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Industrial Edge | North America

Enabling Industrial Autonomy: Applied Intuition

Nearly a year after we initially profiled the company, we revisit Applied Intuition's progress in bridging the gap to autonomy across the industrial landscape and provide key takeaways from their recent investor day.

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Physical AI is the next frontier. Adoption of digitally-enabled AI tools is easy. Bringing it to the physical world is hard. Applied Intuition aims to bring to the table AI-centric software and tooling products that can be tailored to the needs of industrial incumbents globally to compete with the leading edge tech companies. Spanning end markets in Defense, Automotive, Mining, Agriculture, and Trucking and representing multi-trillion dollar global TAM (as defined by the company), Applied Intuition is a platform agnostic to hardware (optical-only sensor suite vs. LiDAR/radar), chip provider (not exclusive to NVDA/QCOM/AMD), and solution (retrofitting legacy mining equipment vs. providing hardware that can preserve operability in complex Defense domains). **Management's message is clear: *the company's unique value proposition is its ability to work closely with industrial partners in multiple verticals to co-develop and deploy AI products flexibly.***

About Applied Intuition: Founded in 2017, Applied Intuition is a Silicon Valley-based startup that provides simulation, validation, and development infrastructure that complements OEM autonomy systems and software stacks. The company develops software infrastructure, simulation, and validation tools for autonomous systems across automotive, defense, trucking, mining, construction, and agriculture. The company is based in California, but has expanded operations across North America, Europe, and Asia. For more details, see About Applied Intuition .

Three key messages from Applied Intuition's 2026 Investor Day:

1) Diversified across end market, platform, and geography, Applied Intuition boasts access to some of the most unique data sets globally – and supplements it with simulation. Advances in world models and large-scale simulation are accelerating progress by enabling developers to train systems across millions of virtual scenarios before real-world deployment, reducing costs and improving safety validation. But world foundation models built by the big labs today are trained on video data from the web. What they lack is specific mining or manufacturing visual data. Applied Intuition combines that real world industrial data with closed loop reinforcement learning to tackle edge cases.

2) Beyond real-world industrial edge data, Applied Intuition's potential advantage lies in their deeply integrated partnerships with industrial companies. Similar to other horizontally integrated tech providers yet distinct from other

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AUTOS & SHARED MOBILITY

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Industry View **In-Line**

autonomy providers, Applied co-develops products and bundles their offerings in a more capital light approach vs. some existing AV businesses attempting to partner with legacy OEMs today. **Applied built a full-stack physical AI platform that can augment the hardware expertise from their industrial partners with gen AI – offering legacy OEMs a compelling approach to build truly competitive autonomy.**

3) Having a cost-competitive product and expertise in physical AI potentially makes for a compelling partner in what may become a commoditized industry. In the long term, if AI tech products gets commoditized, Applied's ability to offer the most competitive pricing could create a more sustainable competitive advantage. Leading edge frontier models are already converging with open source models in China. While physical AI is likely years away from commoditization, over time it could become the next highly competitive field where share is captured by the lowest cost producer. Applied claims that they can be a winner here – management asserts that few other companies can boast having already deployed physical AI products at scale with real industry partners ***while also pointing to $2bn in remaining deal value.***

Exhibit 1: Applied Intuition Company Profile

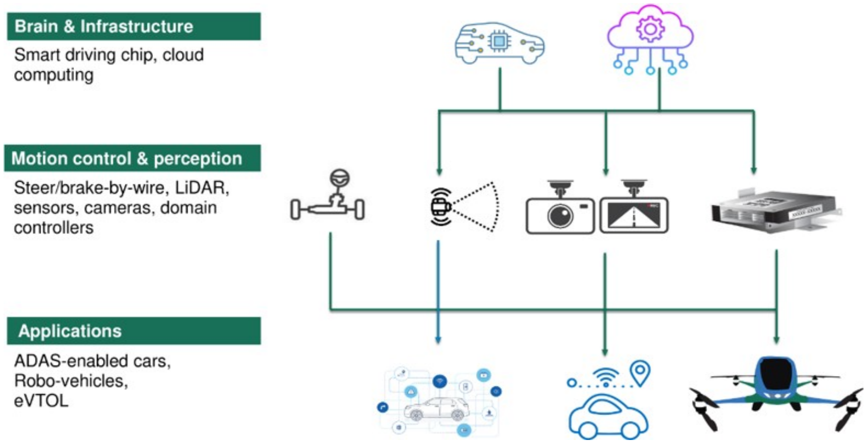
Source: PitchBook, Applied Intuition, Morgan Stanley Research

Why are we profiling Applied Intuition? As investment continues to concentrate around spatially aware AI, companies across the industrials spectrum increasingly require more advanced simulation technologies to support the safe introduction of autonomous systems to market. Applied Intuition's platforms support full-stack autonomy development by stress-testing systems against rare edge cases and complex operating conditions, with applications spanning AVs and ADAS software. Within automotive, these capabilities support OEMs' preference to retain control over their autonomous systems by providing a simulation and development toolchain that integrates into existing vehicle platforms, supporting the transition to L3 and L4 adoption.

