

## **TOYOTA - KINTO 98%**

by "Matt" Zihang Zheng







Kinto is an existing mobility services brand launched by Toyota.

It offers a range of services related to car ownership and usage, with a focus on flexibility and convenience. It aims to adapt to changing mobility needs and provide more sustainable and convenient transportation solutions.

## The Kinto 98% Concept is a shared mobility designed to be the most sustainable & accessible product wearing a Toyota badge.









## **To Tackle Climate Change**, We Need to Rethink Parking and Traffic Flow.

-Institution for Transportation and Development Policy



# 200+

sq.mi. Devoted Parking Space

According to Bloomberg, 200 square miles of space has been devoted to parking in L.A., which considerably more space than roads themselves (140 square miles). This takes up roughly 14 percent of L.A. County's incorporated land.

### **Excessive Parking Space**



# 85Hrs

**Parking Search Time per driver** per year

According to INRIX,

Annual search parking search cost in LA is 12 minutes per trip on-street search time 11 minutes per trip off-street search time 85 hours per driver per year annual search time

## **Unsatisfied Parking Demand**

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# 18.6B

**Ib. of Unnecessary Carbon Emissions** per year

According to ITDP (Institution for Transportation and Development Policy), An estimated 30% of fuel wasted due to vehicles navigating in search of parking — the equivalent of 18.6 billion pounds of carbon emissions annually.



# \$120B

**Economical Loss due to Traffic Congestion** per year

According to Duke University professor, Henry Petroski, Traffic congestion and the associated delays cost the U.S. economy over \$120 billion

annually due to poor infrastructure.

**Congestion Pollution** 

**Financial Consequences** 





## **Design Solution**



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## Space is the key







## **Design Solution**



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## **Design Solution**



### **Kinto 98% Dimensions** 3260mm x 2000mm x 1750 mm\*

\*30% more compact in length based on an average vehicle length of 14.7in (4.5 meters)

Matt Zihang Zheng





## **Multi-Vehicle** Connection

The Kinto 98% features a rear concave design, which allows the front wheels of one Kinto 98% to align with the rear wheels of the one in front, enabling a multi-vehicle connection.

This innovation allows multiple Kinto 98% vehicles to join together, creating a connected "train". This concept allows for sustainable commute use-cases such as:

**Group Cruising** saves energy when traveling

### **Stacked Parking** saves space when parked

2-seat mode Ready to Stack

4-seat mode Extended Rear Cabin







## **Group Cruising**



The Kinto 98% can travel individually or in groups, seamlessly merging and separating from bundles at will.

It streamlines traffic by uniting vehicles heading in the same direction, effectively reducing traffic congestion.

## **279%** More Spatially Efficient **Freeway Driving at 70mph**



## KÎNTO |

A unit of 4 Toyota Kinto 98%s takes up an average of 104.6 meters in freeway traffic (incl. safe distance before and after) \*

A unit of 4 traditional vehicle takes up an average of **396 meters** in freeway traffic (incl. safe distance before and after) \* -

\*Calculation based on an average vehicle length of 14.7in (4.5 meters) and 70mph traffic speed (31.5 meters per second) with 3 seconds of safe travel distance between traffic (94.5 meters)





## **Stacked Parking**





\*Calculation based on an approximate 300-350 sq.ft. requirement per parking space (in accountant for traffic aisles, end island/caps, space between adjacent cars, as well as the entrance and exit lanes) according to research by lowa Statewide Urban Design and Specifications \*\*Institution for Transportation and Development Policy (ITDP) states that parking lots are unsustainable, resource-intensive, and non-porous materials (asphalt, concrete, gravel, etc.) that contribute to urban heat island effects and compound stormwater pollution and runoff

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# **425%** More Spatially Efficient

## **Parked in the Stacked Manner**

By utilizing stack parking and autonomous technology, the Kinto 98% maximizes parking space efficiency. This approach allows for the accommodation of more vehicles using fewer parking lots.

As a result, it contribute to mitigating urban heat island effects and mitigating issues associated with stormwater pollution and runoff. \*\*

No Need for Traffic Aisle

12 rows

With the second











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**TOYOTA - KINTO 98%** 

Let's drive into a sustainable future

# THANK YOU for your consideration

Concept designed and visualized by "Matt" Zihang Zheng

