



cādence®

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Cadence Design Systems, Inc.

Computational Software for Intelligent System Design

Company Overview Presentation

Q3 2022

Safe Harbor Statement and Regulation G

Safe Harbor Statement

The following discussion contains forward-looking statements, including our outlook on future business and operating results. Due to risks, uncertainties and other factors, many of which are outside our control, actual results may differ materially from expectations expressed or implied in the forward-looking statements. You should not rely on forward-looking statements as predictions of future events. All forward-looking statements in this discussion are made only as of October 24, 2022, are based on estimates and information available to us at that time, and we do not intend, and disclaim any obligation, to update them.

Additional information concerning factors that could cause actual results to differ can be found in our SEC filings, including our most recent Forms 10-K and 10-Q, and the cautionary statements regarding forward-looking statements in our October 24, 2022 earnings release, as well as our future filings.

Non-GAAP Measures

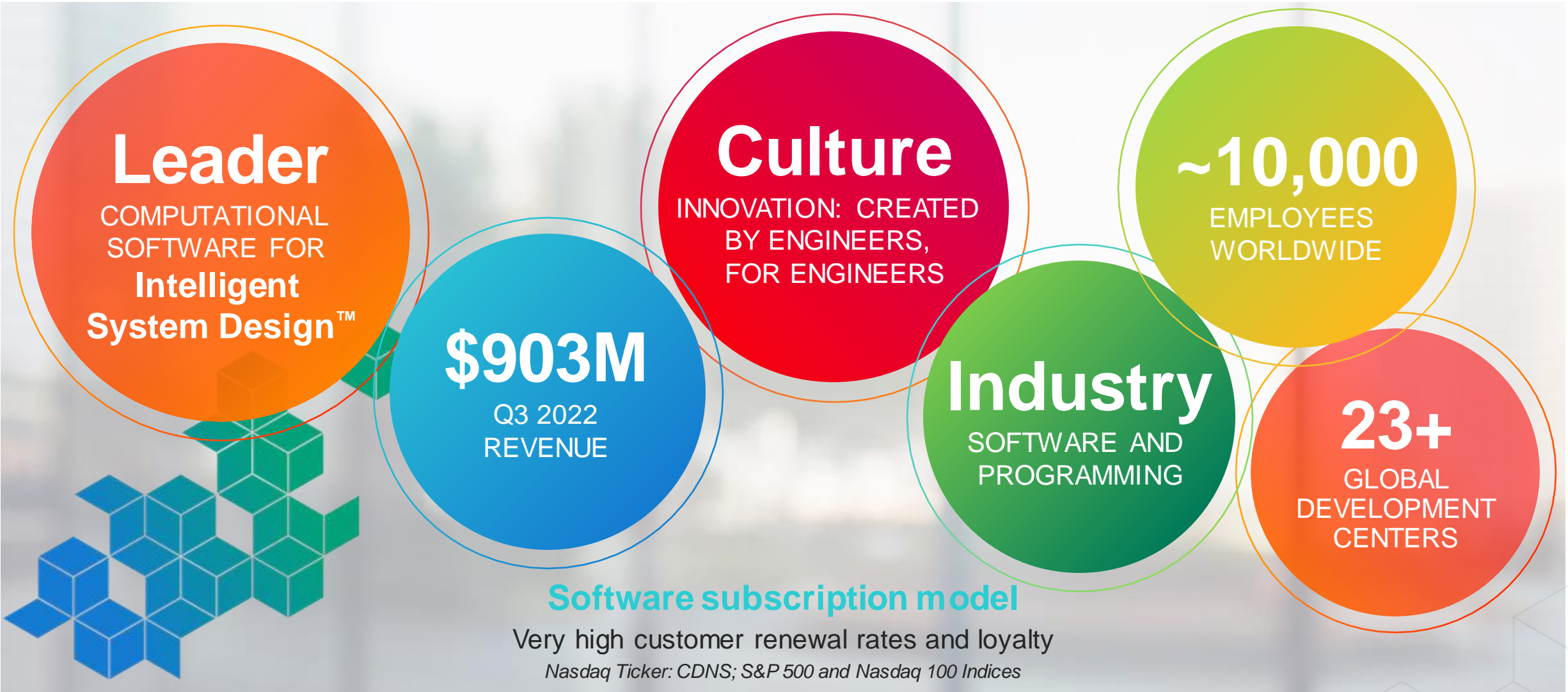
In addition, the following discussion contains certain non-GAAP measures, which should not be considered in isolation from, or as a substitute for, GAAP results. Reconciliations of non-GAAP measures with their most directly comparable GAAP results, including those set forth in our October 24, 2022 earnings release and CFO Commentary for the quarter ended October 1, 2022, are available in the quarterly earnings section of the investor relations portion of our website at [cadence.com](https://www.cadence.com).



Company Overview

Cadence at a Glance

Computational technology for designing today's electronic systems

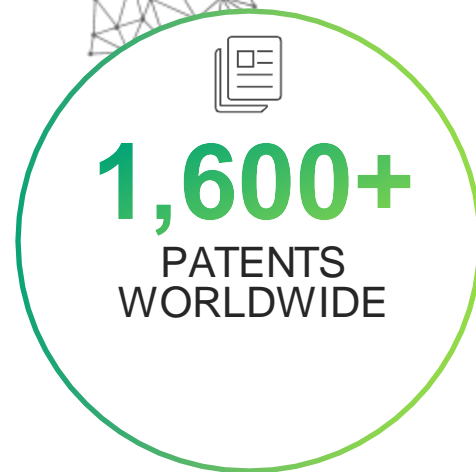
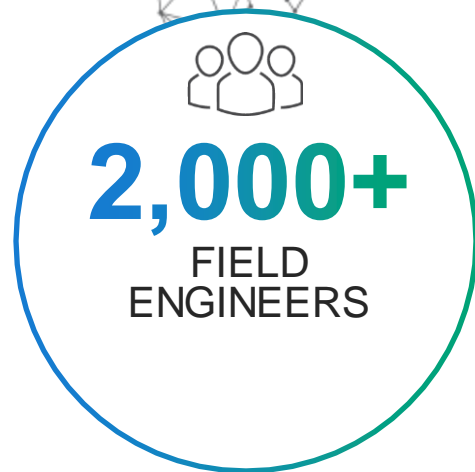
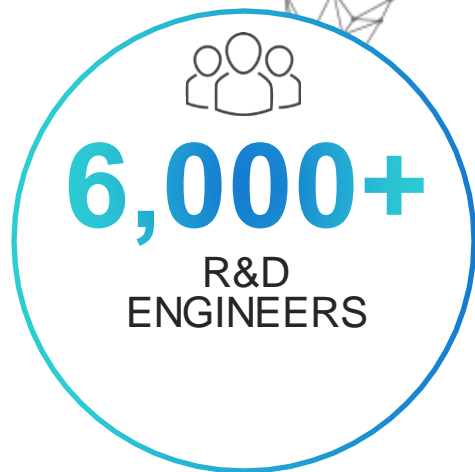
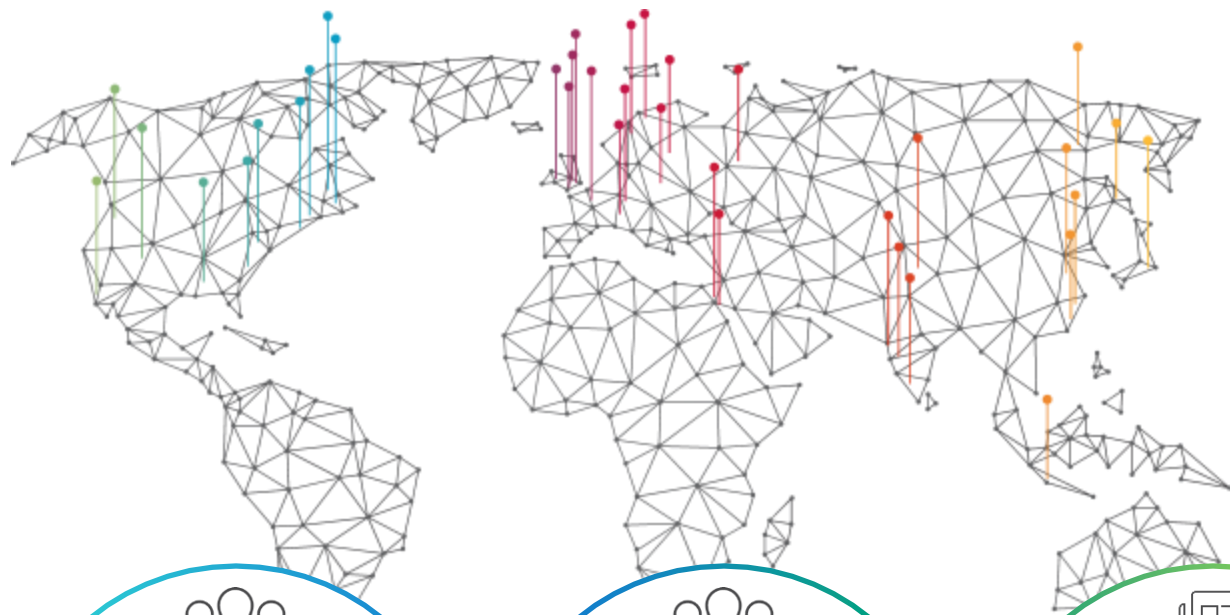


