelerators



IoT

Smart Home, Industrial, Wearables

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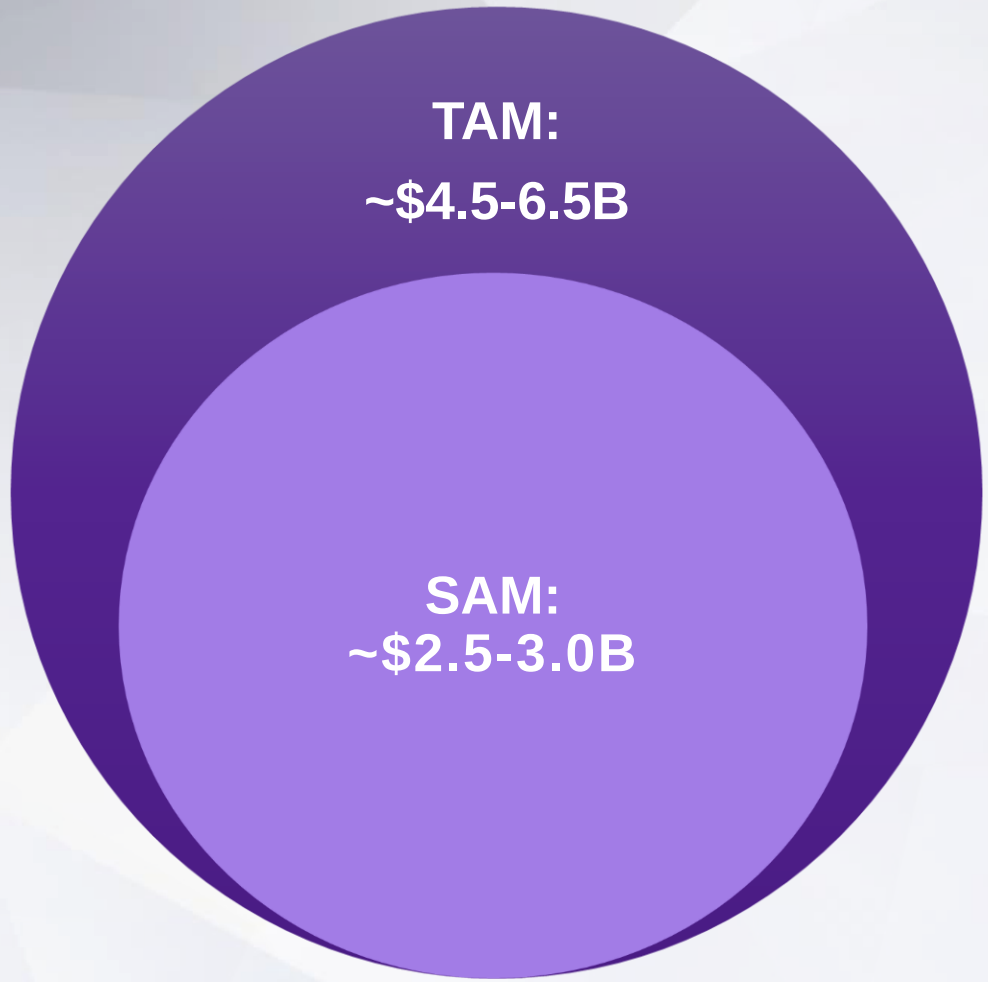


Leader in Software Integrity

- Assembled and developed the broadest portfolio of solutions on the market; >$500 million TTM revenue
- Solutions that enable organizations to manage application security, quality and compliance risks at the speed their business demands
- Approximately $2.5-3.0 billion served market: fragmented, with numerous point solutions; recognition of cost of software failure has increased dramatically
- Serving organizations in sectors ranging from embedded (including semis, systems) to enterprise (incl financial services, medical, industrial, automotive)

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Software Security & Quality Market