Why now? The auto industry is approaching an AI-driven inflection point, and we expect mainstream adoption to begin in developed markets in 2026. We believe adoption will be accelerated by three factors: **(1)** breakthroughs in Gen AI-powered simulation, **(2)** tech cost deflation through global collaboration (including US and China), and **(3)** increased regulatory support. We forecast a $200bn global ADAS/AD market by 2030, including $150m from hardware and $40-$50bn from software. Automakers are not just trying to disrupt the auto market, they are aiming to reshape how mobility works, how vehicles interact, and how they can serve users on the road and beyond as carmakers seek to monetize more time from passengers' daily lives. **And it's not just autos. Many industrial companies are making strides towards autonomous operations.**

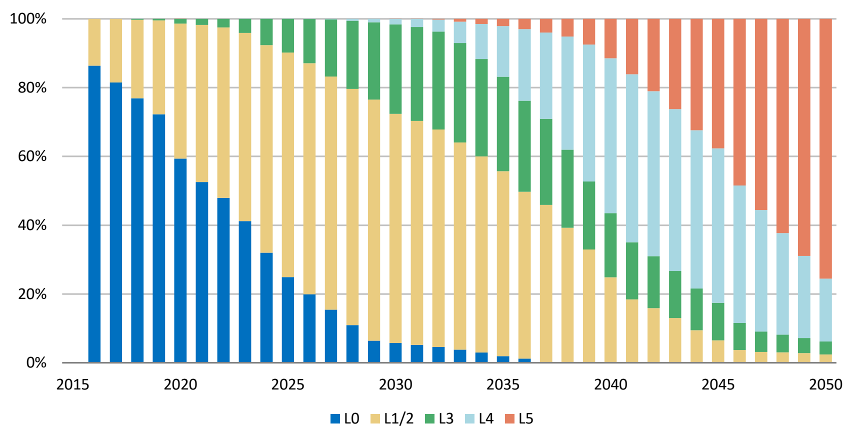
- **Defense: Lockheed Martin** (covered by Kristine Liwag) is developing autonomous defense systems, including its Sanctum counter-UAS platform and a collaboration with Saildrone to advance unmanned maritime defense capabilities.
- **Trucking: Aurora** (covered by Ravi Shanker) became the first company to launch fully driverless commercial trucking on U.S. public roads in 2025 and has since exceeded 250k driverless miles with zero Aurora-driver attributed collisions.
- **Construction & Machinery** (Angel Castillo): **Caterpillar** (CAT) has 690 autonomous mining trucks in operation as of year-end 2024, with aspirations to 3x this number by 2030. In addition, CAT is rolling out a spectrum of autonomous and semi-autonomous solutions for the construction end market including 3D grade (leveling/shaping of land) control, auto-compaction, remote cockpits, and others. **Deere** (DE) has launched fully autonomous tractors for tasks like tillage and is expanding deployments as uptime and reliability improve. In parallel, DE's AI-enabled See & Spray system, having gone from a few hundred units operating in North America in 2024 to over 1,000 new orders in 2025, brings autonomy to spraying at the application level, using computer vision on self-propelled sprayers to target weeds and precisely control chemical application.
- **Mining (Carlos de Alba): Freeport McMoRan** (FCX) is implementing fully autonomous haulage trucks at its Bagdad copper mine in Arizona in an effort to lower costs and improve efficiencies within its North America segment. Moreover, the company's Grasberg mine in Indonesia has significant levels of automation at its extraction and haulage levels, such that these processes are fully automated. **Teck Resources** (TECK) has also introduced fully autonomous haulage trucks at its Highland Valley Copper mine in BC, Canada.

Exhibit 2: Autonomous mobility supply chain



Source: Morgan Stanley Research

Exhibit 3: Global Autonomous Vehicle Sales Penetration (%)



Source: Morgan Stanley Research estimates

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For Further Reading:

- Autos & Shared Mobility: From Horsepower to Brainpower – AI Takes the Wheel (27 July 2025)
- Internet: Approaching an Autonomous Inflection Point (7 Dec 2025)
- Defense: Dollars, Disruptors, and De(Consolidation); Identifying Investment Opportunities (6 Mar 2026)
- Robotics: The Robot Almanac- Vol. 6: Autonomous Vehicles (21 Dec 2025)

- Autos & Shared Mobility: 2026 Outlook: Navigating the Auto Industry's Uncertain Road Ahead (7 Dec 2025)
- Transport: Freight Expectations: AI Margin Expansion vs. Reset (23 Mar 2026)
- Robotics: The Robot Almanac- Vol. 5: Space & Defense
- Tesla: Beyond the Wheel – Mapping Tesla's Journey into Physical AI (7 Dec 2025)
- Embodied AI: Physical AI Disruptors: Applied Intuition (28 Apr 2025)