Source: Cadence Earnings Press Release, October 24, 2022
https://www.cadence.com/en_US/home/company/new-room/press-releases/pr-ir/2022/cadence-reports-third-quarter-2022-financial-results.html

A Great Place to Work Around the Globe



Developing and Deploying Computational Software



Cadence People and Sustainability



Innovation

Launched 13 significant, innovative products in 2021 across all business groups enabling the next wave of sustainable innovation



Net-Zero GHG

Reduced Scope 1 and 2 emissions by 32% in 2021 over 2019 baseline achieving our 2025 target early
Set a target to reduce Scope 1 and 2 emissions 50% by 2030
Set a target to be Net-Zero across all operations by 2040



Cadence Giving Foundation

Launched the Cadence Giving Foundation to promote the power of technology to support critical needs in our global communities like diversity and inclusion, environmental sustainability, and education



Diversity, Equity, and Inclusion

Our U.S. Black, Latinx, Veteran, LGBTQ+, and Women Employee inclusion groups
Built new communities within Cadence through cultural celebrations and initiatives throughout the year



25+ Best Workplace Recognitions

Across 13 countries, including Fortune's 100 Best Companies to Work For, Fortune's World's Best Workplaces, and Newsweek's Most Loved Workplaces



Newsweek's Most Responsible Companies

Recognized as #115 on Newsweek's 500 Most Responsible Companies and #6 in our industry



Best Workplace for LGBTQ+ Equity

Named one of the Best Places to Work for LGBTQ+ Equality by the Human Rights Campaign Foundation



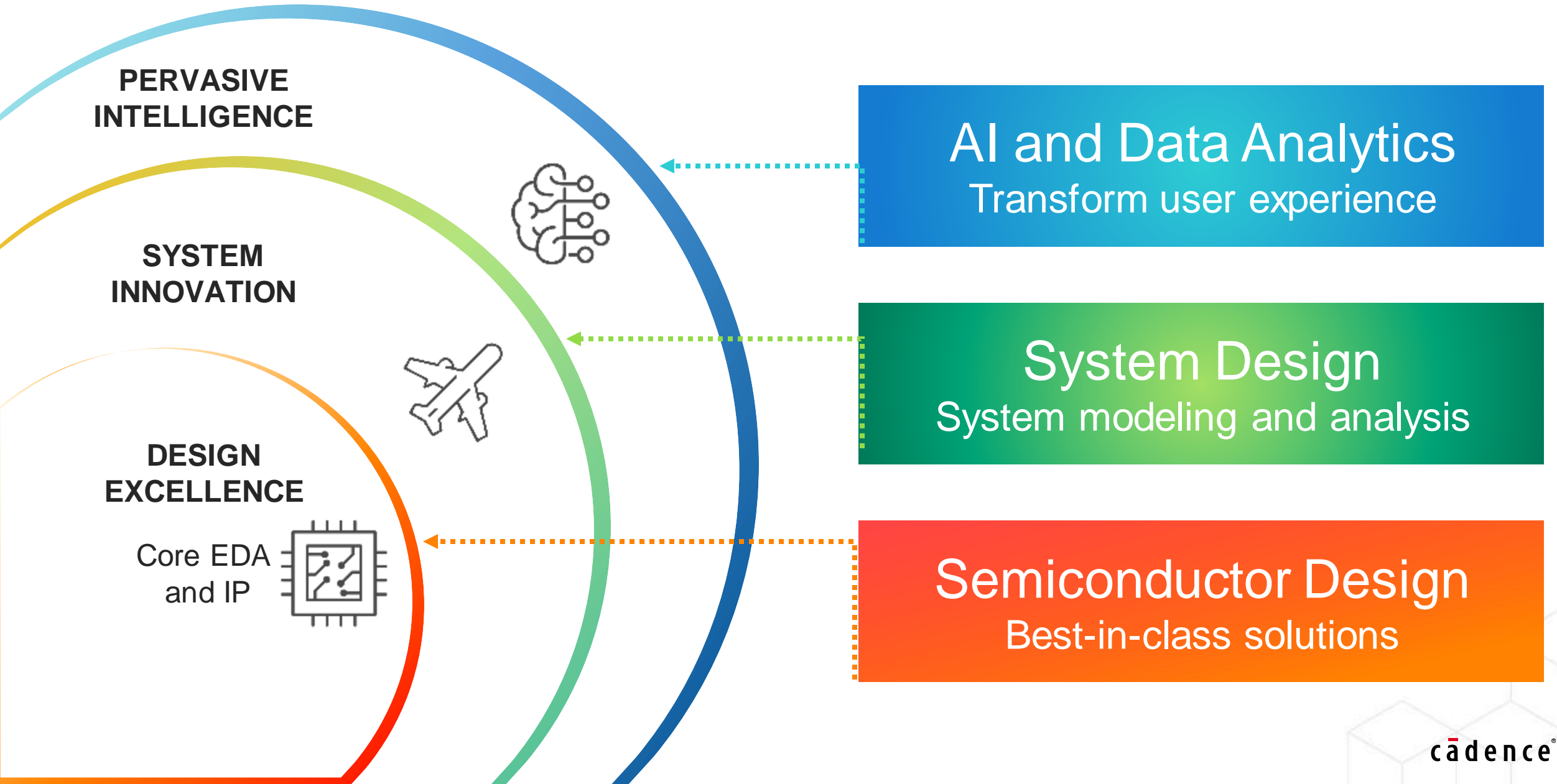
Investor's Business Daily Top 100 ESG Companies

Recognized by Investor's Business Daily as one Of IBD's 100 Best ESG Companies of 2022



Intelligent System Design Strategy

Cadence Design Systems Strategy



Cadence Is Your Partner to Enable this Convergence

30 Years of Computational Excellence

- Numerical solvers
- Binary decision diagrams
- SAT solvers
- Symbolic model checkers
- SMT solvers
- Bounded model checker
- Adaptive meshing
- Matrix solvers
- Graph theory and topology
- Distributed processing
- Non-linear solvers
- Computational geometry

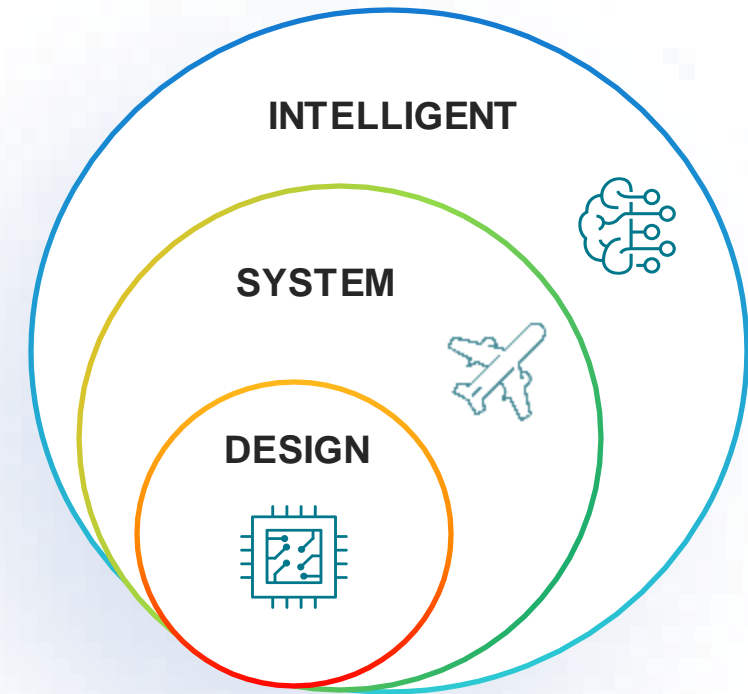
Design
IP

Digital
Design

Custom
Design

Verification

System
Analysis



cādence[®]

Intelligent System Design[™]

Major Electronics Industry Drivers

The semiconductor industry is rapidly growing as a result of an unprecedented combination of technology drivers impacting multiple industry segments

