

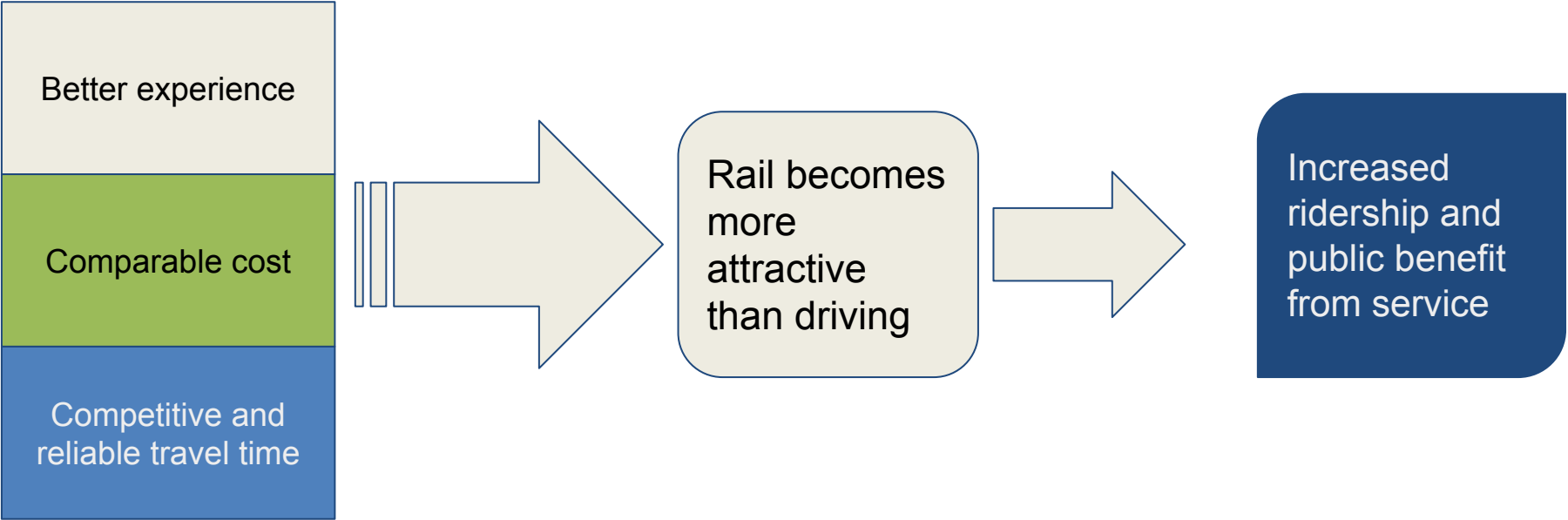


Conceptual User Experience (UX)

Part Two

January 28, 2021

Why User Experience Matters



User Needs and Goals

Feedback Requested: Have we adequately explained the passenger needs & goals?

01

Safety

- Safe and secure stations and safe and secure travel
- Well lit, clean

02

Information

- Integrated and diverse ticketing and trip planning options
- Real time arrival, departure, travel time, and schedule change information

03

Comfortable

- Shelter, restrooms, trash receptacles
- Food/beverage service
- Comfortable seats, outlets for charging small devices, WiFi, large item/bike storage

04

Reliable

- Consistent, on time arrival and departure times
- Well maintained equipment, tracks, trains and stations

05

Accessible

- Accessible to persons with disabilities
- Connects to local transit, park-n-rides, rideshare, micromobility, sidewalks & trails

06

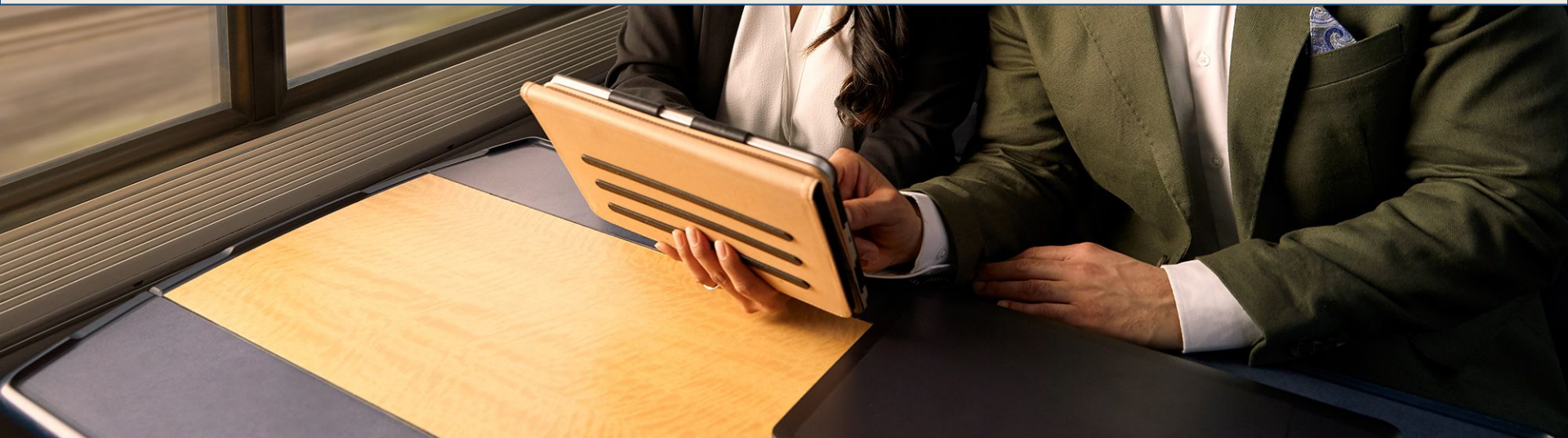
Good Value

- Competitive travel cost compared to other modes of transportation
- Standard fares and business class tickets with additional amenities