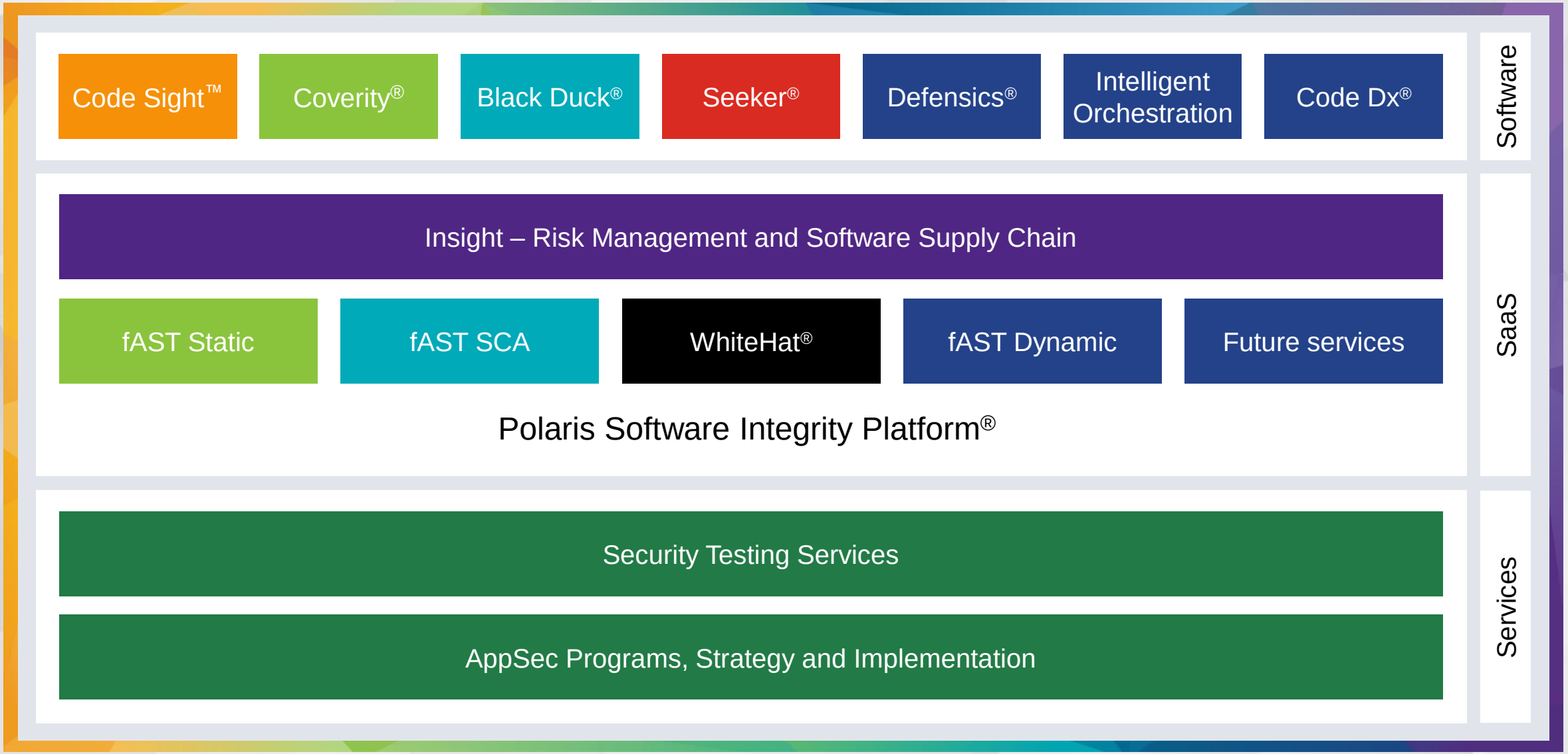
- Evolving market, ~15% growth
- Growth drivers:
  - Ubiquity and growth of software
  - Cloud transformation
  - Significant business risk from breaches
  - Rise of open source
  - Software supply chain complexities
- Synopsys long-term multi-year growth objective: ~15-20% range*

Sources: Gartner, Forrester, IDC, other external and internal analyses

*This multi-year objective was provided as of May 17, 2023

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Software Integrity Portfolio

