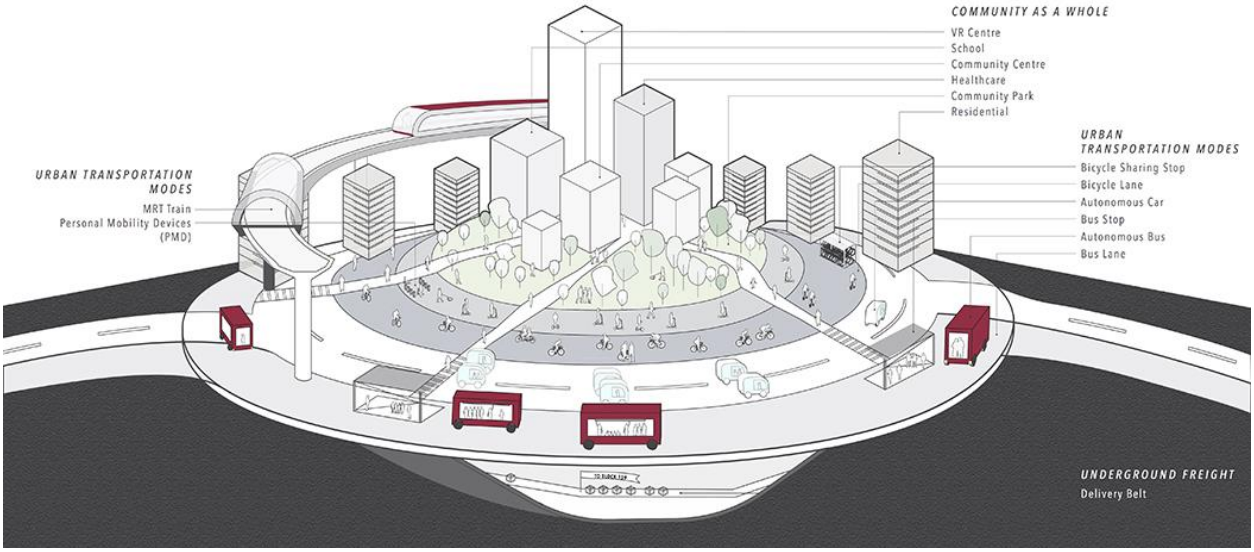
ARCH 4104 – Design Studio, Spring 2019, Ming-Chun Lee



Urban Mobility

Two Major Trends in Urban Mobility

- **Shared Active Transportation**: Over the past decade, Shared Active Transportation systems have become a common sight on North American public streets and rights-of-way, creating new mobility opportunities and changing the way people move around their cities. Companies rent small, shared-use-specific, vehicles to the public from multiple locations within the right-of-way. To date, these small vehicles include: bikes, e-bikes, scooters, and e-scooters, but other vehicles may be under development. Typically, Shared Active Transportation small vehicles are stored in the public right-of-way.
- **Autonomous Vehicles**: Autonomous driving advancements are expected to disrupt conventional ways of commuting, including buses, taxi services, and privately owned cars. For example, autonomous public buses may have the capabilities to work around congestion to bypass traffic and improve commute predictability; autonomous shared e-hailing, made possible by vehicle-to-vehicle communications via high-speed wireless technology, can eliminate driver expense, lowering trip cost enough for consumers to overcome reluctance to share with strangers, and in turn can result in lower demand for individual cars.

For urban planners and designers, the key question now is: **How do we make our cities ready for these emerging changes in urban mobility?** To address this question, we propose a mixed-methods research approach to offer some insights into possible ways in which the current physical configurations of our urban structures may be altered to make these new forms of urban transportation enable better urban living in the future. This includes not only transportation efficiency but also economic prosperity and social inclusion. This urban-focused topical studio will be conducting background research and producing design solutions as “typologies” for possible physical configurations of urban structures. The production of design solutions will be done using selected locations in Charlotte as demonstration sites with various physical, social, and environmental characteristics for comparisons.

- Topics of background research include: 1) current trends of urban mobility, 2) policy issues associated with new forms of modern transport systems, 3) best practices for urban form transformations or alternations responding to these new transport systems.
- Design elements of “typologies” for future urban form configurations consist of: 1) roadway sectional configurations within right-of-way, 2) re-configurations within the pedestrian-realm in relation to building edges, 3) re-configurations of street block structures including their associated open spaces, 4) re-thinking of parking, in terms of demand and supply management and its potential physical forms and locations, 5) potential new forms of “hubs,” where different types of transit may intersect creating opportunities for not only bike/scooter storages but also small shops, repairs, cafes, etc.