Designing our User Experience

Both onboard and at our stations



Stations: Multimodal Access

- Designing multimodal access into station layout
 - Simple mode shifts between bus, transportation network companies (Uber, Lyft, etc), and other modes to rail
- Integration with local/regional transit services
- Micromobility options presented at the station, such as shared e-bikes or scooters
- Pick up and drop off area
- Bike racks and lockers
- Parking
 - Electric vehicle charging stations
 - Passenger vehicle parking (short term and long term)
 - Dedicated carpool and vanpool parking
 - Digital parking payment and management system
 - Motorcycle and scooter parking



Considered Station Amenities

- Context-sensitive facility design
 - Partnership with local municipalities and other stakeholders
- Commercial activities
 - Possible commercial activity for food, drinks, durable goods, merchandise
 - Integration and partnership with small and local businesses
- Well-lit, secure, and patrolled station, parking, and platform areas, 24 hours a day.
- Comfortable waiting areas
- Heated platforms
- Passenger information
 - Dynamic messaging signs, providing real-time schedule updates, train statuses, and other information
 - Ticketing kiosks at major stations
 - Informational kiosk with FRPR system maps
- ADA-Accessible features

Feedback Requested from the Rail Commission: What station amenities are a must have verses nice to have?



Onboard Accessibility

- Entire train capable of being accessed by wheelchair users
 - Wide aisles
 - Wheelchair parking locations
 - Accessible restrooms
- Reserved seating for seniors and persons with disabilities
- Train doors would be capable of serving level-boarding platforms and low-boarding platforms
 - Automatic gap filler
 - Trap doors in vestibules
- Passenger information in multiple forms (audible, visual)
- Accessible features also aid faster boarding/alighting
 - And lead to more comfortable experiences for those with strollers, luggage

Onboard Furnishings

- Modern furnishings and features
- Comfortable seating
 - Headrests
 - Footrests
 - Armrests
 - No middle seats (2-abreast seating)
 - Reading lights
- Fold down desks/tray tables
- Large windows for scenic viewing
- Safety features meeting or exceeding FRA requirements
- Reserved seating only
- Clean and well maintained
- Smooth, quiet, comfortable ride



<https://www.amtrak.com/onboard/onboard-accommodations-for-all-your-needs/seating-accommodations/business-class.html>

Amtrak Acela/Avelia

<https://railcolornews.com/2019/08/29/us-take-a-look-inside-the-new-acela-hihg-speed-trains-for-amtrak/>



Siemens Venture Trainset

<https://www.mobility.siemens.com/us/en/portfolio/rail/rolling-stock/venture-trainsets.html>



Other UX Examples



Brightline, Florida

Amtrak Quiet Car
(Northeast Corridor)



Deutsche Bahn
(DB)



Real time station arrival times



Indicates "speaking zone" on train

[User Experiences on a Train Trip - Erik Ramsgaard Wognsen \(erw.dk\)](#)