Data Science and Machine Learning



Hyperscale Computing



Autonomous Vehicles



5G Communications



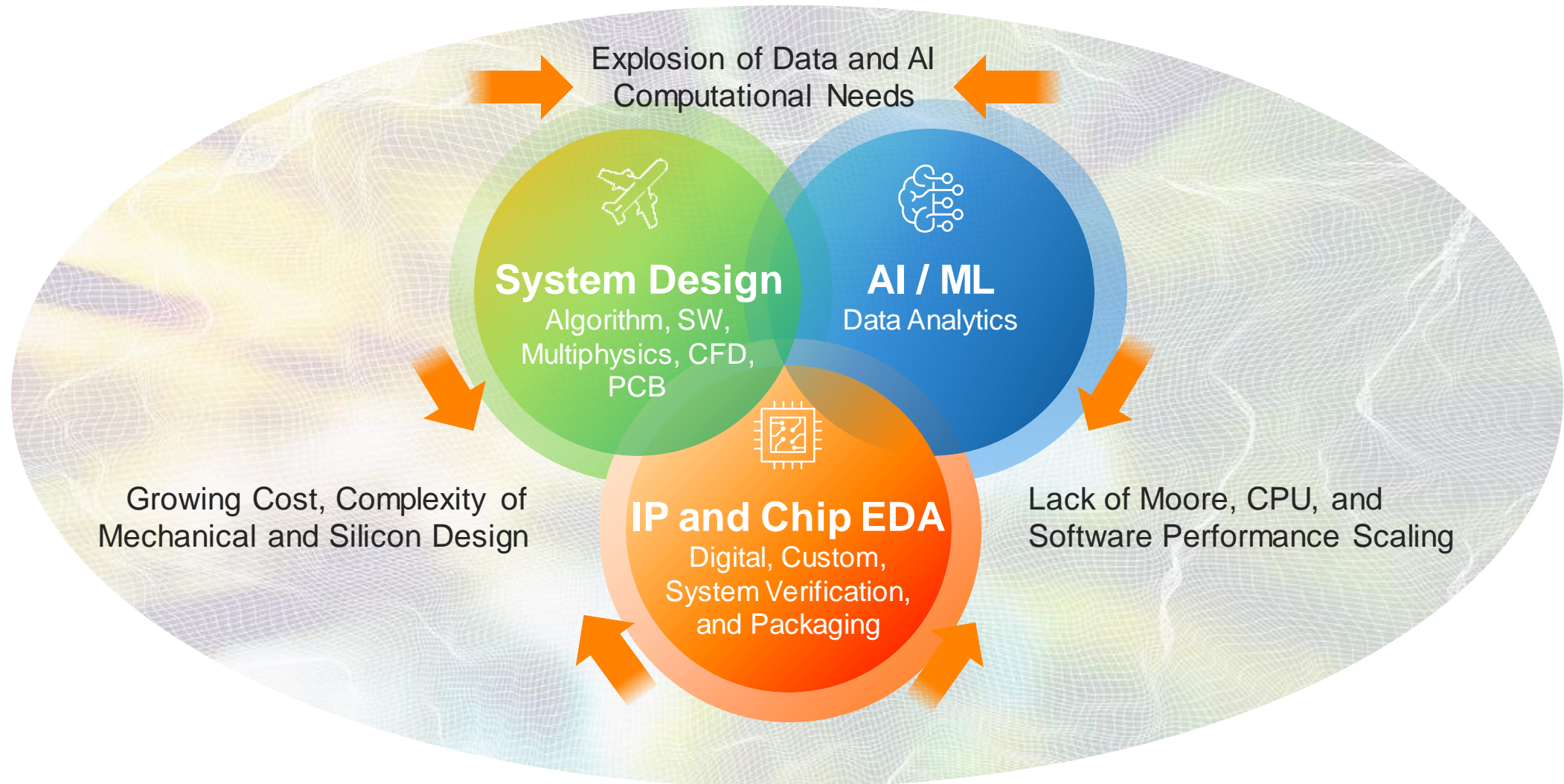
Industrial IoT



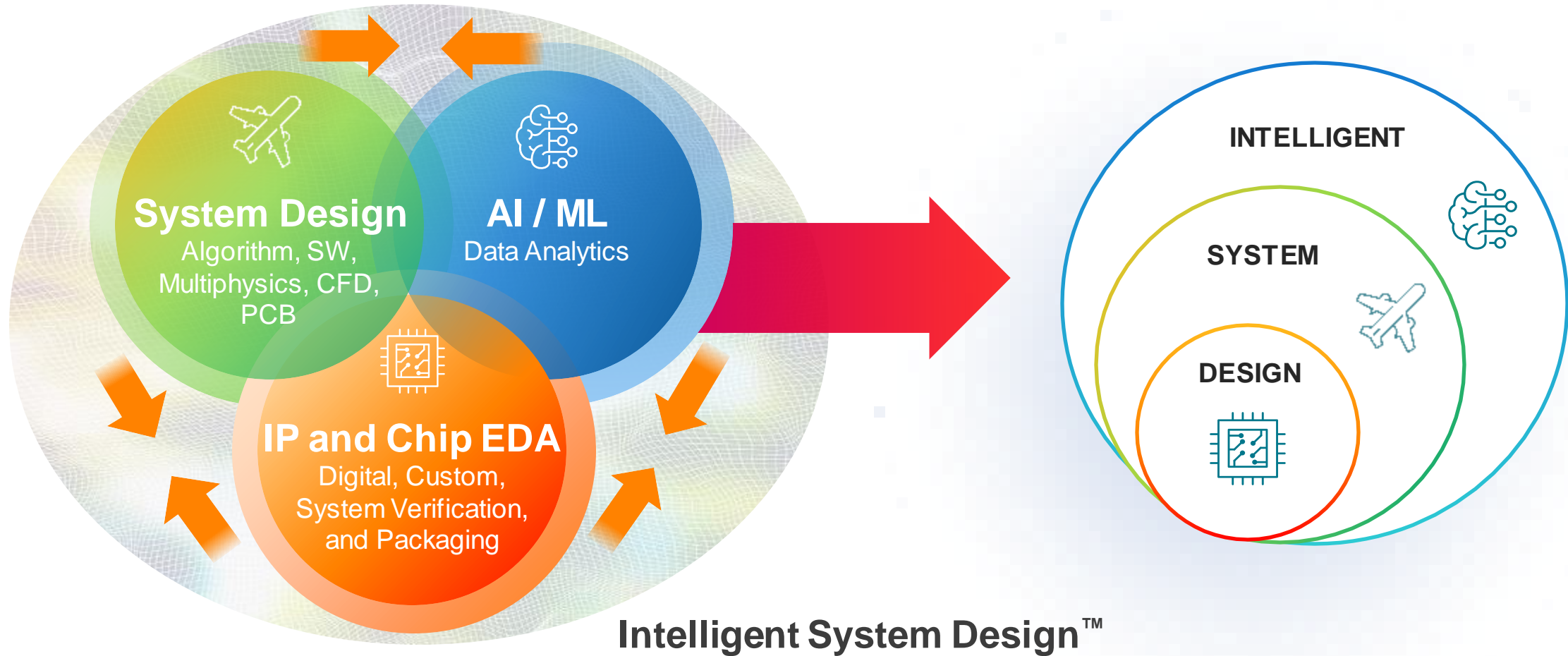
Healthcare



Drivers of Convergence in Computational Software



Cadence Is Leading the Computational Software Convergence



Intelligent System Design™

Merger of EDA, system design, AI

Pervasive intelligence throughout design

Grounded in computational engineering

Co-optimizing system, hardware, software

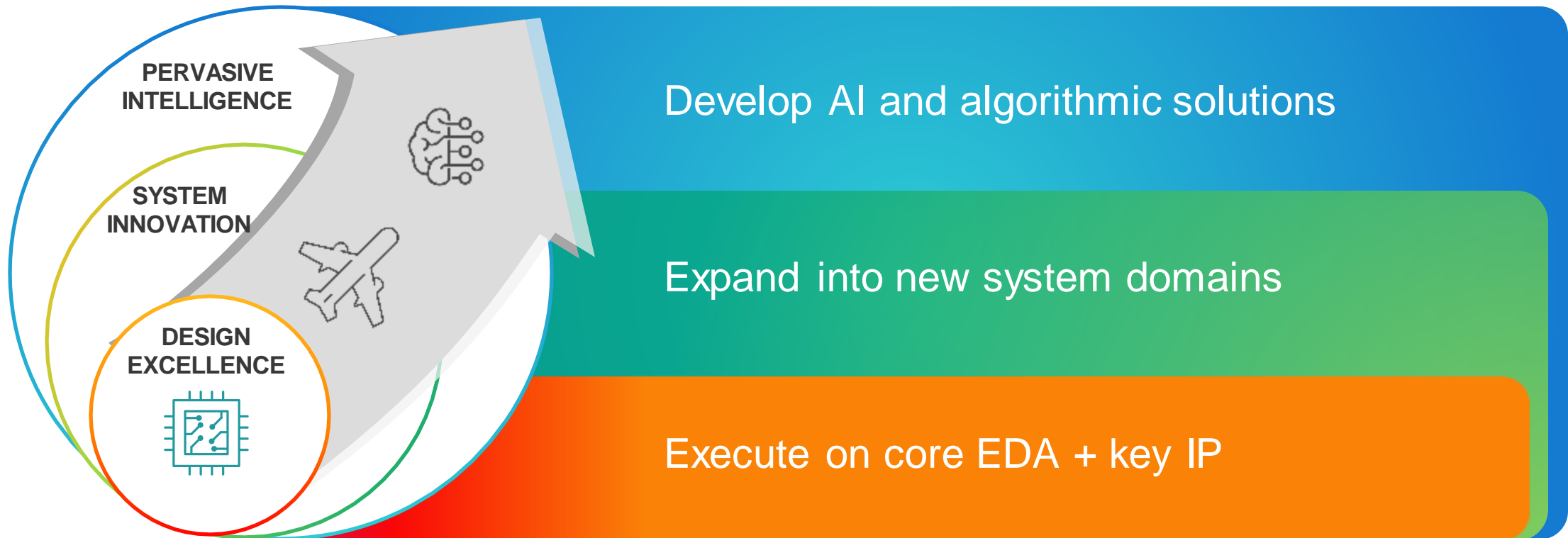
Spanning multiple system domains

Intelligent System Design – Expanding Beyond Traditional EDA

- The **Intelligent System Design™** strategy drives growth in our core EDA and IP business, broadens our reach in system companies and targeted verticals, and guides expansion into newer adjacent areas.
- The foundation of the strategy continues to be delivering semiconductor device **design excellence** via our core EDA and IP business. In addition, we are building upon our core competency in computational software to expand into two new areas:
 - **System innovation**, where we are expanding into new system domains, and
 - **Pervasive intelligence**, where we will apply AI and our algorithmic know-how to our core business and specific verticals.

