**Introduction**

Today, two major trends of change are occurring: transportation and climate. As our infrastructures deteriorate, we need smarter designs that cater to the needs of our current and future inhabitants. At the same time, transportation should enhance the character of the public realm. If we don't address both at the same time, we will lose the opportunity to work towards a more sustainable future for the city. What we are dealing with is no longer just a city, but it is an ecosystem and the environment is our new frontier. Healthy cities have a strong and sustainable economy, which supports not just the people living in them, but also the environment.

**Scenarios and Findings**

We started with three basic modal share scenarios: a baseline scenario based on historic patterns and two scenarios with autonomous vehicles, one in which we assume conservative use of and another in which autonomous vehicles catalyze a transformation of the mobility landscape. We then apply these mobility scenarios under future land use conditions to generate future mode shares, which in turn inform traffic volumes, parking demand, and curb demand.

- **Baseline Scenario:**
  - No significant changes in traffic patterns.
  - Parking and curb demand remain similar to current conditions.
  - Public transportation usage increases slightly.

- **Evolutionary Scenario:**
  - Moderate changes in traffic patterns.
  - Parking and curb demand increase slightly.
  - Public transportation usage increases more significantly.

- **Revolutionary Scenario:**
  - Significant changes in traffic patterns.
  - Parking and curb demand decrease significantly.
  - Public transportation usage increases dramatically.

**Design and Recommendations**

We designed the Revolutionary Scenario to demonstrate the potential changes in urban spaces due to autonomous vehicles. In this scenario, we assumed a high level of autonomous vehicle adoption and implemented changes to the street infrastructure to accommodate the new mode of transport.

**Existing Conditions**

- **Intersection Capacity:**
  - Current intersection capacity is limited due to high demand.
  - Autonomous vehicles can significantly increase capacity.

**Space for People**

- **Add a pedestrian scramble at Harrison Street:**
  - Increases the sidewalk width from 5 feet to 10 feet, improving pedestrian access.

- **Revolutionary Scenario:**
  - Pedestrians are the primary mode of transportation.
  - New public spaces are designed to accommodate walking.

**Parking Demand**

- **Curb Demand:**
  - As autonomous vehicles become more common, curb demand increases.

**Recomendations**

- **Reduce curb parking:**
  - Autonomous vehicles will reduce the need for curb parking.

- **Add bike lanes and parklets:**
  - Enhances active mobility and supports new modal share scenarios.

- **Optimize stormwater infrastructure:**
  - Improves infrastructure resilience.

- **Increase space for green infrastructure:**
  - Enhances the sustainability of urban spaces.

**Recommended Tools and Technologies**

- **Responsive lighting:**
  - Creates dynamic crosswalks.

- **Green Roofs:**
  - Improves stormwater management.

- **Stormwater harvesting:**
  - Reuses stormwater for various purposes.

- **Green Parking:**
  - Enhances sustainability of parking lots.

- **Bike Sharing:**
  - Encourages active mobility.

**Conclusion**

The Revolutionary Scenario demonstrates the potential changes in urban spaces due to autonomous vehicles. By implementing changes to the street infrastructure, we can create a more sustainable and efficient urban environment. The key to success is proactive planning and design, which will ensure a smooth transition to a future where autonomous vehicles are the norm.