About Applied Intuition

Background and Founding: Applied Intuition was founded in 2017 by Qasar Younis and Peter Ludwig with the original mission of creating a driving simulator to provide an alternative to road-testing for autonomous driving. Since its founding, Applied Intuition has rapidly expanded its global footprint, supporting leading OEMs and governments across North America, Europe, and Asia. The company has also pursued targeted acquisitions to broaden its capabilities in simulation and machine learning, as well as autonomous software. Most notably, the company acquired EpiSci to support the development of autonomous AI pilots for the US and allied militaries.

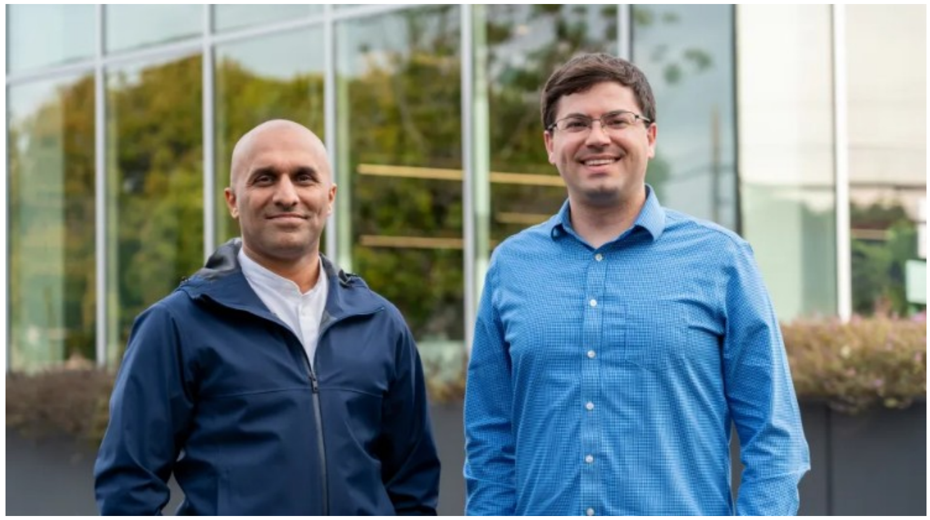
Today, Applied Intuition operates as a global full stack autonomy development company, offering an integrated platform that spans simulation, data, validation, and onboard software, enabling customers to develop, test, and deploy ADAS and autonomous systems across a wide range of vehicle types and operating environments. Outside of automotive, the company has expanded into multiple sub-industries including: industrial, construction, agriculture, and defense. Applied Intuition serves 18 of the top 20 global automakers, as well as the United States military and its allies.

According to the company, it was last valued at $15bn after a $600mn Series F funding round and tender offer in 2025.

About the team: Co-Founders Qasar Younis and Peter Ludwig bring together expertise in automotive engineering, product management, and early-stage business development. Younis, co-founder and CEO, began his career in engineering at General Motors and, after earning his Harvard MBA, founded two startups, Cameesa.com and TalkBin. After navigating the latter (a customer-to-business communication platform) through Y Combinator and selling it to Google in 2011, Younis joined Google as a product lead on Google Maps. Younis then remained involved with Y Combinator, becoming a partner and then COO in 2015. Younis's co-founder, Ludwig, is the current CTO. While his expertise is on the technology side (having held previous positions at NVDA and, like Younis, Google Maps), Ludwig also has ties to the automotive industry as a third-generation automotive engineer from Detroit, MI.

The company maintains automotive and defense advisory boards, which include industry leaders such as Rick Wagoner (former Chair and CEO of General Motors) and General Raymond Thomas III (Former Commander of U.S. Special Operations Command).

Exhibit 4: Applied Intuition Co-Founders Qasar Younis and Peter Ludwig



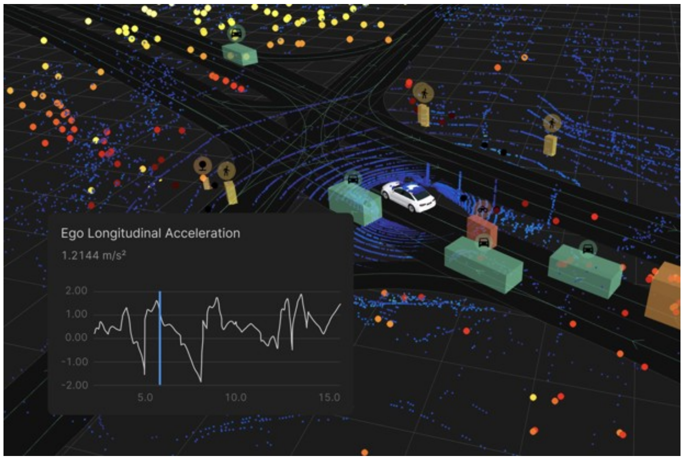
Source: The Mercury News

Technology & Product Offerings:

- **Applied Intuition offers a range of tools that enable OEMs across automotive and adjacent industries (e.g., defense, mining) to develop ADAS and autonomous driving systems.** Its platform combines large-scale simulation, real-world data ingestion from drive logs, and synthetic data generation within a closed-loop development framework that enables continuous iteration and improvement of autonomy models. OEMs can customize detailed simulation environments to evaluate different system designs (e.g., camera-only vs. multi-sensor stacks) and optimize performance. These capabilities are complemented by tools for validation, data management, and integration with vehicle software stacks, allowing customers to run thousands of scenarios in parallel and systematically refine autonomy systems prior to deployment.
- **Simulation Suite:** Applied Intuition offers a suite of simulation products, including Cloud Engine (distributed compute platform for running thousands to millions of simulations in parallel), Log Sim (closed-loop log replay / re-simulation tool), Object Sim (simulating objects such as other vehicles, pedestrians, and infrastructure), Sensor Sim (simulating vehicle sensors such as radar, lidar, and cameras to test their collection and fusion efficacy), and Neural Sim (AI-powered simulator that reconstructs real-world logs). In addition, the company integrates the VehicleSim suite (CarSim, TruckSim, BikeSim, SuspensionSim) following its acquisition of Mechanical Simulation Corporation, providing high-fidelity vehicle dynamics modeling for tires, physics, and motion.
- **Data Solutions:** Several data solutions are offered to help customers manage data associated with ADAS and AV work including Data Explorer (log data search engine that leverages mutlimodal foundation model), Validation Toolset (verifying and validating data for statistical confidence), Map Toolset (creating accurate, fast, and affordable map data), and Synethic Datasets (generates artificial, labeled sensor data using simulation). Recently, the company developed Applied Intuition Copilot, which applies open-vocabulary perception models to surface and automatically extract salient real-world events. The company also provides data engine infrastructure that enables edge data collection, real-time detection and

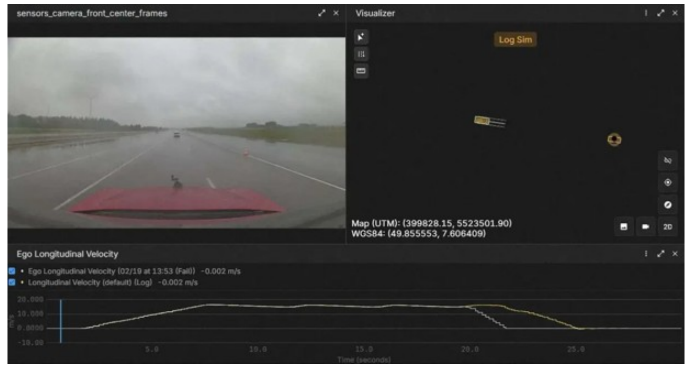
classification, and continuous model improvement.

Exhibit 5: Hypothetical Driving Scenario in an Applied Intuition-Generated Simulation