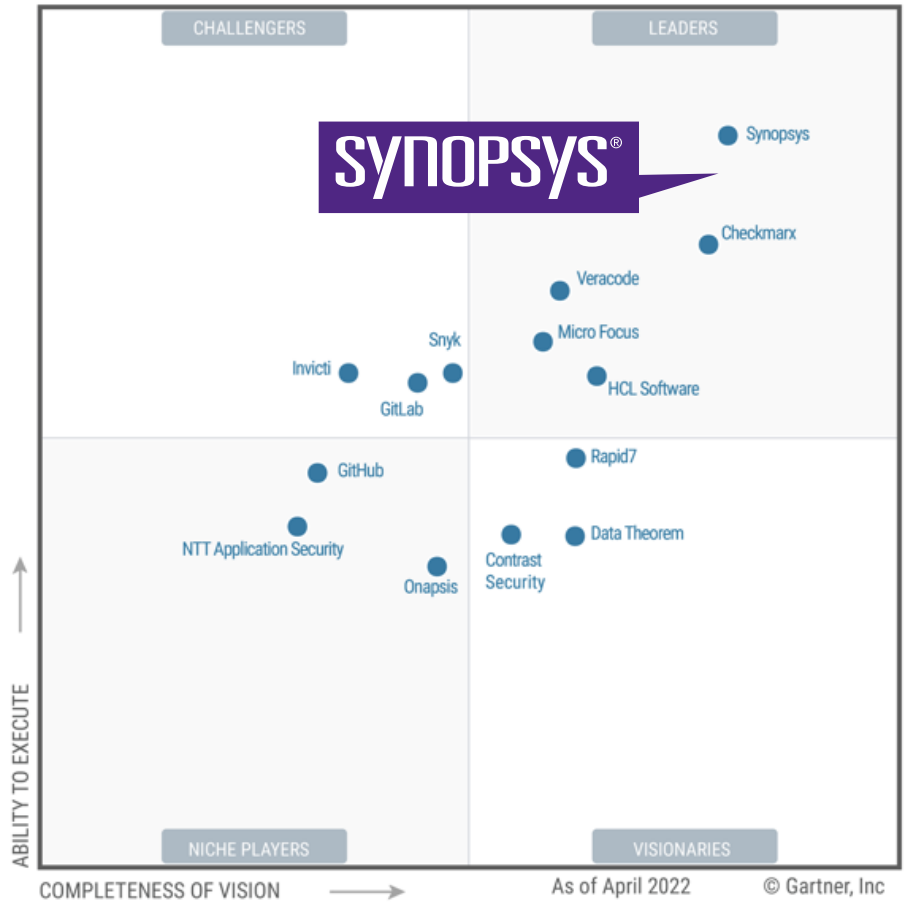


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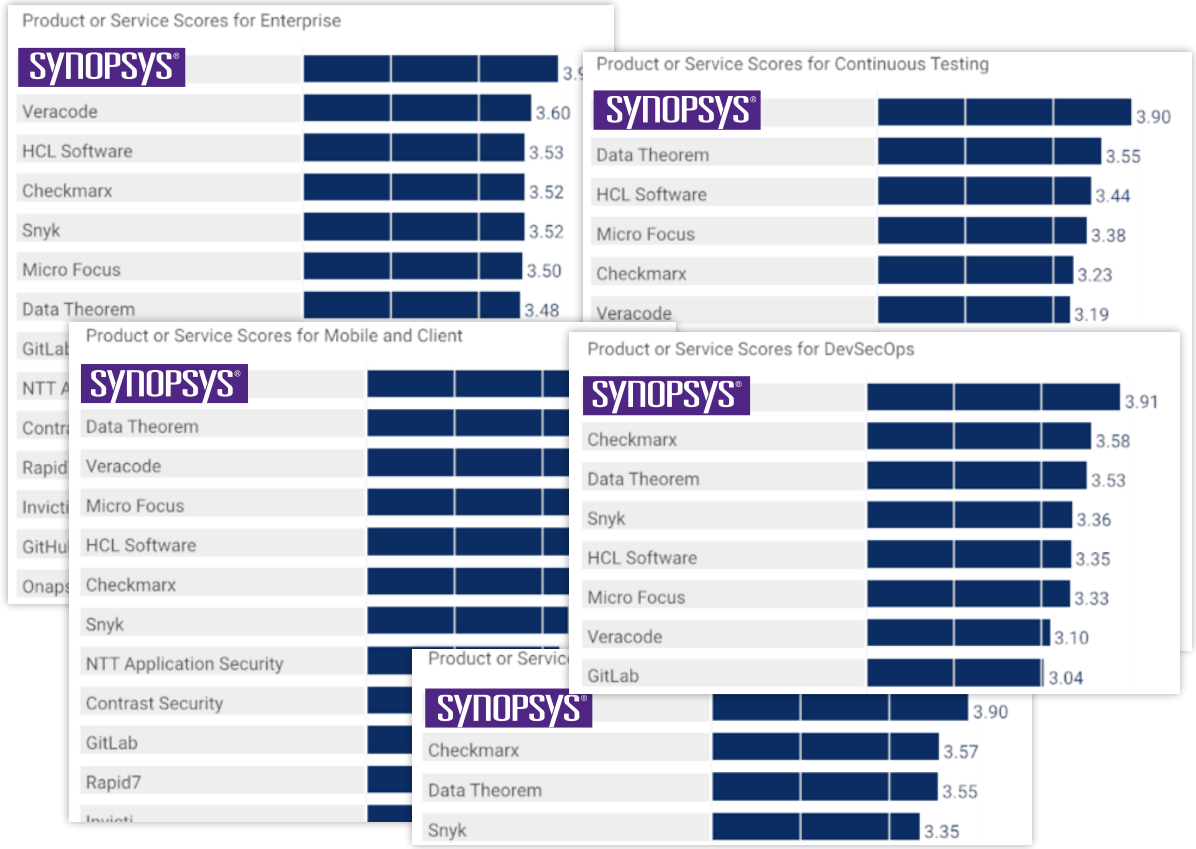
Market Leadership