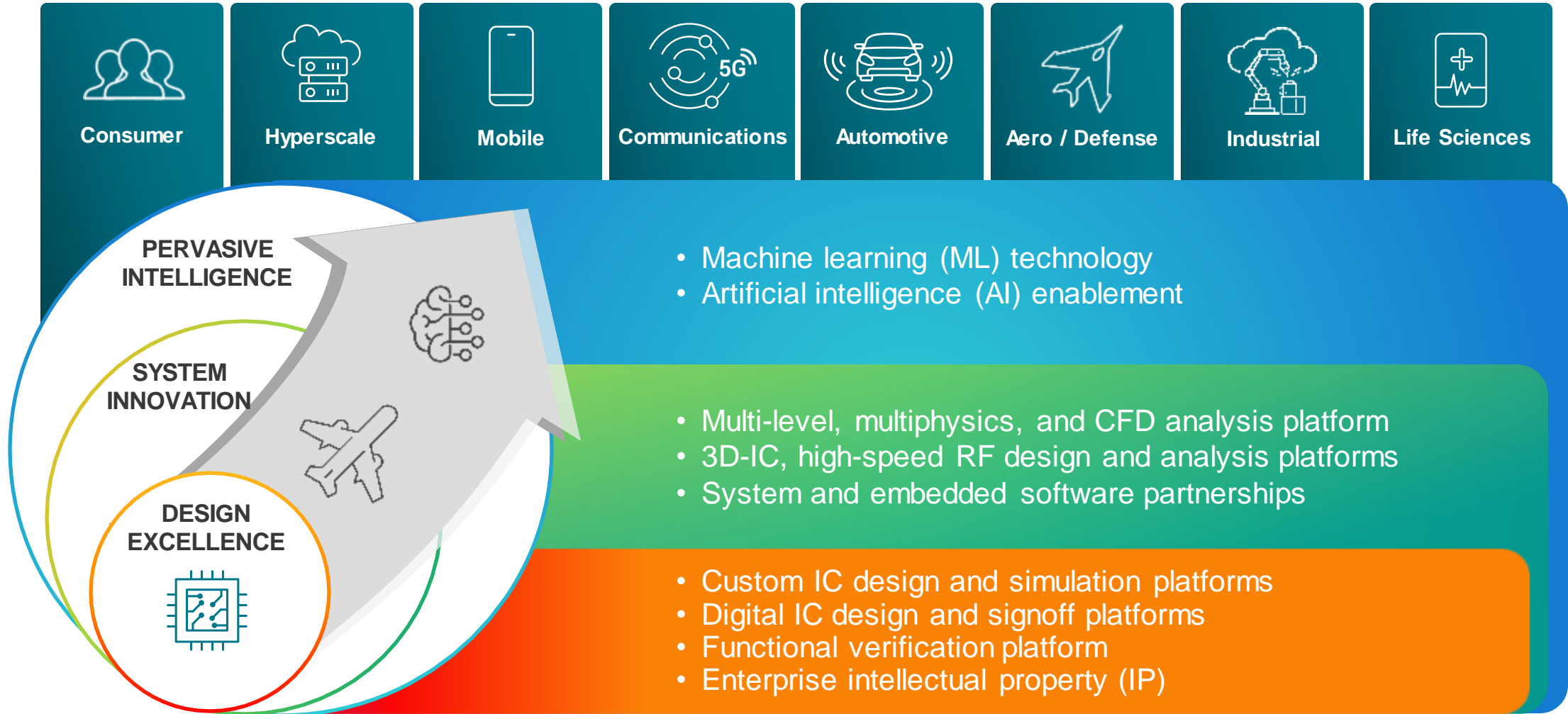
Cadence Intelligent System Design Strategy

Computational Software as a Core Competency



Cadence **Intelligent System Design** Strategy

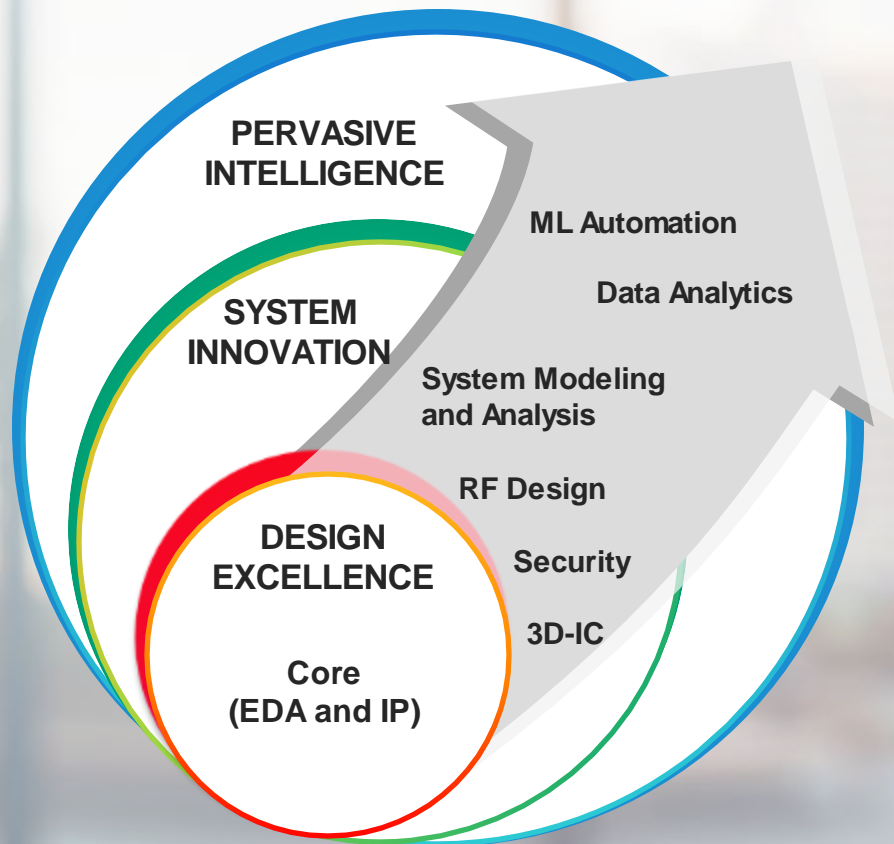
Enabling end-to-end systems from devices to the cloud



Cloud Enabled — Partnerships with Ecosystem Leaders

Recent Product Innovation and News

**20+ significant products
in the past 3 years**



Pervasive Intelligence

- Verisium™ AI-Driven Verification Platform – Automated verification and debug
- Optimality™ Intelligent System Explorer – Multiphysics optimization software enabling multidisciplinary analysis and optimization (MDAO) realization of electronic systems
- Cadence® Cerebrus™ Intelligent Chip Explorer – 10X productivity and 20% better PPA
- Cadence® Joint Enterprise Data and AI (JedAI) Platform – Unified data and AI platform

System Innovation

- Integrity™ 3D-IC Platform – Multi-chiplet design and advanced packaging
- Fidelity™ CFD Software – Next-generation scalable CFD solution
- Future Facilities Software – Data center thermal planning and analysis
- Cadence® OnCloud – A SaaS software platform offering easy cloud-based access to comprehensive, scalable software for electronic system design and analysis

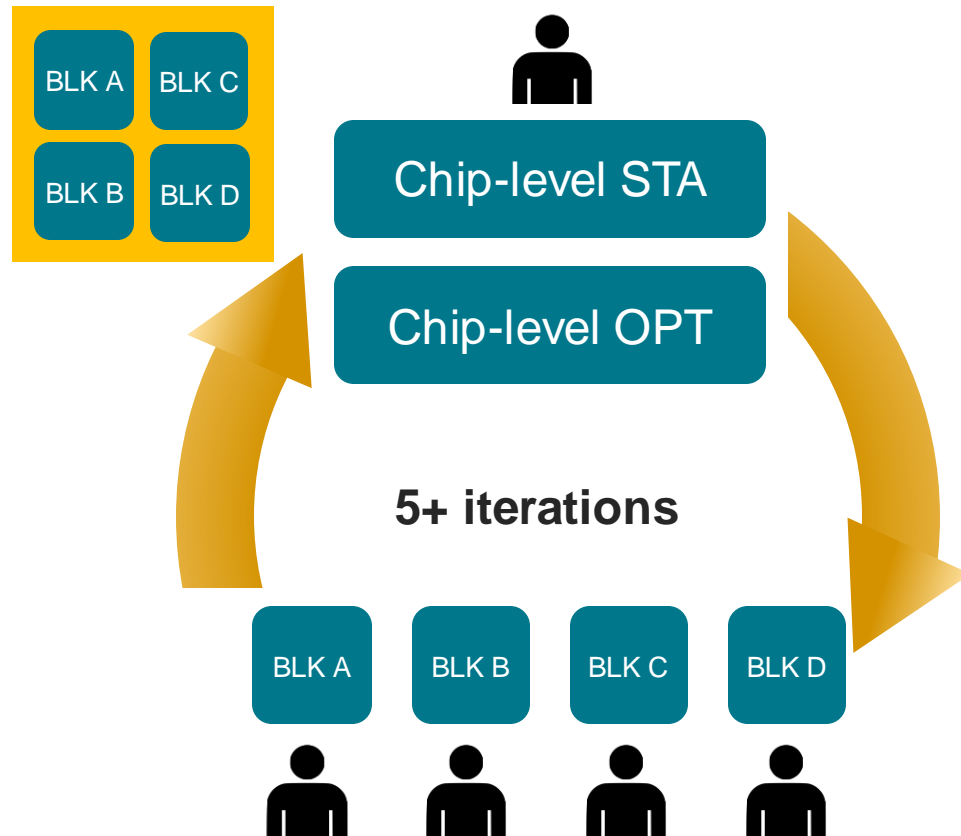
Design Excellence

- Cadence Certus™ Closure Solution – Fully automated and massively distributed to support unlimited capacity
- Spectre® FX – FastSPICE circuit simulation enabling efficient design, verification and characterization of memory and large-scale SoC designs
- Voltus™ -XFi – Custom power integrity solution, delivering over 3X productivity gains