Source: Company Website

Exhibit 6: View of Applied Development Platform (ADP) Simulation



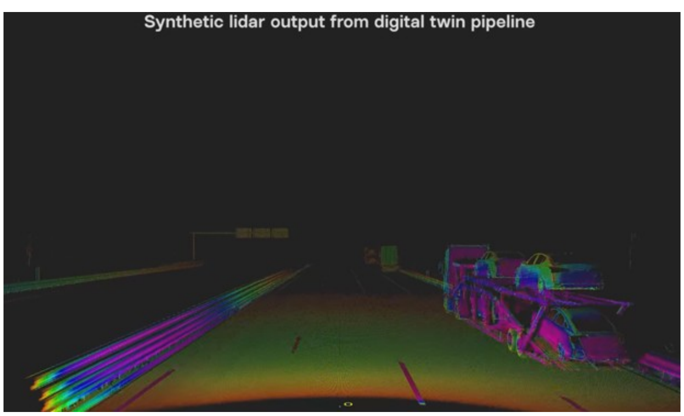
Source: Company Website

- **Vehicle Autonomous Stack:** The company recently launched an end-to-end white box autonomy stack, a hardware- and sensor-agnostic design that enables OEMs to integrate a variety of sensors, compute platforms, and ECUs into their brand-specific experiences. The platform unifies perception, planning, and control within an end-to-end architecture, supporting scalable L2++ driver-assistance features with a defined pathway to higher levels of autonomy (L3 and L4). An off-road autonomy stack, which enables GPS-independent localization, real-time perception and object tracking (including 3D geometric modeling), and multi-sensor fusion, is also offered as a modular offering, meaning OEMs can adopt and integrate it piecemeal into their own existing infrastructure. Their trucking stack also takes a modular approach and aims to address challenges facing truckers such as handling high-speed freeways, various weather conditions, and navigation.
- **Defense Autonomous Stack:** Axion and Acuity form a platform-agnostic autonomy and software stack to scale defense capabilities across air, land, sea, space, and electromagnetic domains. Axion provides a digital-first toolchain for building, simulating, testing, and deploying autonomy across the development lifecycle, enabling rapid iteration with reduced reliance on live testing. Acuity delivers embedded autonomy software that enables systems to perceive, reason, and act independently in dynamic environments, supporting scalable and adaptable autonomous operations.
- **Cabin Intelligence:** Cabin Intelligence is a software and tooling platform built on Applied Intuition's Vehicle OS that enables OEMs to create customizable in-cab interfaces that consolidates operator controls, machine health, and site context into a single intelligent display. The platform supports real-time condition monitoring and predictive maintenance, integrates with vehicle systems (e.g., drive-by-wire, CAN, vision-based cameras), and enhances operator experience through features like voice interaction, integrated camera views, and infotainment (i.e. Apple CarPlay).

variety of industries (from automotive to industrial to agricultural to defense). They cite collaborations with 18 of the 20 top auto OEMs globally. Some of their automotive partnership projects include:

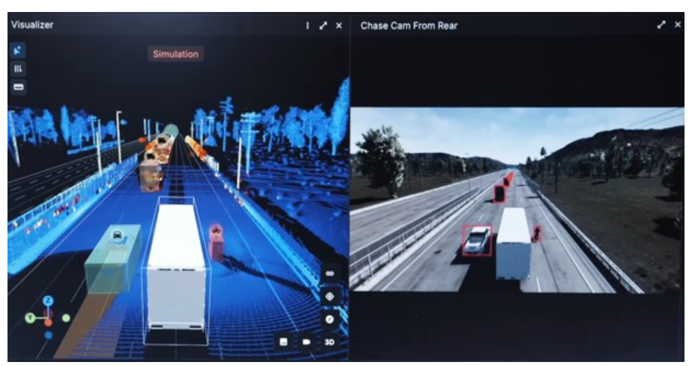
- **Toyota:** Providing Toyota's Woven Planet Group with simulation software to test and scale their autonomous driving algorithms. Woven Planet leverages Applied Intuition's modularity to integrate the simulation offerings into end-to-end system testing.
- **TRATON:** Applied Intuition is working with TRATON, a Volkswagen-owned commercial vehicle unit, to provide Vehicle OS (leveraging the modular design that can adapt to the multiple brands in TRATON's vehicle portfolio) and to virtualize testing in a cloud-native environment to test faster and earlier in the development process.
- **Valeo**: This partnership delivers a digital twin-based ADAS sensor simulation platform, combining Valeo's global digital twin database with Applied Intuition's Spectral sensor simulation to enable more accurate perception testing, validation, and faster deployment of production-ready ADAS systems.
- **Isuzu Motors**: Jointly developing L4 autonomous commercial trucks, supporting Isuzu's autonomy roadmap in Japan and North America.
- **Stellantis:** Tailoring in-vehicle infotainment across Stellantis's vehicle portfolio powered by the company's Cabin Intelligence software and tooling, which consolidates fragmented controls into a unified display.
- **NVIDIA:** Collaborating with NVIDIA to accelerate L2+ ADAS deployment for global automakers. Applied Intuition is designated a recommended software provider for OEMs building L2+ highway driving systems on NVIDIA DRIVE AGX Orin and future DRIVE AGX Thor, integrating autonomy software, simulation, and data tooling with in-vehicle AI compute.
- **AISIN:** Integrating Applied Intuition's ADP solution in AISIN parking systems to virtually simulate sensors and complex edge-case scenarios while enabling cloud-based collaboration to streamline validation.

Exhibit 11: Valeo: Digital Twin Platform for ADAS sensor simulation



Source: Company Website

Exhibit 12: Isuzu replicates real-world driving scenarios in a virtual environment



Source: Company Website

Other notable partnerships outside the automotive and trucking segments include:

- **Komatsu:** Combining Komatsu's mining expertise with Applied Intuition's autonomous vehicle software to develop intelligent, software-defined mining equipment that improves safety, capability, and sustainability in mining operations. This partnership aims to build the world's largest software-defined vehicle (SDV) platform for mining.