Gartner®

Magic Quadrant for Application Security Testing



Top ranking in all five **Critical Capabilities** for Application Security Testing



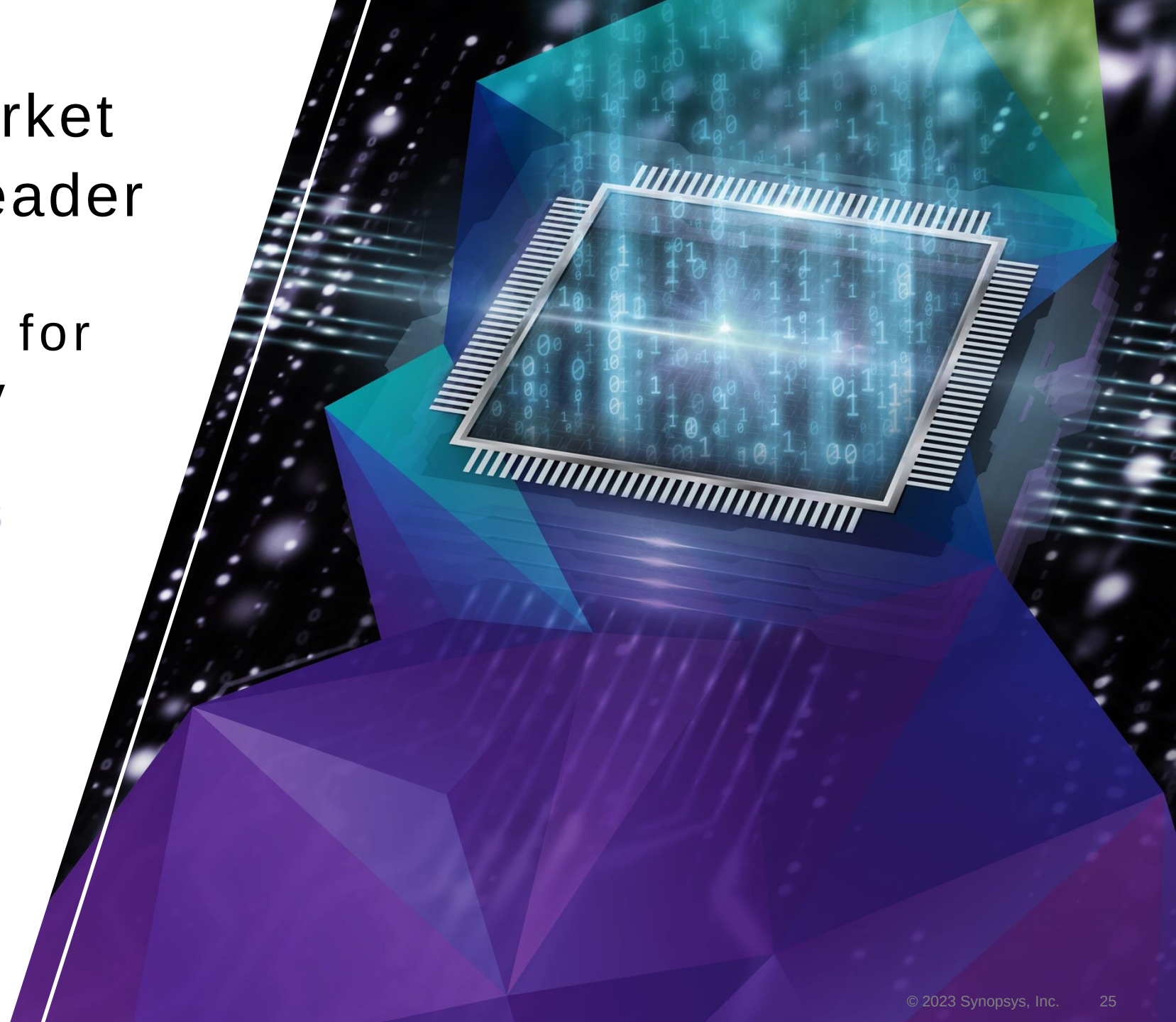
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Synopsys: The Market and Technology Leader