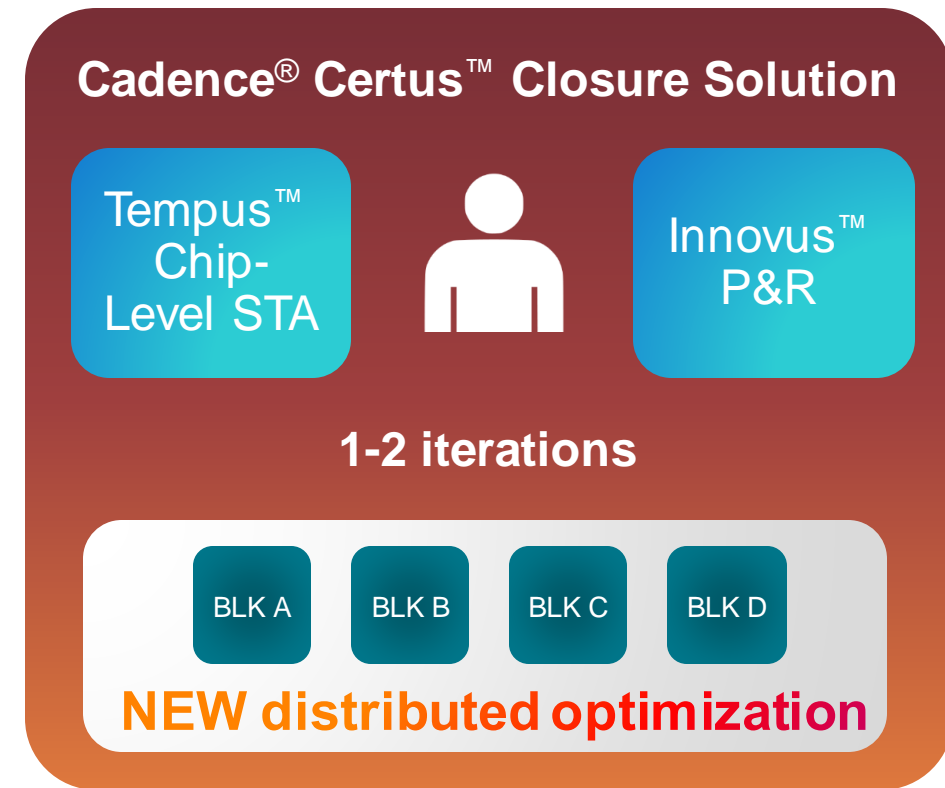
Source: Cadence Earnings Press Release, October 24, 2022
https://www.cadence.com/en_US/home/company/new-room/press-releases/pr-ir/2022/cadence-reports-third-quarter-2022-financial-results.html

New **Cadence Certus** Closure Solution

Fully automated and massively distributed environment

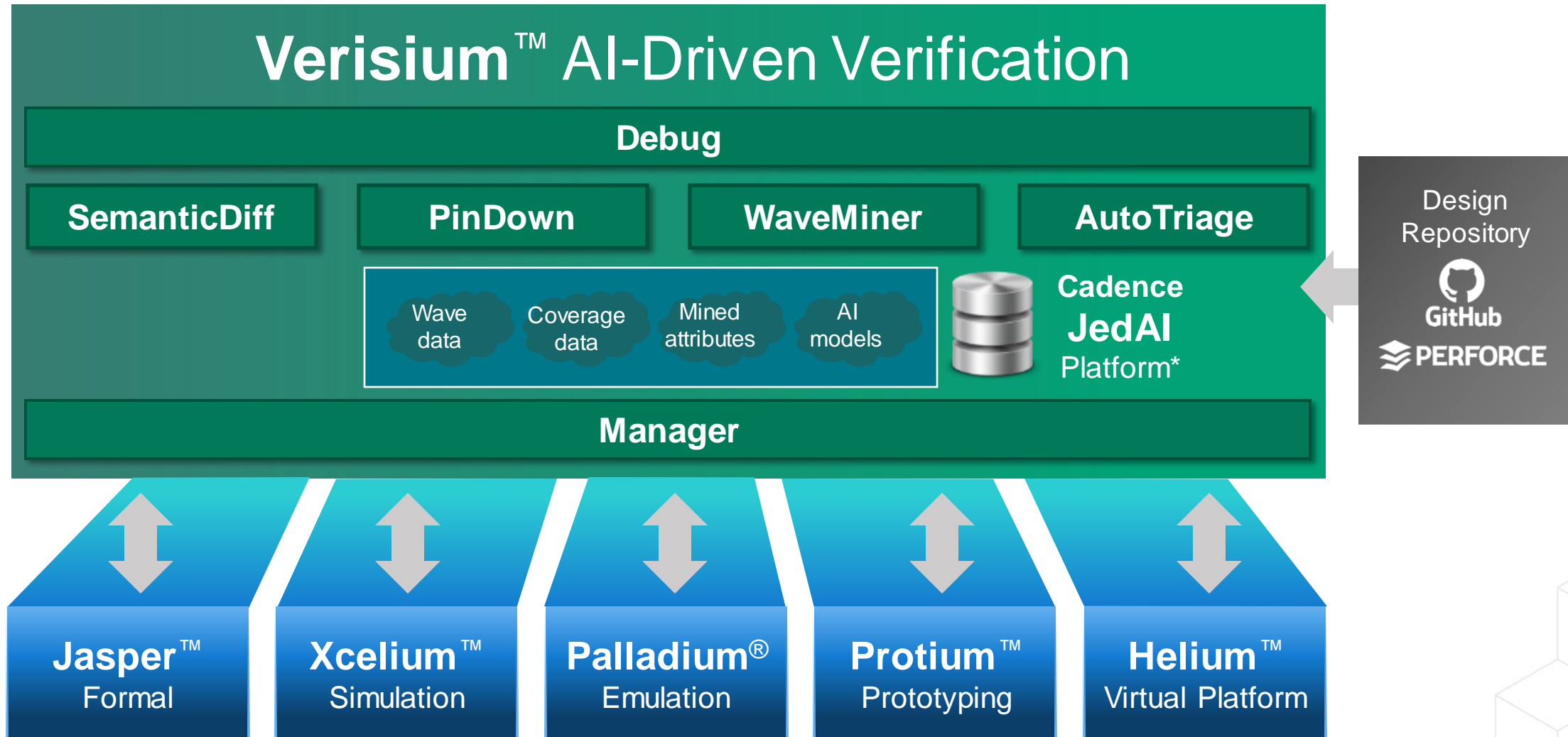


- ✗ 1-2 week TAT per iteration
- ✗ Ad-hoc flow requiring teams of engineers
- ✗ Lacks capacity for full-chip power recovery



- ✓ 5X faster TAT, 10X better productivity
- ✓ Integrated environment for concurrent opt and signoff
- ✓ Up to 10% better interface power

