AVS 2018 Proceedings Summary

Breakout Session #29 Integrating Automated Vehicles on City Streets: An Interactive Planning Workshop

Organizers

William (Billy) Riggs, Assistant Professor, University of San Francisco
William Baumgardner, Principal, Arup
Melissa Ruhl, Planner, Arup
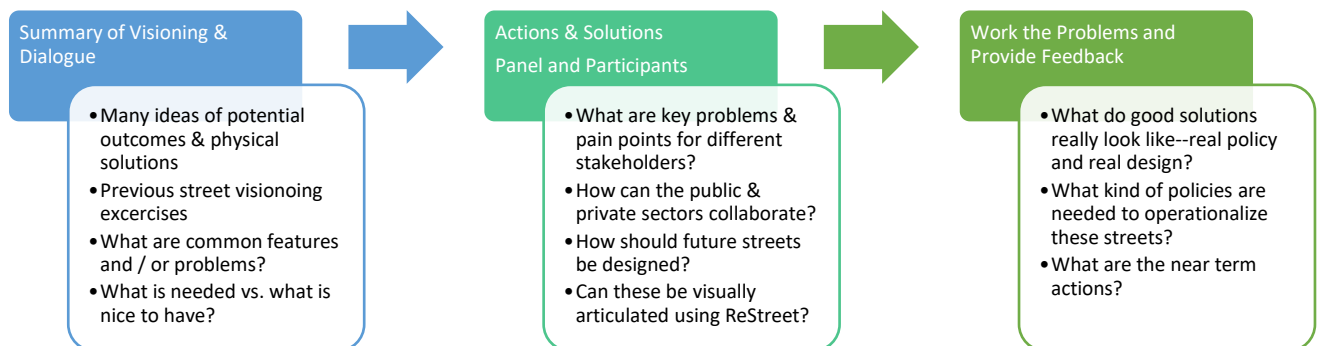Caroline Rodier, Associate Director, UC Davis

Reporters

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Session Focus

The session questioned how automated vehicles be deployed in the city without compromising urban livability at the level of the street—focusing on how streets can be design to facilitate autonomous travel in parallel with urban livability. The goal in focusing on streets was to in design and policy exercises focused to achieve aspirational streets of the future.

Session Summary

The workshop began with an interactive poll and an introduction framing travel behavior and street transformation. The goal was to address the conflict points, including behavior, design, economics, congestion, equity, etc. Following this an expert panel dialogued potential pain points between cities and industry cities as they develop autonomous driving technology, exploring their priorities, goals and needs. This discussion was then used for the participants to act and engage in designing their own streets. Participants sketched out potential concepts for three 'subject' streets using the ReStreet planning tool. These visions were then presented, and then critiqued by the expert panel, who offered concluding thoughts as well as policy and design takeaways. An outline of this process is provided in the graphic below.

Summary of Visioning & Dialogue	Actions & Solutions Panel and Participants	Work the Problems and Provide Feedback
• Many ideas of potential outcomes & physical solutions • Previous street visionoing excercises • What are common features and / or problems? • What is needed vs. what is nice to have?	• What are key problems & pain points for different stakeholders? • How can the public & private sectors collaborate? • How should future streets be designed? • Can these be visually articulated using ReStreet?	• What do good solutions really look like--real policy and real design? • What kind of policies are needed to operationalize these streets? • What are the near term actions?

Key findings and lessons learned from this process included the concept that cities need to evolve from auto-centric to people-centric, and that streets should reflect this reality. There was consensus, even from autonomous vehicle manufacturers that, on city streets, AVs will always be secondary to people. Potential new visions for both suburban and urban streets involved streets that were legible for vehicles but also that reframed a large component of street estate for transit users, cyclists and walkers.
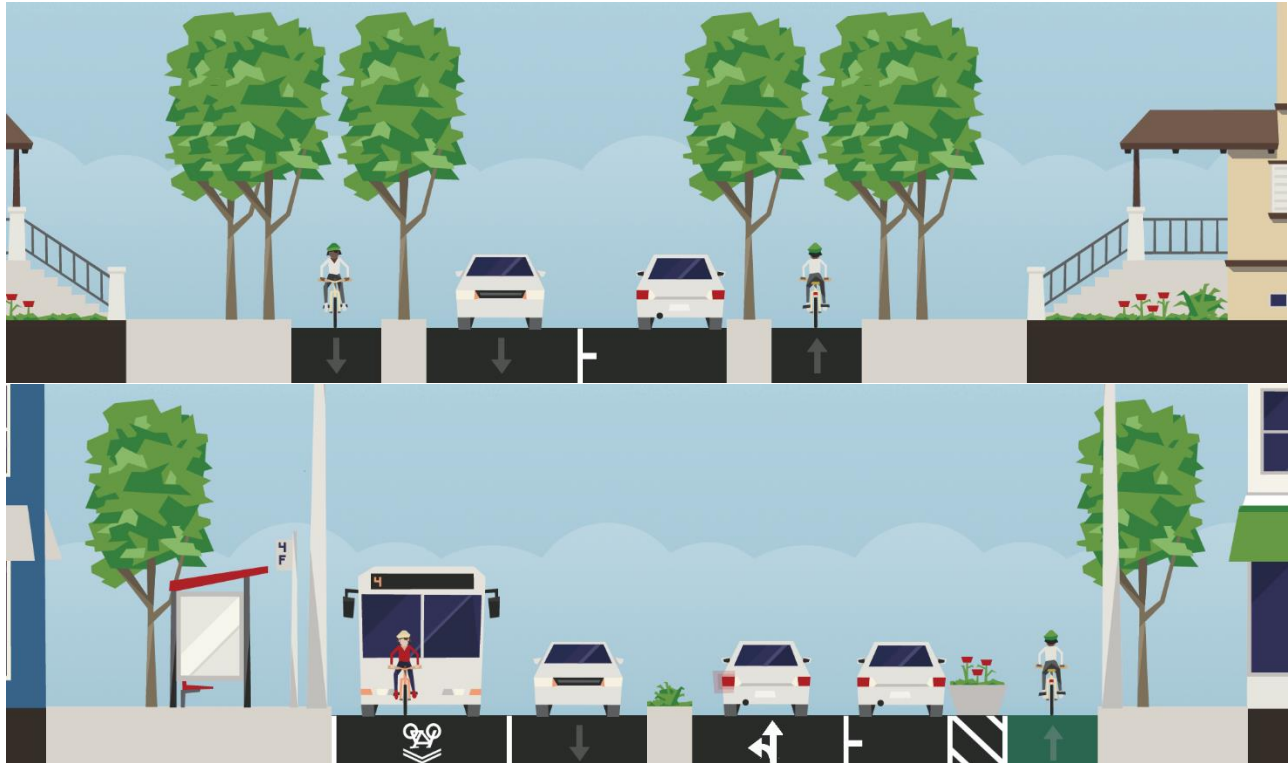
Additional policies that arose included the following key observations, including those on energy, curb management and design for vulnerable populations.

- Transportation and the electric grid will be intertwined. We need to plan for renewable energy systems for mobility.
- Today, the curb is critical; tomorrow, the curb may be irrelevant with new flexible designs that are not yet possible today.
- Accessible, universal design is a challenge for both vehicles and streets. This challenge needs to be tackled and resolved.

Suggested Action Items

Suggested action items for public and private professionals included:
- Design for clarity, design for people
- Open doors to pilot new ideas
- Evolve policy faster, with more collaboration and partnerships
- Advance mapping efforts with digital infrastructure inventories
- Rethink infrastructure finance to consider dynamic pricing