



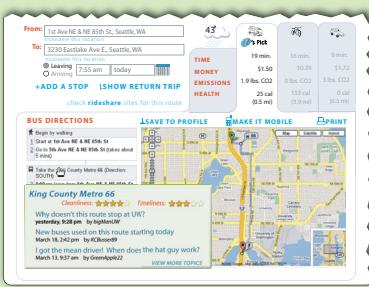
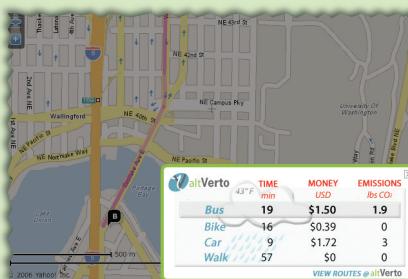
altVerto

Using interventions and community to promote alternative transportation

"I know I should drive less, but I just don't think about that as I'm about to get in my car."

Intervention

altVerto begins with a notification plugin that users are incentivized to install. Whenever they seek directions using their preferred mapping site, altVerto displays the alternative options and associated savings.



An iterative, user-centered design process



Contextual inquiry

We engaged with our target audience to understand how they choose among travel options. A concurrent literature review highlighted the most effective means of motivating people to use alternative transit.



Ideation

We generated initial ideas based on user needs uncovered in our contextual inquiry. We evaluated these ideas based on the constraints facing transit operators and other stakeholders, and storyboards of our most promising ideas to potential users.



Validation

We evaluated an experience prototype of the notification system in a week-long diary study. Our intervention-based approach effectively changed user choices and some users became advocates for alternative transit.

Prototyping

We worked with diary study participants to revise paper prototypes of altVerto. This feedback led to a high fidelity visual prototype and revised feature set.

Car culture must change

Between 70% and 80% of transportation in the United States consists of single-occupant vehicles [1]. Excessive car use damages the environment, increases congestion, and contributes to health problems. American car culture continues to worsen, and while public transit provides a viable option for mobility, it is not always an obvious alternative. We seek to decrease single-occupant trips among people who could choose to use alternative transportation.

Existing services cater to existing users

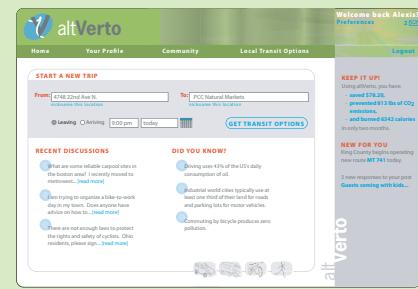
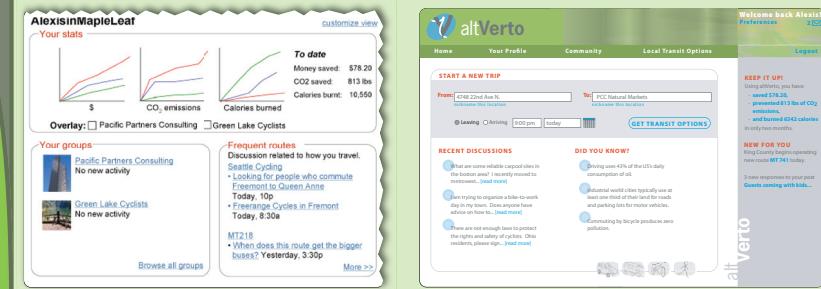
Potential transit users told us that they need information about transit options and relative costs in order to break their car habits. Existing services that provide this information do so only when users seek out alternative transit options. These services improve the transit experience but do not attract new users.

Individual coaching can change behavior

Individually coaching potential users is one of the most effective ways to increase public transit use [2]. While effective, this can be too costly for transit providers. altVerto automates many aspects of this coaching program, greatly increasing its reach. Choices, costs, and feedback are provided according to best practices in persuasive technology [3].

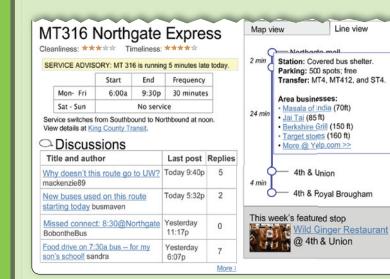
Sustained use

altVerto provides feedback on the historical costs of users' travel choices. This motivates users to choose altVerto as their preferred route planner, and to consider changing how they make regular trips, such daily commutes.



Community

Community features in the results entice users to take ownership of their transit experience. As users move beyond annotating and discussing transit routes and options, altVerto becomes a hub for collective action on transit-related topics.



Selected references

- [1] Pisarski, A.E. Commuting in America III. *Transportation Research News*, 241 (2006), 26-29.
- [2] Transportation Research Board. Individualized Marketing: Implications for Transportation Demand Management. *Transportation Research Record*, 1618 (2007).
- [3] Wantland, D.J., Portillo, C.J., Holzemer, W.L., Slaughter, R., and McGhee, E.M. The effectiveness of Web-based vs. non-Web-based interventions: a meta-analysis of behavioral change outcomes. *J Med Internet Res*, 6(4) (2004), 110-121.