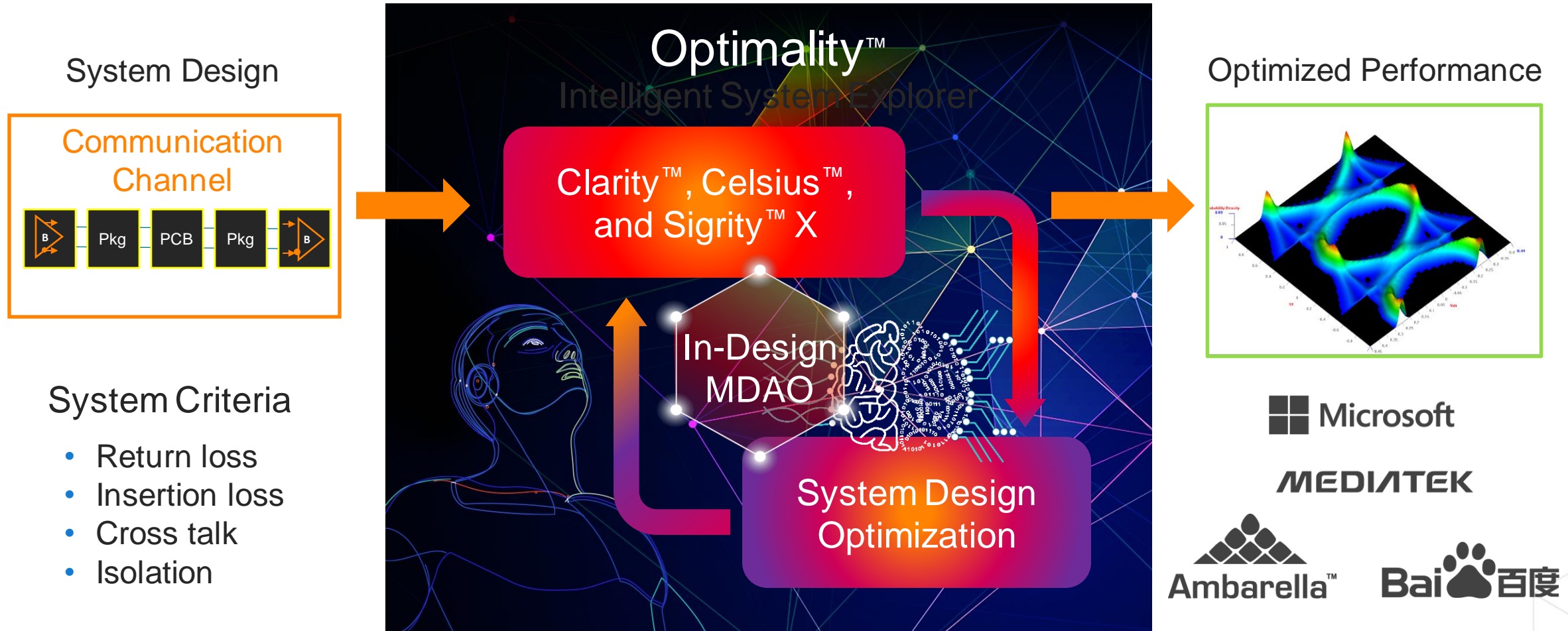
Introducing Verisium Platform



* Cadence® Joint Enterprise Data and AI (JedAI) Platform

AI-Driven Design Analysis and Optimization

AI for system analysis providing on average 10X faster design closure with fewer simulations



AI-driven multidisciplinary design analysis and optimization (MDAO)

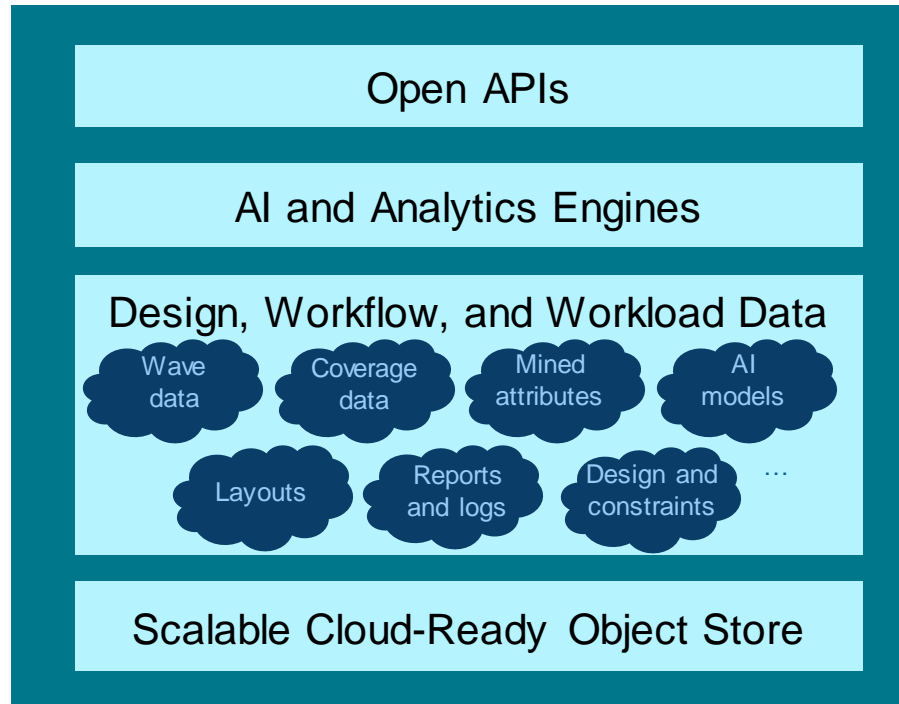
Cadence Joint Enterprise Data and AI (JedAI) Platform

AI-Driven
Verification

AI-Driven
Implementation

...

AI-Driven
System Analysis



**Cadence JedAI
Platform***

On-Premises

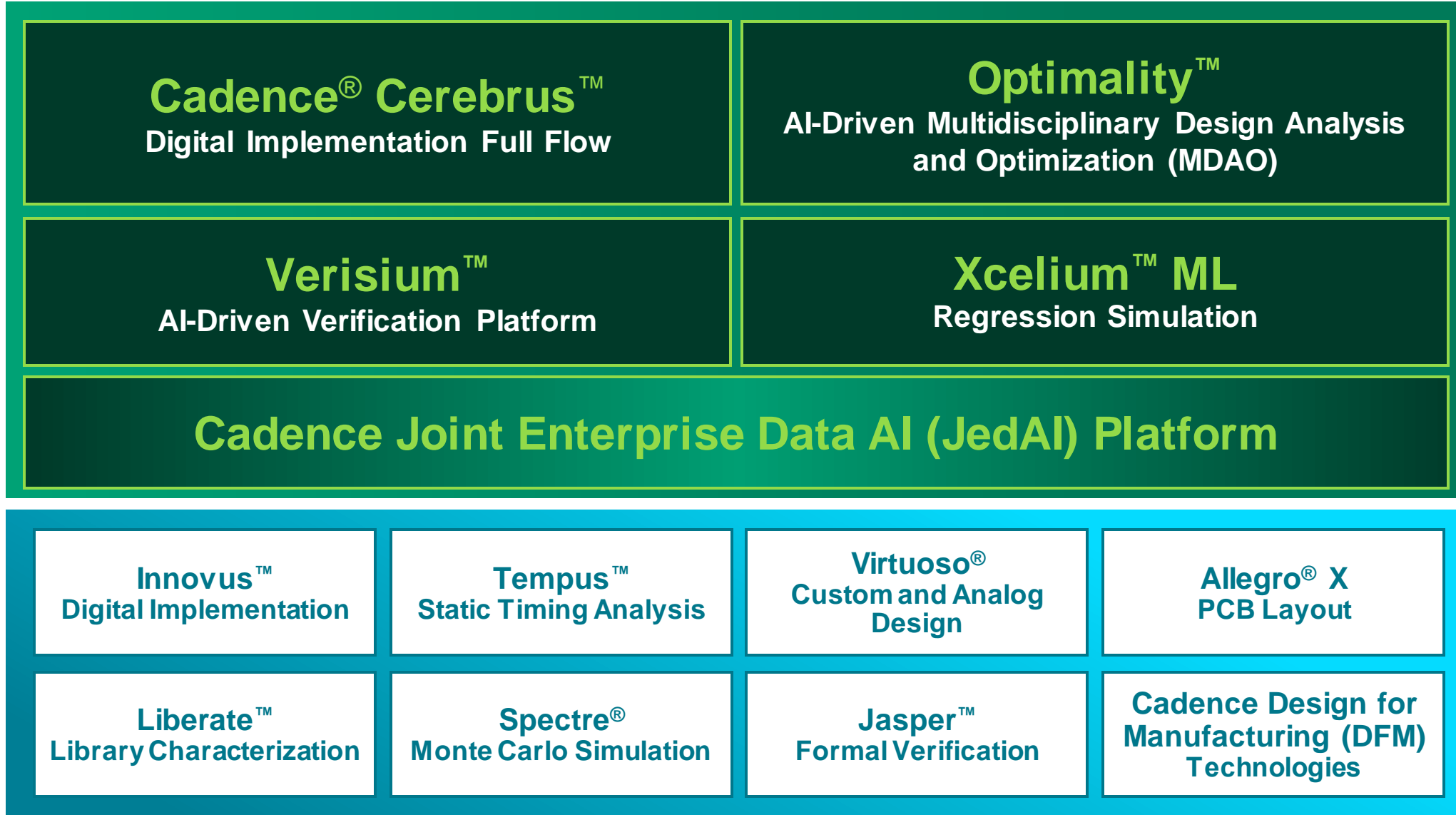


Cloud

* Cadence® Joint Enterprise Data and AI (JedAI) Platform

cadence

Cadence AI-Driven Solutions



AI-Driven Platforms

AI-Driven Tools

McLaren
FORMULA 1 TEAM

cādence

TECHNOLOGY PARTNER

Cadence named an Official Technology Partner of the McLaren Formula 1 Team, enters a multi-year partnership

With Cadence's innovative CFD software, McLaren can investigate optimal designs in less time with unprecedented reliability



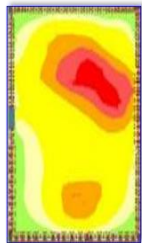
Cadence Acquires Future Facilities – The Digital Twin Company

Engineering simulation-driven, physics-based 3D digital twins for sustainable data center design and operations