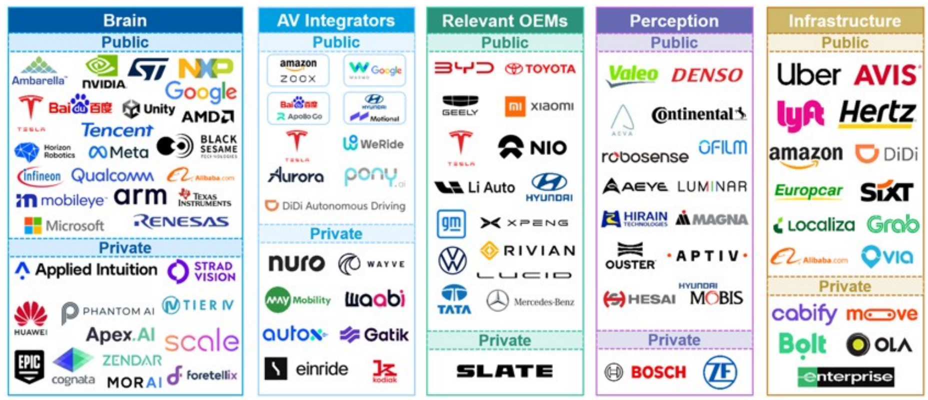
- **SNC:** Integrating Applied Intuition's autonomy and simulation software with SNC's defense systems to accelerate the deployment of mission-ready autonomous air defense and battlefield technologies.
- **Kraken:** Applied Intuition UK and Kraken have partnered to apply simulation and autonomy to maritime engineering, accelerating deployment of fully autonomous surface vessels for defense and civilian applications.
- **AEVEX Aerospace:** This partnership leverages Applied Intuition's autonomy software with AEVEX's unmanned aircraft systems to demonstrate and accelerate scalable, soldier-ready autonomous "launched effects" capabilities for the U.S. Army.

Competitors: We outline a number of autonomous software development companies which are competitors to Applied Intuition (not a comprehensive list).

- **Wayve (UK; VC-backed):** Wayve is an end-to-end autonomous driving company developing AI Driver - a foundation model that learns driving behavior directly from large-scale, real-world data using a camera-first, end-to-end architecture. While Applied Intuition's roots are in simulation and development tooling, its growing investments in AI-native autonomy stacks and data pipelines increasingly overlap with Wayve's approach to learning-based driving systems.
- **Foretellix (Israel; VC-backed):** Foretellix's Foretify platform provides scenario-based verification and validation platforms for autonomous systems, competing directly with Applied Intuition's simulation and testing suite. Positioned as a scalable validation toolchain for autonomous systems, Foretify directly competes with Applied Intuition's simulation and testing stack. The overlap is particularly pronounced in sectors such as automotive, autonomous trucking, and mining, where both companies support customers in industrializing AV/ADAS validation workflows.
- **Cognata (Israel; VC-backed):** Cognata offers a simulation and autonomy development toolchain through the OneSim platform, delivering high-fidelity digital twins, sensor-accurate simulation, and scalable synthetic data generation, as well as its Off-Road AVBox, a pre-integrated hardware and software system. Cognata competes directly with Applied Intuition in simulation and autonomy workflows, especially in off-road and defense use cases where its technology supports simulation of complex mission environments and autonomous system validation.
- **NVIDIA (USA; covered by Joe Moore):** Even though they are partnered, NVIDIA competes with Applied Intuition through its DRIVE platform, which combines high-performance AI compute, simulation (DRIVE Sim), and full-stack autonomous driving software into a unified ecosystem. This positions NVIDIA as an end-to-end provider, overlapping with Applied Intuition across simulation, data infrastructure, and autonomy development, particularly as both companies aim to power software-defined vehicles. The company is one of the largest technology companies in the world with 2025 revenues of $130.5bn.

- **Mobileye (USA):** Mobileye competes with Applied Intuition through its vertically integrated autonomy stack, including its SuperVision and Chauffeur ADAS systems, the Mobileye Drive full autonomous platform, and its broader AV development ecosystem. While Applied Intuition provides a modular, software-first platform for simulation, validation, and autonomy development, Mobileye offers a more vertically integrated, turnkey solution combining perception, compute, mapping (REM), and deployment. The company generated ~$1.9bn in 2025 revenue.

Exhibit 13: Global Autonomous Vehicle Enablers



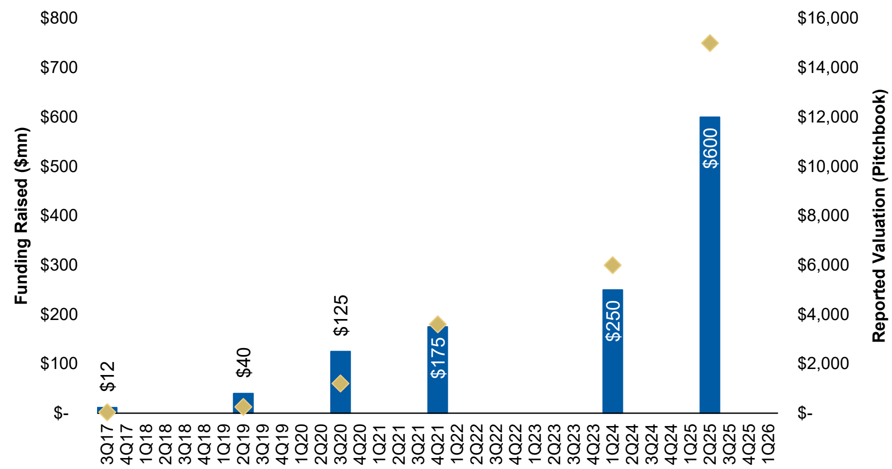
Source: Company Websites, Morgan Stanley Research. Note: Meant to give a representative snapshot. May not capture 100% of exposed players.