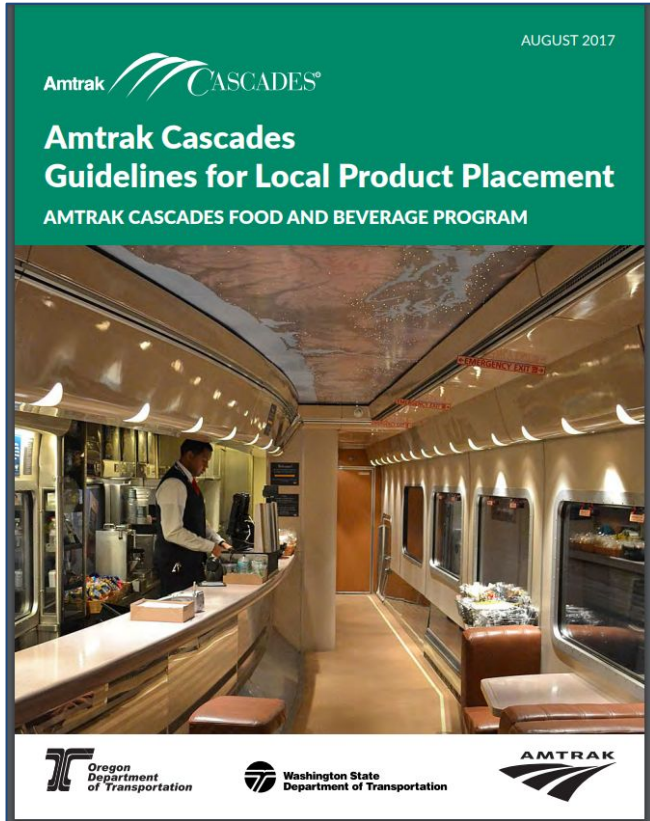
On-Board Amenities

- Food and beverage service
 - A dedicated café car, staffed to provide both food and beverage service, as well as tourist information, and other sightseeing lounge features
- Bicycle and luggage storage
 - Overhead small luggage storage
 - Bicycle storage on the front half of the control cab car
 - Large luggage storage on standard passenger coach
- Connected user features
 - Charging ports
 - Wireless internet access
- Passenger Information
 - Video displays
 - Upcoming stations and connections
 - Train speed
 - Other essential information about the trip, announcements
 - FRPR Rail System Maps
 - Connecting transit system options by destination
- Potential for premium (first-class) service



Feedback Requested from the Rail Commission: What on-board amenities are a must have verses nice to have?

Amtrak Cascades: Promoting Regional Cuisine



A Regional passenger rail service that connects 18 cities in Oregon, Washington, and British Columbia, Canada.

Food and beverage service has Bistro Car featuring both national and locally sourced products, which provide a “Pacific Northwest vibe” that emphasizes Northwest cuisine and distinguishes Amtrak Cascades as a truly regional brand.

Rail Commission Discussion of User Experience

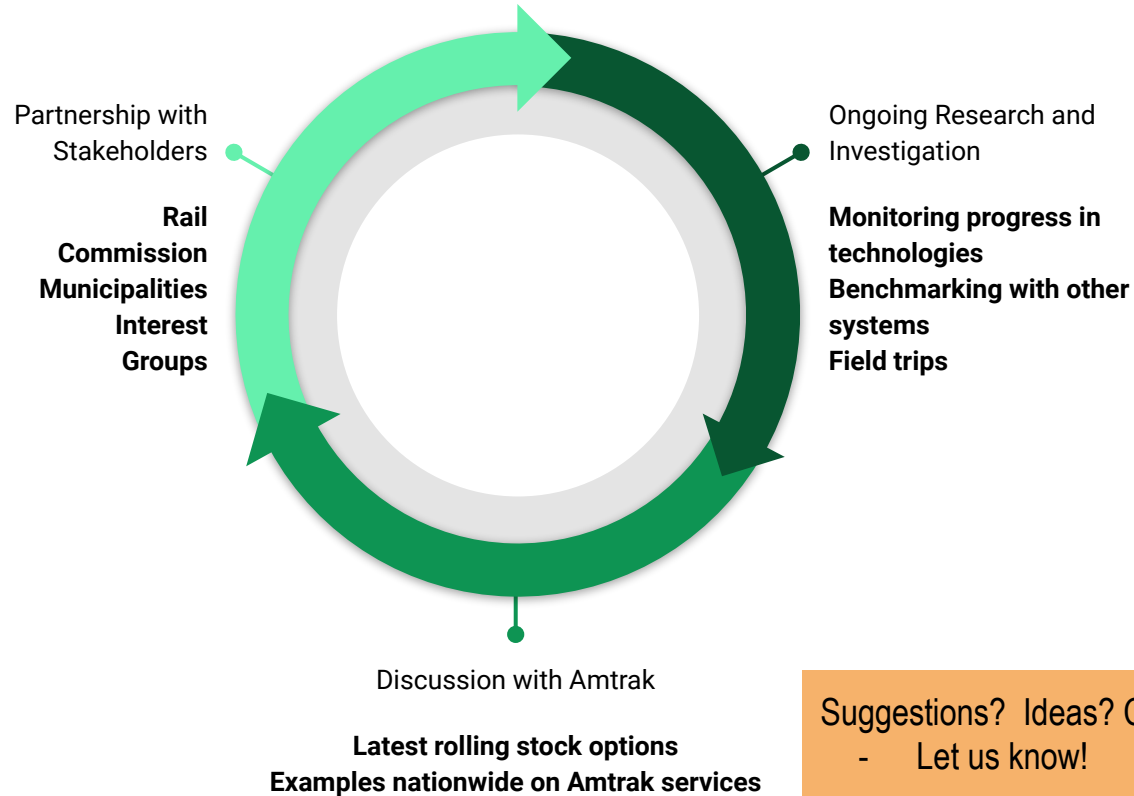
What features of train travel do you value the most?

What amenities make the most sense for Colorado?

What train rides have you taken have been the most positive? Why?

What additional information would you like to get from the FRPR Project Team?

Next Steps - Moving Forward



Suggestions? Ideas? Concepts you've seen?
- Let us know!

Thank You

Chris Enright

Professional Engineer I

CDOT Region 1 & Front Range Rail team

Chris.Enright@state.co.us

(303) 512-5985

Lisa Streisfeld

Assistant Director of Mobility Services

CDOT Office of Innovative Mobility & Front Range Rail team

Lisa.Streisfeld@state.co.us

(303) 757-9876