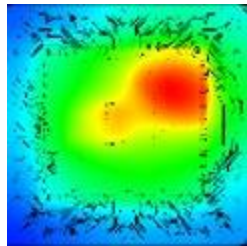
Analyze and Optimize Thermal from Chips to the Data Center

Celsius™ Thermal Solver

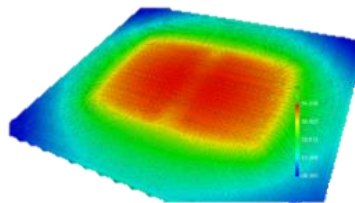
Electronics cooling (CFD*)



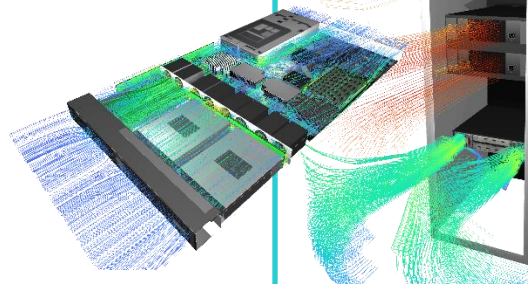
Chip



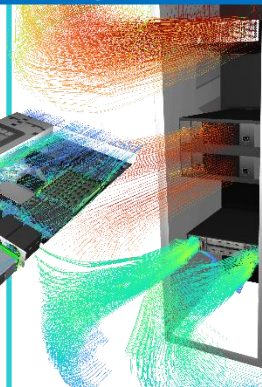
Package



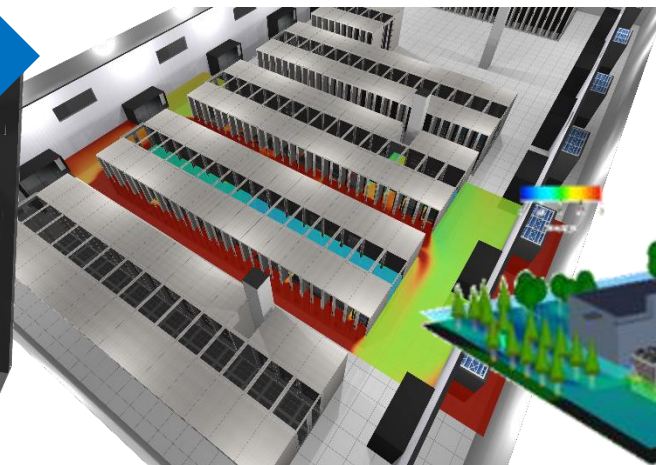
PCB



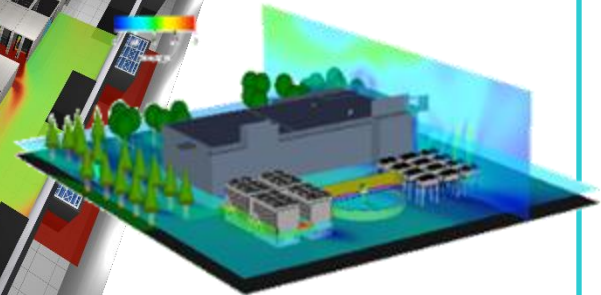
Blade



Rack



Data Center



Environment

future facilities

Intelligent System Design™ that enables engineers to predict, visualize, and qualify the impact of any change in the data center prior to implementation and during operations

Source: https://www.cadence.com/en_US/home/company/newsroom/press-releases/pr/2022/cadence-completes-acquisition-of-future-facilities.html

*Computational fluid dynamics

cadence

Cadence Acquires OpenEye – Biosimulation

Pioneering leader in computational molecular design

Acquisition



Leading provider of computational molecular modeling and simulation software being increasingly used by pharmaceutical and biotechnology companies for drug discovery

Technologies

Pioneered physics-based approaches and the cloud-native Orion® software platform to accelerate advances in human health

Target Industries
Biosimulation

Pharmaceutical

Biotechnology

- Growing utilization of computational techniques in drug discovery driven by rising demand for new drugs across a range of diseases
- Chemical synthesis and drug screening to study the 3D structure of molecules is a major factor fostering growth in biosimulations
- OpenEye Scientific's products are used by 19 of the top 20 pharmaceutical companies globally

OpenEye Scientific's deep scientific expertise accelerates Cadence's Intelligent System Design™ strategy and expands its total addressable market

Source: https://www.cadence.com/en_US/home/company/newsroom/press-releases/pr/2022/cadence-expands-into-molecular-simulation-with-acquisition-of.html



Financial Performance

Financial Summary

2021

\$2.988B

Revenue

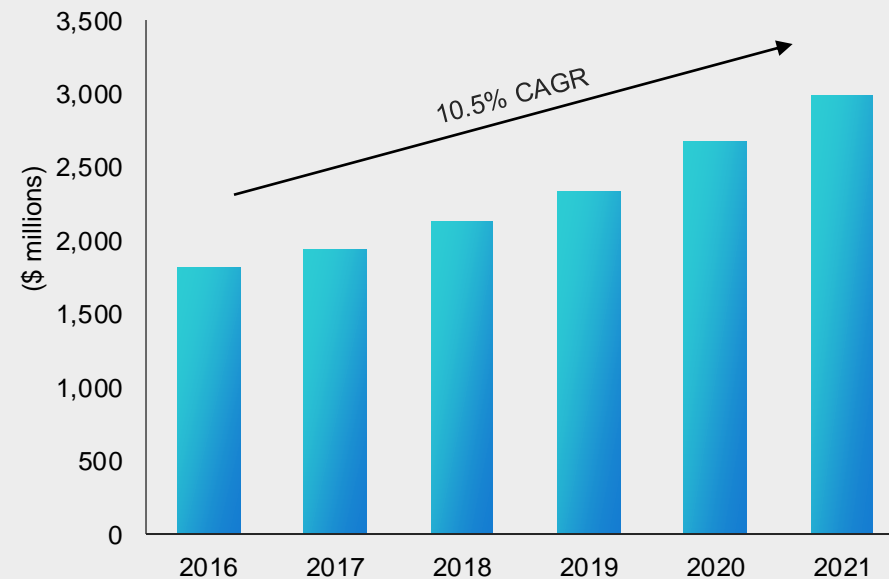
37%

Non-GAAP
operating
margin¹

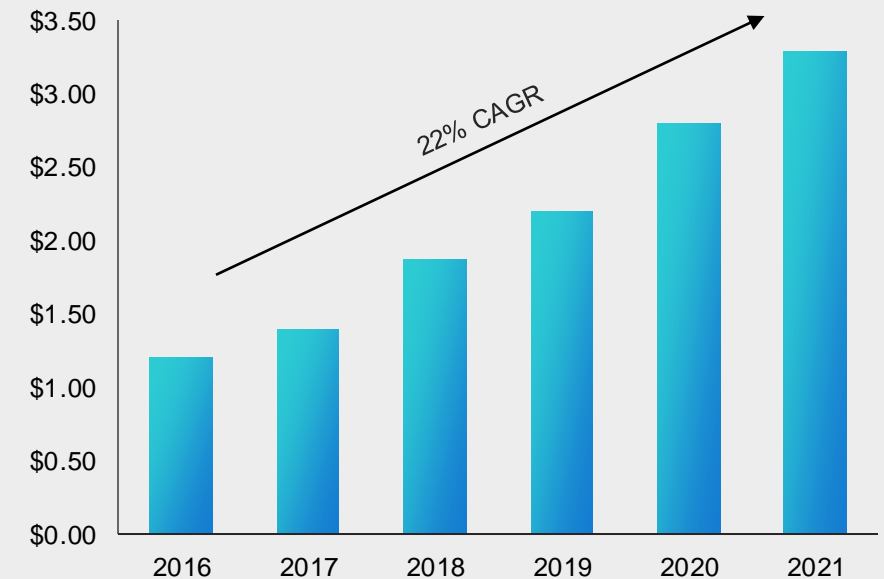
Free
cash flow

\$1.036B

Revenue



Non-GAAP EPS¹



Notes:

1. Non-GAAP operating margin and non-GAAP EPS (excludes amortization of acquired intangibles, stock-based compensation, non-qualified deferred compensation expenses and certain non-recurring cash expenses). See quarterly earnings releases and CFO Commentary for reconciliations to GAAP measures.

