# AV STREET CRED BOOSTER

Just in Time Reading List on Converting Your Communities and Campus into Innovation Engines

innovation4mobility.

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# BUILD YOUR DIY AV CURRICULUM
## Street Cred on AV Shuttles

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Street Cred on AV Shuttles  is an ongoing project for us. Some would say obsession.

We've honed our "cred" with hundreds of interviews and site visits and dozens of AV rides.

Over the last five years, we have also researched, written, and read a boatload of books, studies, blogs, and articles. And we recorded podcasts, videos, and even a PBS special. We have debated, presented on panels, and led planning and implementations.

Kelley in partnership with Lisa has taught train the trainer courses, and AV tech workshops. They also created an interactive tech zone on automated and smart mobility. Kelley continues to teach mobility innovation through on demand education and virtual classrooms.

 This booklet is a starter kit to build your street cred on AV Shuttles

With a decidedly personal bias and skewing to readiness and research with a sprinkling of fun, we offer this reading & listening list to boost your street cred with some "book"learning.  Created for a course on land use and AVs, we highlight  mobility hubs and curbside management, two key tools to future proofing infrastructure.

The AV Shuttle Street Cred Booster is a work in progress. So share your reading list with us.

*Kelley and Lisa*

team@innovation4mobility.com.

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## AV BASICS & ADVENTURE STORIES

Here are our 3 favs for AV Basics -- Driverless provides an accessible text on the fundamentals, the Taxonomy fills you in the lingo, and Driven is a great adventure tale.

If you like to listen, "Planning the AV Future" is our recommendation. Co-hosted by APAs Jennifer Hennaghan and Kelley. The Five episodes

- Introduce AVs,
- Tell origin story of AV shuttles,
- Consider where shuttles fit with transit,
- Look at the role of 5-g and connected tech, and
- Outline  scenario planning's value in use and disruptive technologies.

(Lisa's the star of episode on scenario planning.)

Lipson, Hod, & Kurman, Melba. **Driverless: Intelligent Cars and the Road Ahead.** The MIT Press, Sept. 15, 2017.
Great for fundamentals.  Check out the chapter on object identification and sensors.  The best discussion of the Trolley Problem., Best of all... no hyped predictions about deployment.

"**Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles**"
J3016_201806. Society of Automotive Engineering, 2018.
DOI:10.4271/j3016_201609. Read for core concepts and nomenclature ...a must to master for AV street cred!

Davies, Alex. **Driven: The Race to Create the Autonomous Car.** Simon & Schuster, 2021.
An (boys) adventure story about DARPA challenges in the 1990s. Races in the deserts and stolen treasures abound.

Need an AV help desk? Take a look at one of these guides on planning, policy, operations, transit, and infrastructure. (Our work always covers equity, sustainability, and economic development considerations.) These will get you started.

Henaghan, Jennifer, Coyner, Kelley, and Nisenson, Lisa. "Preparing Communities for Autonomous Vehicles," American Planning Association, 2018. https://trid.trb.org/view/1504657

Coyner, Kelley et al, Low-Speed Automated Vehicles (LSAVs) in Public Transportation. Washington, DC: The National Academies Press. (Includes Practitioner Check Lists.)

Coyner, Kelley, "A Framework for Hawaii's AV Future: Accessible, Autonomous, Connected, Electric and Shared," Honolulu, HI, Ulupono Initiative, 2020.

Bailey-Campbell, P., Bittner, J., Constantine, S., Coyner, K.,  Rodriguez, G., Schriber, J., and Silber, H. Topical Papers, TRB Forum on Preparing for Automated Vehicles and Shared Mobility Systems, 2020.  Topics include:

> Land Use
> Planning and Modeling
> Transit and Partnership Opportunities
> Freight
> Prioritizing Equity, Accessibility and Inclusion
> Maximizing Positive Social Impacts
> Infrastructure Enablers
> Safety Scenarios and Engagement during Transition
> Models for Data Sharing and Governance

## CURBSIDE: PUDO PEOPLE AND PACKAGES

**PUDO +Pick Up and Drop Off**

The e-commerce explosion makes managing a now issue. Lisa's "Primed for Delivery," American Planning Associiation, 2020 highlights those trends and provides a planning matrix for AVs at the curb.
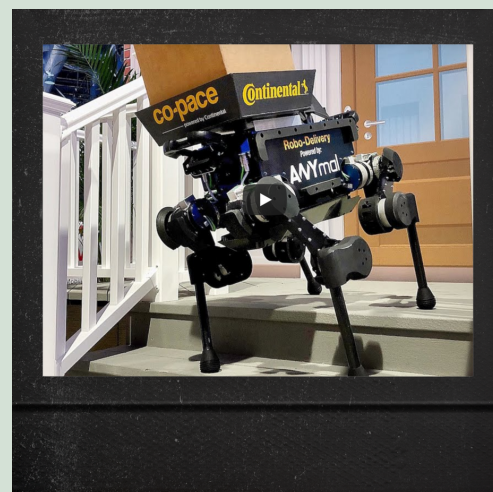
## Curbside Tools

Barth, Brian. "Curb Control" APA June 2019

Coord. "Curbside Management Intro " Youtube, 2020.

SFMTA. "Curb Management Strategy," SFMTA." 2020,

Comeaux, Daniel. "Curb Space and its Discontents," Harvard Kennedy School, 2020.

# ADAPTIVE MOBILIITY HUBS

## Future Proofing Infrastructure

AVs need to connect with other modes and adaptive mobility hubs are key to tapping all forms of shared, connected, electric, active and automated transport. Malls, gas stations, and master plan communities, and transit hubs can each support mobility hubs. Here some resources to guide your way.

Sako. "Identifying Best Practices for Mobility Hubs." Vancouver, Prepared for Translink, 2018, 2

Crowther, Jean. "Mobility Hub Typology Study," Portland DOT, 2020.

SANDAG. "Regional Mobility Hub Plan," San Diego Forward, 2020.

Shared Use Mobility Center. "Mobility Hubs: Where People Go to Move," Chicago, 2019