Uniquely Positioned for Growth and Stability

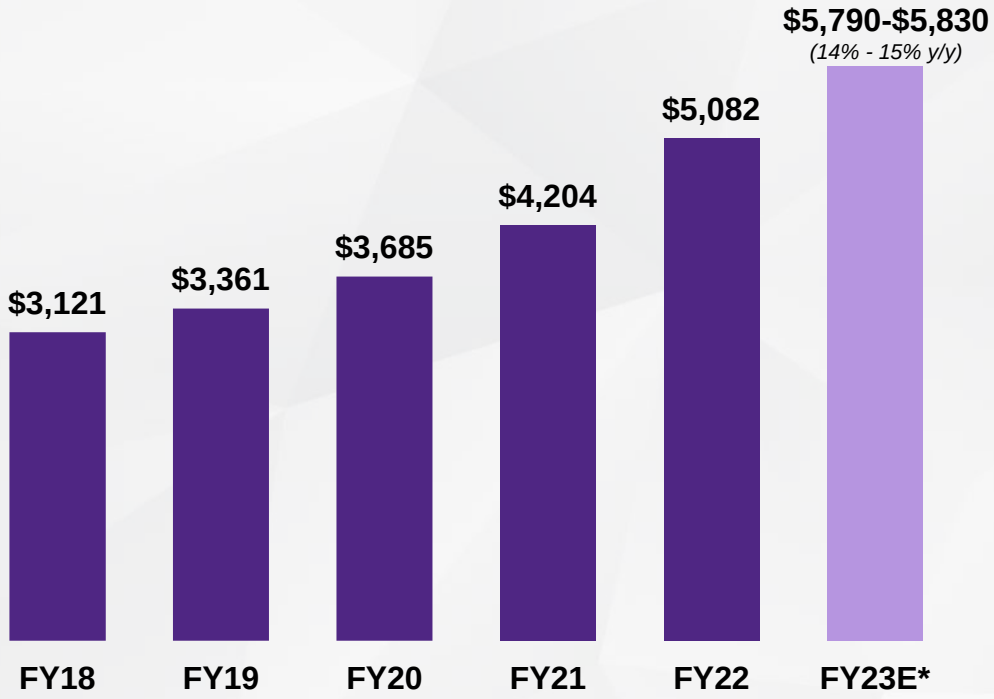
- Robust End Markets
- Clear Technology Leadership
- ▸ Financial Strength and Growth