Key Obstacles/Risks: We highlight a few key risks the company faces.

- **Intensifying Competition from Large, Integrated Players:** Applied Intuition operates in a highly competitive space with well-capitalized incumbents and partners like NVIDIA and Mobileye, who offer end-to-end, vertically integrated autonomy stacks, which can be more attractive to OEMs looking for a single vendor solution. Larger players have greater resources, distribution, and installed base, potentially compressing margins or limiting market share.
- **Dependence on OEM Adoption and Cyclicality:** The company's business model relies heavily on OEMs (auto, industrial, defense) adopting and integrating its platform, which have long product cycles and complex procurement processes. Slower-than-expected autonomy adoption or overexposure to R&D cycles of legacy OEMs that are capital restricted could impact growth and partnership optionality.
- **Evolving Regulatory Landscape:** Applied Intuition operates in industries (autonomous vehicles, defense systems, etc.) that are highly sensitive to evolving regulatory policy. AV driving regulations remain fragmented across geographies with unclear timelines for broader L3/L4 deployment approvals. Additionally, increasing expansion into defense introduces heightened national security regulations and shifting government priorities.

Valuation & Investors: According to PitchBook, Applied Intuition ha date from notable investors including BlackRock, Fidelity Investmen Franklin Templeton, and Lux Capital. Applied Intuition's latest round F in June 2025 which valued the company at $15bn per the company

Exhibit 14: Applied Intuition Venture Funding Rounds and Reported Valuations (PitchBook)



Source: PitchBook, Morgan Stanley Research

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2026 Investor Day

Applied Intuition hosted its 2026 Investor Day in Sunnyvale, CA on March 31st, featuring presentations from management, fireside chats with early investors, and product demos.

Applied Intuition: Overview and Technology Foundation

- **Applied Intuition positions itself as a premier physical-AI infrastructure provider, with roughly 80% of the organization focused on product and engineering.** The company has spent the past decade building end-to-end (E2E) autonomy tooling, spanning simulation, data, and vehicle operating systems, enabling autonomy across commercial, industrial, automotive, and defense applications. Leadership emphasizes that autonomy has undergone a paradigm shift from rules-based AV1.0 systems toward E2E (end-to-end) AV2.0 models, with the next major leap—AV3.0—driven by closed-loop simulation and reinforcement learning.
- **The core technological moat is simulation-driven, closed-loop learning, where autonomy stacks are trained not just on curated real-world data but in high-throughput synthetic environments**. Applied's world-model approach enables reactive, reward-grounded learning at scale, with simulators capable of running at up to 200Hz on a single GPU. This infrastructure allows continuous improvement of policies and is positioned as the key enabler of scalable autonomy across domains.

Cross-Vertical Physical AI Strategy

- **Applied Intuition's strategy centers on a single, generalizable physical-AI platform that can be deployed across mining, construction, agriculture, trucking, automotive, and defense.** The company argues that autonomy challenges across these sectors—navigation, perception, human-machine interaction, and robotics—are converging around shared foundation models and world models. Data collected in one industry feeds improvements across all others, creating compounding returns from a unified autonomy stack.
- **The company highlights critical labor shortages and productivity constraints as secular tailwinds for automation in physical industries.** Mining, construction, and agriculture face rising demand alongside shrinking workforces, with limited pipelines for new labor. Even small reductions in downtime or labor intensity can unlock substantial economic value, positioning autonomy and AI as the only scalable solution to these structural challenges.

Industrial Autonomy: Mining, Construction, and Agriculture

- **In mining and construction, Applied Intuition is pursuing full-stack automation rather than point solutions**. The company envisions fully connected operations where all machines operate on a single OS and intelligence layer, enabling fleet-wide optimization, predictive maintenance, and end-to-end visibility from 'drill-to-mill'. Strategic partnerships—such as a six-year, co-development agreement with Komatsu—are structured around shared investment and long equipment lifecycles, allowing autonomy capabilities to improve over time via software updates.

- **Agriculture and seasonal industries particularly benefit from simulation-first development, as real-world data collection is constrained by short operating windows**. Applied's simulation and synthetic-data capabilities allow policies to be trained and validated outside narrow harvest or operating periods, improving robustness while reducing dependence on scarce real-world data.