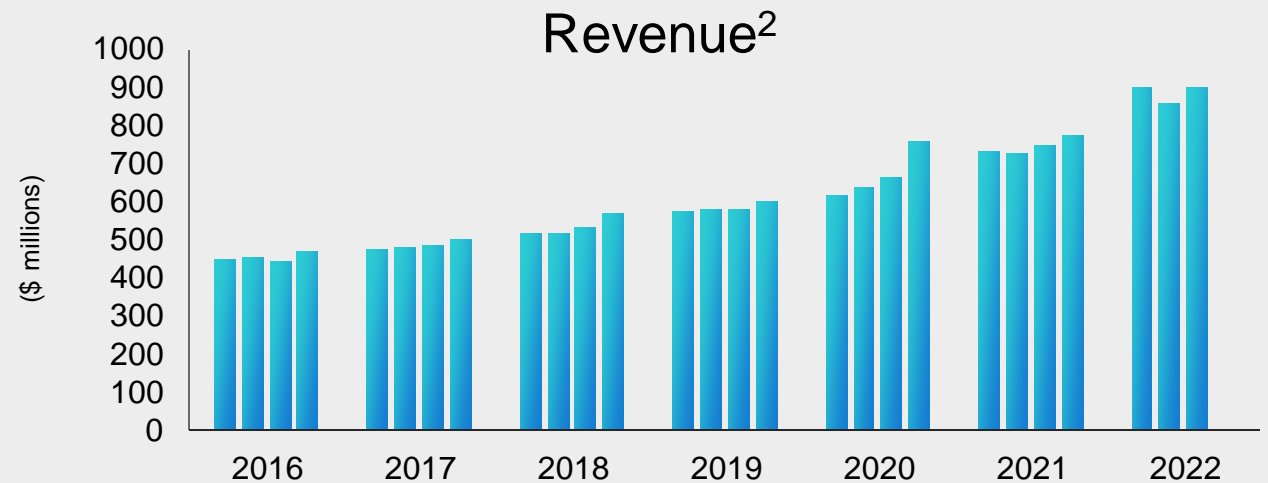
Recurring Revenue Model

High visibility software revenue stream

- Recurring revenue mix: ~85% for 2022
- Backlog¹: \$5.5B (Q3 2022)

Revenue growth

- 20% (Q3'22/Q3'21)



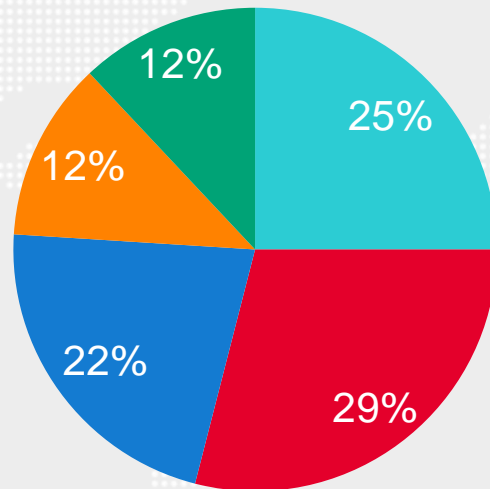
Notes:

1. Backlog = Remaining Performance Obligations + Other Arrangements with Non-Cancelable Commitments
2. Q4 2020 was a 14-week quarter

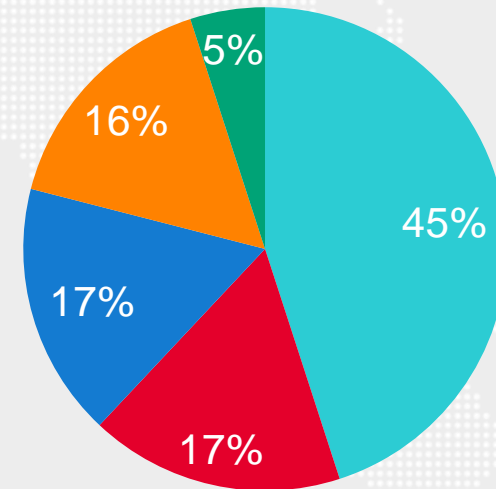
Diversified Business Across Products and Regions

Revenue Mix for Q3 2022

- Functional Verification
- Digital IC Design and Signoff
- Custom IC Design and Simulation
- System Design and Analysis
- IP



- Americas
- China
- Other Asia
- EMEA
- Japan

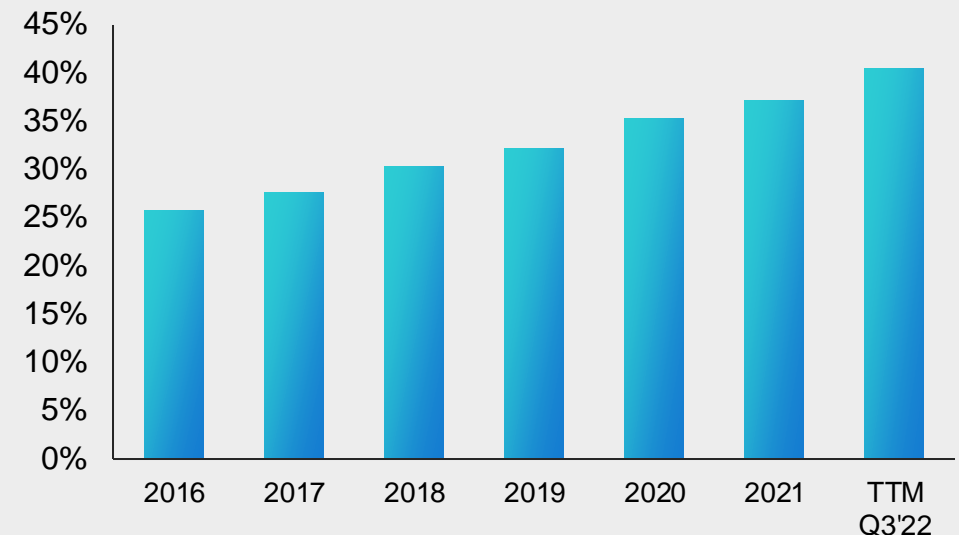


Driving Profitable Growth

Strong operating profitability

- Focus on growth and disciplined ROI-centric resource allocation
- Non-GAAP operating margin 39%¹ (Q3 2022)

Non-GAAP Operating Margin¹



Notes:

1. Non-GAAP operating margin and non-GAAP EPS (excludes amortization of acquired intangibles, stock-based compensation, non-qualified deferred compensation expenses and certain non-recurring cash expenses). See quarterly earnings releases and CFO Commentary for reconciliations to GAAP measures.

Cash Flow, Capital Structure, and Capital Allocation

Free cash flow generation

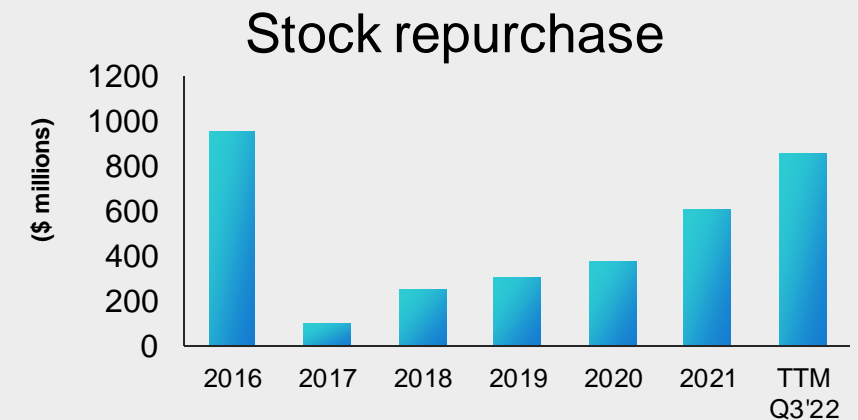
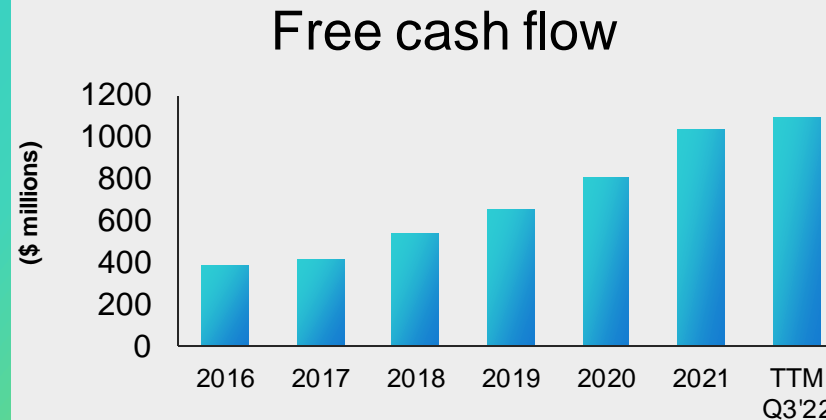
- \$1.036B (2021)

Capital structure (Q3 2022)

- Cash: \$1.026B
- ST credit facility¹: \$700M
- LT debt: \$650M

Capital allocation

- Internal investment
- M&A
- Repurchase stock



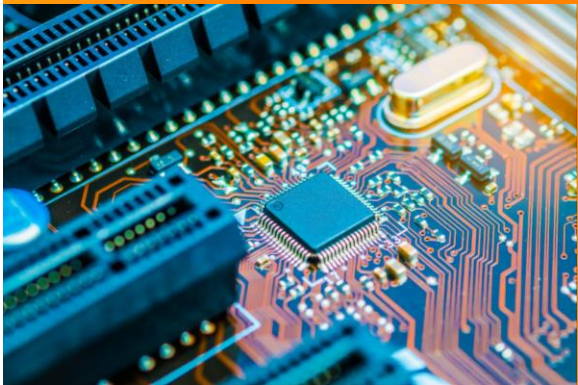
Notes:

1. \$150M drawn out as of Q3 2022

In Summary

Essential

solutions for designing
semiconductors and
electronic systems



Data-driven economy
and its supporting
technology waves
combined with our
Intelligent System
Design™ strategy
expand TAM



Culture of innovation
creates the products
for **category
leadership** and
growth



Growth, focus, and
discipline drive
**financial
performance**





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