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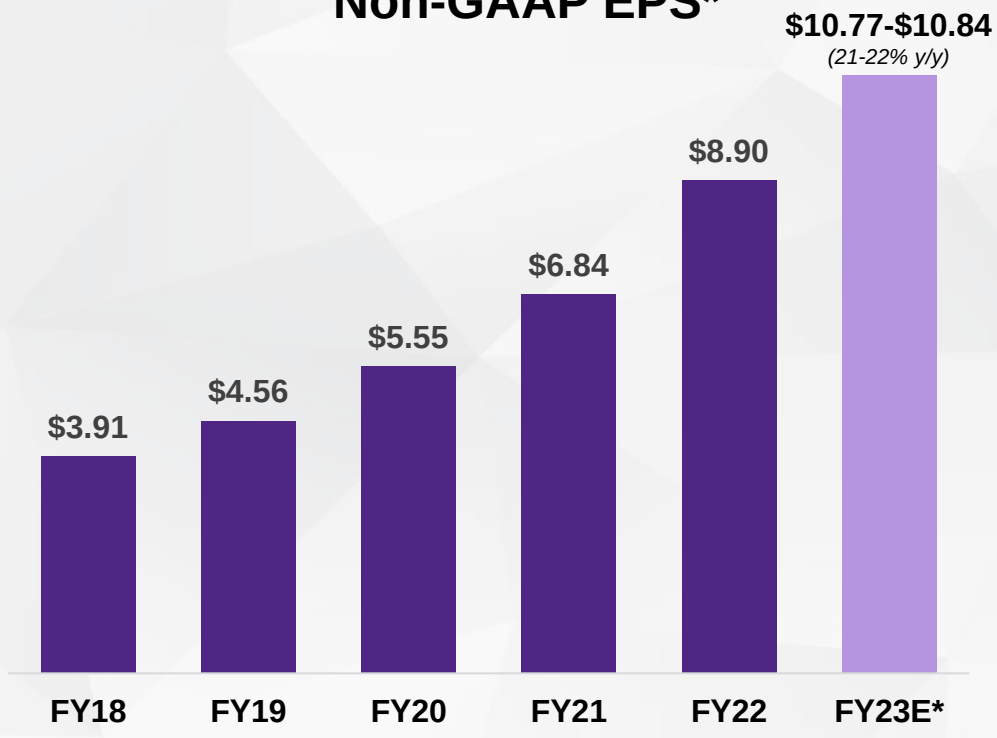
Excellent Financial Execution

Revenue (M)



Recurring revenue model with $7.3B non-cancellable backlog provides stability throughout the business cycle

