



KAIHAN'S

AUTOMOTIVE & TRANSPORTATION

INSIGHTS AND PERSPECTIVE

CONTEXT

- Projections for 2020 estimated \$77M in light vehicle sales, with an 8 percent rise in 2021, and the automotive industry finally “catching up” post-pandemic in 2023 ([Forbes](#)).
- In the six years leading up to 2019, carbon emissions increased by 33 percent.
- AI in transportation is estimated to grow to a \$3.5B market in 2023 ([PSI](#)).
- Sixty-five percent of goods globally are transported by truck ([McKinsey](#)).



TRENDS

1. Digitally integrated, Frictionless Mobility

- Cities, communities, and companies are looking towards developing digital infrastructure for transportation to enhance travel.
- Personal identification and wallets are migrating to the digital space, opening opportunities for ticketless travel and biometric recognition in private and public transportation ([Deloitte](#)).
- AI augmentation in mobility, which is currently being pursued by the San Diego Association of Governments ([SANDAG](#)), can reduce travel times, increase fuel efficiency, manage congestion, and even improve air traffic control efforts ([Deloitte](#)).
- Connecting vehicles, cameras, sensors, computers, and other devices through IoT shows promise in drastically enhancing travel in terms of efficiency, mapping, planning, and safety ([Forbes](#)).

2. Mobility-as-a-Service (MaaS)

- The automotive and transport industries are seeing shifts in MaaS in terms of vehicle ownership and usership, changing modes of transportation and automation ([Forbes](#)).
- By 2026, subscription-based vehicle usership could own 10 percent of all new vehicle sales ([Forbes](#)). Companies such as Ford, Porsche, and Jeep have explored opportunities in the vehicle subscription category.
- Bringing new vehicles to customers' doorsteps enhances personalization and creates new venues for customer interaction.
- Kyte is a rental car company that delivers vehicles via hubs in city centers to customers

who can order through their app or online ([TechCrunch](#)).

- Automation is entering MaaS, with AutoX in Shenzhen, China offering driverless “robotaxis” to the general public ([Forbes](#)).

3. Harm Reduction

- With increasing awareness of environmental and humanitarian responsibility, automotive and transport are taking steps to reduce the most impactful effects of their industries.
- Sweden has published its “Vision Zero” which aims to reduce road fatalities to zero by 2050 ([Science Direct](#)).
- Continental, a transport systems company, is striving to innovate to zero through its “#SafelyThere” campaign and focus on developing automotive safety technology ([Forbes](#)).
- Moves in the electric vehicle market aspire to reduce the environmental impact of carbon emissions while innovating on travel strategies. The Tesla Semi is touted to outperform fuel-based competitors while reducing the carbon footprint of the trucking industry. And even more recently, NASA has announced its aim to phase-in electric flight as a commercial option in the next 15 years ([The Guardian](#)).



4. Rescaling Production

- With consumer preference moving towards personalized experiences and customizable products, the need for flexibility, agility, and locality in production matters more than ever. Rescaling production design to meet the needs of customers in a shorter window, while still increasing customization, is a growth point.
- Microfactories, such as those being constructed by Arrival, a UK-based, EV company, are built upon the benefits of localized, flexible vehicle production ([Kaihan.net](https://kaihan.net)). Smaller production models allow for more agility and flexibility for customization and personalization. These microfactories can accomplish standardized and customized tasks simultaneously on a smaller scale ([FutureBridge](https://futurebridge.com)).

8PS

Leverage Point	“8Ps” of Strategy	Opportunity for Disruption	Recommended Leverage Points
<u>Position</u>	The core customer you serve, what need you meet with what brand attributes	4	<ul style="list-style-type: none"> • What customers are you currently serving? How can you position your organization to pursue a new customer base? • How do you evaluate your success in meeting the needs of your target customer?
<u>Product</u>	The offerings and packages you deliver; where you outperform, and where you underperform	8	<ul style="list-style-type: none"> • How are you exploring personalization and customization in your product lineup? • How can you incorporate MaaS into your offering? Can you blend your product line with MaaS to create a holistic experience for customers? • How can you incorporate AI or IoT systems into your product lineup?
<u>Promotion</u>	How you communicate with customers, including marketing, sales, and PR	6	<ul style="list-style-type: none"> • How can you promote your product or service to new targets? • What competitive appeal does your offering have to customers—where they are? • Have you expanded into social media marketing? What opportunities can your organization capitalize on by using it?

Leverage Point	“8Ps” of Strategy	Opportunity for Disruption	Recommended Leverage Points
<u>Price</u>	How much you charge for services, how you monetize	4	<ul style="list-style-type: none"> • What is your pricing structure? How could you move towards subscription-based pricing in a MaaS model? • How does your pricing structure differentiate you from competitors in your space?
<u>Placement</u>	How you deliver on your value proposition, and through what channels	9	<ul style="list-style-type: none"> • Do you have an opportunity to implement localized production to increase proximity to customers? • How can you reach customers where they are utilizing a MaaS model? • What channels is your product or service available through? How can you challenge conventional automotive sales models?
<u>Physical Experience</u>	The customer experience, what they see, smell, feel, taste, or hear	5	<ul style="list-style-type: none"> • How does your business model appeal to customers’ desire for environmental responsibility? • Are you innovating on automotive safety and wellness technology?
<u>Processes</u>	Your operations and processes	7	<ul style="list-style-type: none"> • Are you prepared to implement MaaS in your organization? • What opportunities do you have in exploring localized production models?
<u>People</u>	The choices you make regarding hiring, organizing, and incentivizing your people; your values.	4	<ul style="list-style-type: none"> • Are you positioned to implement or coordinate with MaaS in terms of mobility of staffing?

ARRIVAL

- Arrival is a UK-based EV company focused on providing electric vehicles from scratch to individual and corporate clients.
- Arrival focuses on localization and customization, allowing customers to purchase personalized vehicles with a shorter build and delivery window than typically expected.
- The company completes its production in “microfactories” which are built in or near city centers—and increases the flexibility and agility of the manufacturing process.
- Arrival plans to construct 1,000 microfactories by 2026.
- In 2020, Arrival and UPS reached a \$1.2B agreement for the production of 10,000 electric, customized delivery vehicles ([Kaihan.net](#), [Forbes](#)).



- Care by Volvo is a subscription-based vehicle usership program which charges a flat monthly rate to customers who want to personalize their driving lifestyle.
- The monthly payment for Care covers the car, insurance, tires, maintenance, and other fees ([CNET](#)).
- Customers of Care by Volvo were previously given the option to switch cars after a year of usership, but they are now given the option to re-personalize their vehicle every four months.