Autonomous Trucking and Logistics

- **Applied Intuition views trucking as a foundational autonomy market, given that over 70% of U.S. domestic freight moves by truck and global driver shortages are intensifying.** The company operates autonomous trucking programs in the U.S. and Japan and is expanding into Saudi Arabia, positioning itself as one of the only autonomy providers currently operating in Japan. Each mile driven contributes to a shared learning system spanning real-world and simulated data.
- **A deep partnership with Isuzu marks Applied's first major international trucking deployment, featuring a next-generation autonomous truck built for commercial scale and operating on extended routes**. The collaboration is framed as a tightly integrated co-development effort rather than an arms-length technology license, reinforcing Applied's strategy of embedding its vehicle OS deeply into OEM platforms.

Automotive: The Unified Vehicle OS Thesis

- **Applied Intuition maintains that legacy automotive autonomy architectures are structurally flawed, relying on fragmented, rule-based stacks that do not improve over time and cannot scale economically.** The company contends that L2++ and L4 autonomy are no longer distinct technology paths, as transformers enable a single E2E model to generalize across autonomy levels using the same sensors, compute, and software stack.
- **The Applied Vehicle OS is positioned as the foundation for the "AI car," enabling safe deployment of AI applications across the entire vehicle.** Partnerships with Stellantis and TRATON (Scania, MAN, International, and others) reflect a strategy of powering global OEM platforms with a modular, reusable software layer that avoids bespoke integration for each new vehicle program.

Defense, Space, and Maritime Applications

- **Applied Intuition sees autonomy as reshaping global defense economics, citing rapid growth in drone warfare and rising autonomy budgets.** The company positions its infrastructure as uniquely suited for large-scale simulation, testing, and orchestration of autonomous systems with humans in the loop, supporting ground, air, and maritime domains.
- **Edge deployment is a critical differentiator in defense and maritime environments, where connectivity is limited or nonexistent.** Applied Edge—a containerized, fully offline compute and autonomy platform—is designed to allow forces to iterate, learn, and retain data in contested environments, and is already deployed within certain U.S. and UK defense organizations.

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Global Stock Ratings Distribution

(as of March 31, 2026)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

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	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1534	42%	461	50%	30%	698	43%
Equal-weight/Hold	1573	43%	372	40%	24%	716	44%
Not-Rated/Hold	4	0%	1	0%	25%	1	0%
Underweight/Sell	568	15%	89	10%	16%	209	13%
Total	3,679		923			1624	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

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INDUSTRY COVERAGE: Autos & Shared Mobility

COMPANY (TICKER)	RATING (AS OF)	PRICE* (04/27/2026)
Andrew S Percoco		
Adient PLC (ADNT.N)	E (12/07/2025)	$21.62
Aptiv Plc (APTV.N)	E (12/07/2025)	$60.07
Avis Budget Group Inc (CAR.O)	E (12/07/2025)	$187.07
BorgWarner Inc. (BWA.N)	E (12/07/2025)	$55.39
Dauch Corporation (DCH.N)	E (12/07/2025)	$5.82
Ford Motor Company (F.N)	E (09/25/2024)	$12.49
General Motors Company (GM.N)	O (12/07/2025)	$77.96
Hertz Global Holdings Inc (HTZ.O)	E (02/08/2024)	$5.59
Lear Corporation (LEA.N)	E (12/07/2025)	$125.61
Lucid Group Inc (LCID.O)	U (12/07/2025)	$5.93
Magna International Inc. (MGA.N)	E (09/25/2024)	$62.28
Mobileye Global Inc (MBLY.O)	E (08/02/2024)	$9.01
Quantumscape Corp (QS.O)	E (12/07/2025)	$7.06
Rivian Automotive, Inc. (RIVN.O)	U (12/07/2025)	$16.72
Tesla Inc (TSLA.O)	E (12/07/2025)	$378.67
Visteon Corporation (VC.O)	E (06/01/2022)	$113.14
Daniela M Haigian		
Asbury Automotive Group Inc (ABG.N)	E (09/25/2024)	$200.03
AutoNation Inc. (AN.N)	O (09/25/2024)	$204.00
Carmax Inc (KMX.N)	E (11/10/2025)	$38.17
Carvana Co (CVNA.N)	O (08/07/2025)	$406.73

Group 1 Automotive, Inc (GPI.N)	O (09/25/2024)	$339.52
Lithia Motors Inc. (LAD.N)	E (09/25/2024)	$276.86
Penske Automotive Group, Inc (PAG.N)	O (09/25/2024)	$160.14
Sonic Automotive Inc (SAH.N)	E (09/25/2024)	$71.58
Javier Martinez de Olcoz Cerdan		
Goodyear Tire & Rubber Company (GT.O)	U (09/28/2025)	$7.14

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.