Non-GAAP EPS*

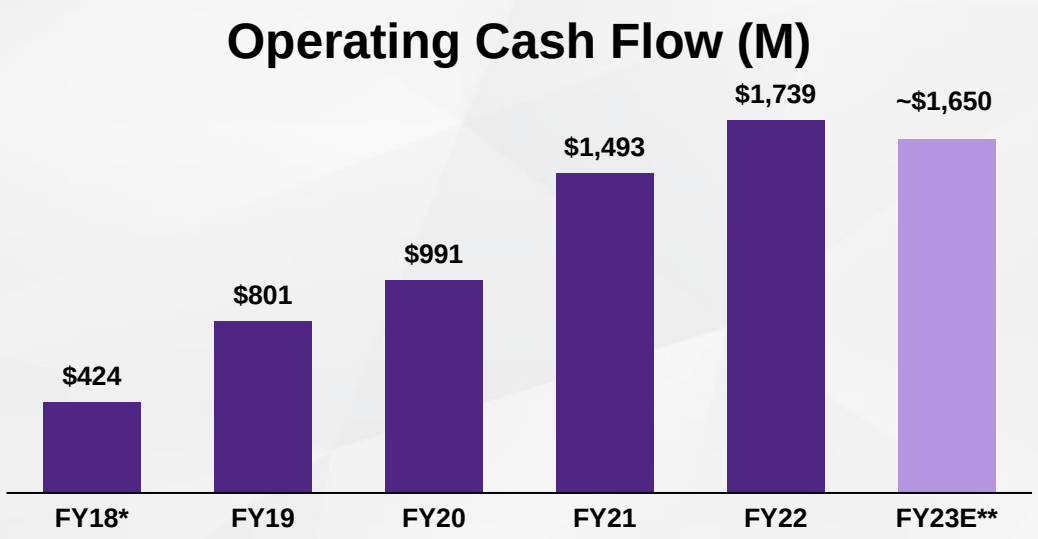


Strong financial execution while investing for long-term growth

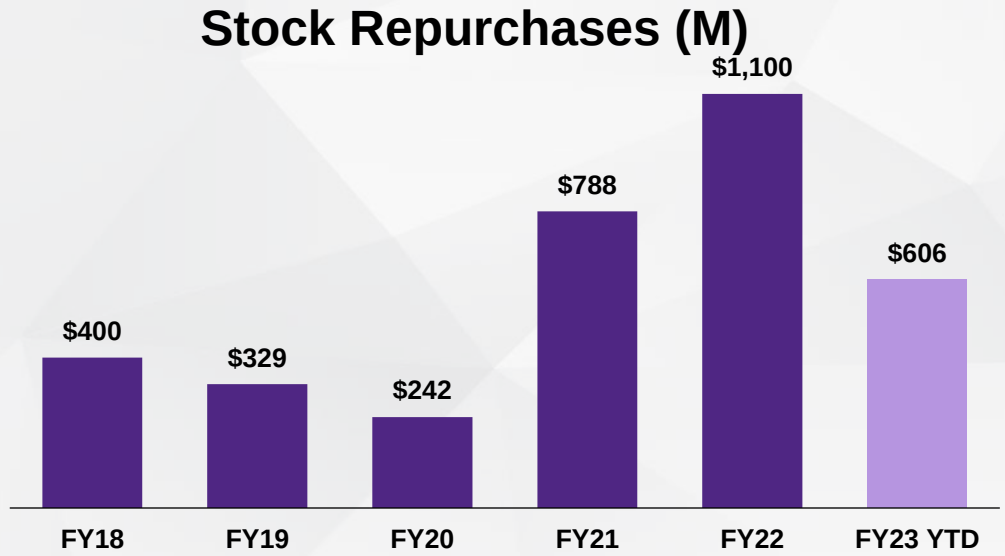
* FY23E reflects guidance provided as of May 17, 2023

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Cash Flow & Capital Allocation



- Roughly tracks EBITDA less cash taxes on multi-year basis
- It is important to consider multi-year averages, as operating cash flow is inherently lumpy



- Repurchased ~$3.5B in stock since 2018
- Capital allocation priorities:
  - Internal investments
  - Buybacks and acquisitions

* Includes approximately $230M in one-time payments
** FY23E reflects targets provided by Synopsys as of May 17, 2023.

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GAAP to Non-GAAP Reconciliation(1)

Earnings Per Share – Full Fiscal Year 2023 Targets

	Range for Fiscal Year Ending October 31, 2023	
	Low	High
Target GAAP earnings per diluted share attributed to Synopsys	$ 7.44	$ 7.60
Adjustments:		
Amortization of intangible assets	0.67	0.64
Stock compensation	3.77	3.71
Acquisition-related items	0.03	0.03
Restructuring charges	0.29	0.29
Tax adjustments	(1.43)	(1.43)
Target non-GAAP earnings per diluted share attributed to Synopsys	$ 10.77	$ 10.84
Shares used in non-GAAP calculation (midpoint of target range)	156,500	156,500

(1) Synopsys' fiscal year 2023 will end on October 28, 2023. For presentation purposes, we refer to the closest calendar month end.

For additional information about the measures Synopsys uses to evaluate its core business operations, please review the earnings press release and Item 2.02 of the Current Report on Form 8-K filed on May 17, 2023.

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GAAP to Non-GAAP Reconciliation[1][2]

Operating Margin – Midpoint of Fiscal Year 2023 Targets

	Twelve Months Ending October 31, 2023
At midpoint of revenue and expense guidance ranges	
GAAP operating margin	21.7%
Amortization of intangible assets	1.8%
Stock compensation	10.1%
Acquisition-related items	0.1%
Restructuring charges	0.8%
Target non-GAAP operating margin	34.5%

(1) Synopsys' fiscal year 2023 will end on October 28, 2023. For presentation purposes, we refer to the closest calendar month end.

(2) These numbers represent the midpoint of targets in the prepared remarks provided on May 17, 2023, and do not represent official guidance for fiscal year 2023.

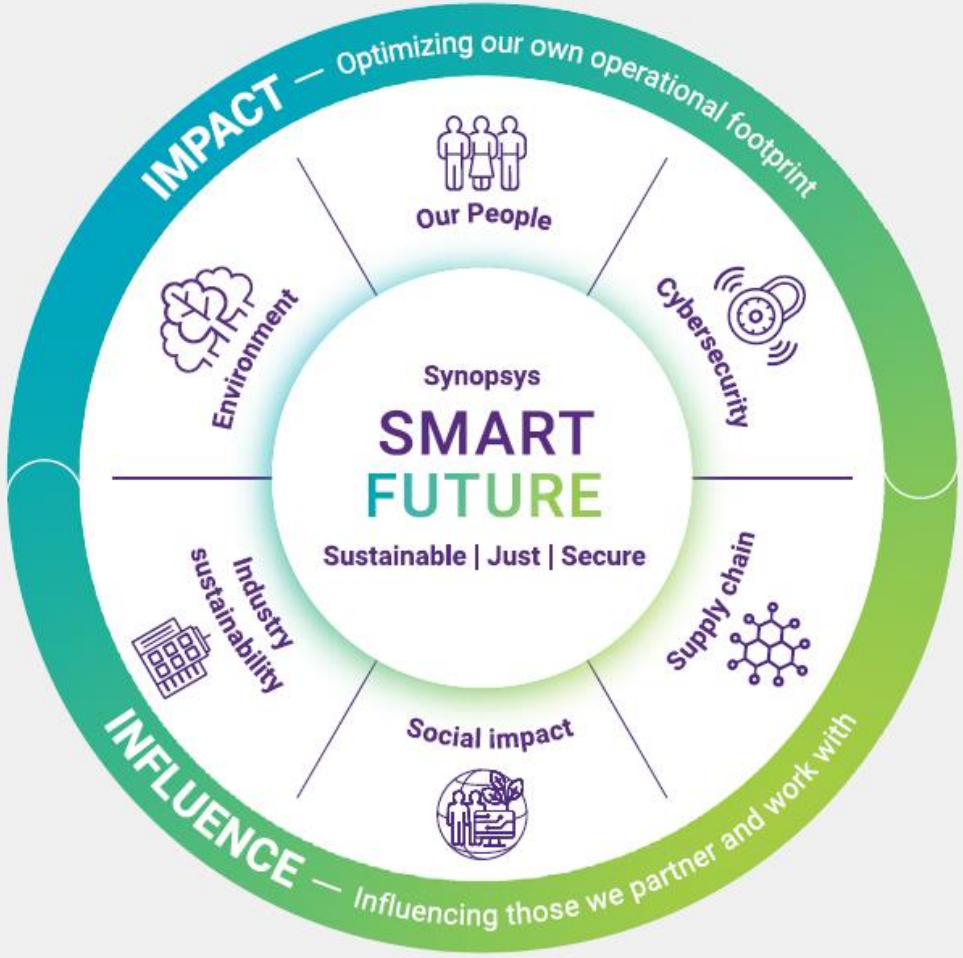
For additional information about the measures Synopsys uses to evaluate its core business operations, please review the earnings press release and Item 2.02 of the Current Report on Form 8-K filed on May 17, 2023.

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Environment, Social, Governance Highlights

Building a **Smart Future** Together

Synopsys' Smart Future ESG strategy provides a focus and structure for how we manage our own operational impact and influence others around us to create a better world.



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Synopsys 2022 ESG Progress Highlights

Environment

- Our low-power electronic design automation (EDA) solutions allow our customers to achieve an additional 25% power reduction for their systems-on-chip (SoCs)
- Developed new Greenhouse Gas (GHG) emissions reduction targets for review and validation by the Science Based Targets initiative (SBTi)
- Achieved CarbonNeutral® company certification for the fourth consecutive year
- Mitigated approximately 50% of our 2022 North America energy demand through the Azure Sky Wind Farm VPPA

Social

- 33% representation of women on the Board of Directors
- Increased total representation of women globally to 24.9%
- Launched NEX-GEN, a new ERG for young professionals at Synopsys South Asia
- Donated $4.7M to charities focused on STEM education, communities in which we work, and environment matters through Synopsys Foundation and Synopsys India

Governance

- Obtained ISO 22301 certification, the international standard for Business Continuity Management Systems to help safeguard our business operations

For more details, please refer to our 2022 ESG Report.

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SYNOPSYS
THANK YOU