Transit *Stop, Collaborate, and Listen:* Modernizing Transit Stops

APTA's Emerging Leaders Program

Class of 2020

Team Six

Agenda

- Introductions to the team
- Introduction to the project goal and objective
- Today's transit stop features
- Today's advanced amenities
- Transit stop modernization
- Q & A

MEET THE TEAM

Evan Alvarez

- Special Services Manager
  - Champaign-Urbana Mass Transit District
- Grew up in Mobile, Alabama
- Passion for advocacy for persons with disabilities
- BA from University of Alabama
  - Anthropology (Religion and Community-Building)
  - Geography (Environmental, Urban, and Regional Planning)
- MUP from University of Illinois at Urbana-Champaign
  - Transportation and Accessibility

Christina Belmont

Sr. Marketing Manager at Genfare
- Holds a BA in Communications with a poli sci minor
- Extremely passionate about digital marketing
  - Website & SEO
  - Social media
  - Content marketing, sales collateral & blogging
  - Public relations & communications
  - Marketing strategy & branding
- Association involvement
  - Vice Chair of APTA Fare Collection Sys Committee
  - Vice Chair of APTA EXPO

Trey Blaise

- Sr. Service & Schedule Design Analyst
- Manage large-scale service changes
    - PTC schedule changes
- Develop conceptual schedules for scenario planning
- Operations modeling
- Louisiana State University
    - Geography and French
- University of Illinois at Chicago
    - Transportation Planning

Kira Thomas

- Operations Manager – Supervision
  - Chicago Transit Authority
- CleverCAD Lead Project Manager
- Skills include:
  - Management
  - Project Management
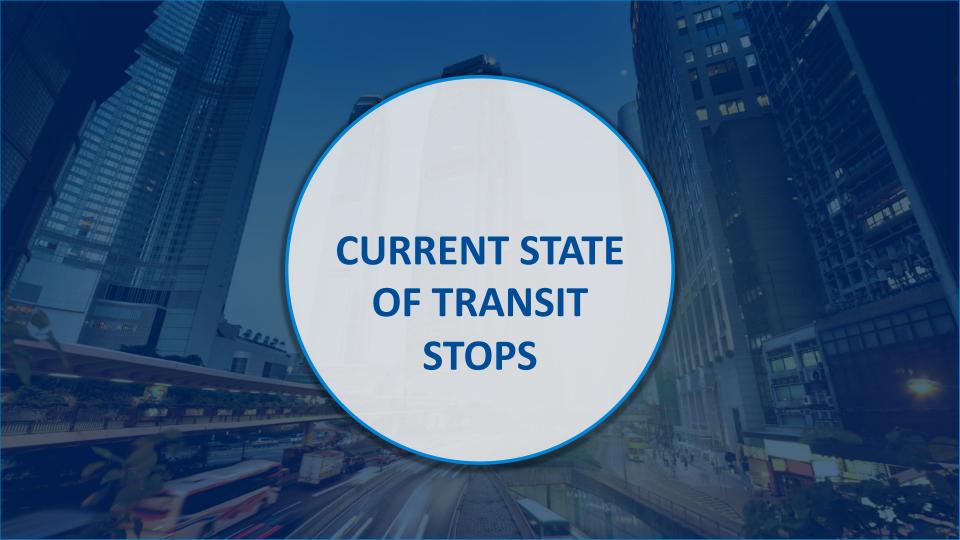 - Emergency Management

PROJECT SCOPE & OBJECTIVE

Project scope & objective

Project scope:

- Our Team is made up of individuals with differing roles that interact with different modes of transportation.

  - We want to play to each others' strengths, interests and expertise.
- We set out to accomplish a review of today's average transit stop, take a look at transit stop amenities that are on the cutting-edge, and then look at modernizing transit stops for our future.

Objective:

- To research, talk to our peers, compile ideas and mock up a concept of a modern transit stop featuring all these elements together. Everything from new technologies to amenities—we want this project to reflect what our riders want.
- Have fun and be creative!

CURRENT STATE OF TRANSIT STOPS

At the risk of stating the obvious...

- Multiple types of services and modes of transport
  - Bus
  - Rail
- Multiple tiers of amenity
  - Transit hub
  - Transfer point
  - Coverage stop
- So what are we looking for here?
  - Guidance on when amenities are appropriate, what they look like

Financial

- Actual budgeting implications of creating a more developed station or bus stop

Spatial

- Issues with right-of-way, utilities, acquiring the space to provide the desired level of amenities

Bus Stop
- Standard shelters, lighting, trash receptacles, etc.
- Emerging Trends
  - Bus Rapid Transit (BRT)
    - Transit station approach to bus stops

Train Station
- Standard lighting, heating, etc.
- Lends itself to more expensive infrastructural investments
- Emerging Trends
  - New ways of displaying and interacting with information
  - Allowing live service changes to be reflected, trip planning at the station

TODAY'S ADVANCED AMENITIES

Current Trends in Station Modernization

From a mode agnostic standpoint - 3 Main Categories of Modernization

Digital signage
- Real-time transit tracking information
- Trip planning / Service disruption response
- Wayfinding

Personal Device Access
- USB Ports
- WiFi
- Cellular Phone Networks

Transit stations as public spaces
- Incorporating local business opportunities
- Gathering spaces for community events

Digital Signage

Real-time tracking information
- GPS data is becoming more accessible to transit agencies
- Riders have access to vehicle arrival information as well as connecting services

Trip planning / service disruption response
- Route maps, connecting services
- Audio and visual component
- Service change

Wayfinding

Personal Device Access

Wi-Fi

- Agencies are now employing the use Wi-Fi to provide riders with access to the internet

Device Charging

- It is estimated that ~70% of the world has a mobile device
- Agencies are including charging ports to allow riders access to power their devices

Mobile networks

- Underground stations / tunnels are being installed with mobile network access
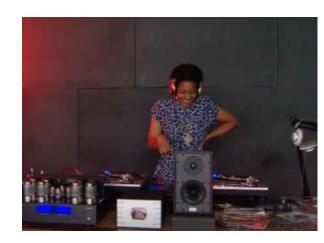
Transit Stations as Public Spaces

Retail is being incorporated into transit station design

- Grocery stores are commonplace in many foreign transit stations
- Gives transit riders easy access to necessary items within their trip and provides agencies with revenue stream

Public gathering spaces

- The addition of plazas either surrounding or inside stations
    - These provide opportunities for stations to be not only a place to start a journey but a place for meeting and civic engagement
- Chicago Transit Authority
    - 95th St. Red Line station now includes a DJ booth

What do riders really want?

- What would it take for our transit stops to go from barely adequate to something extraordinary?

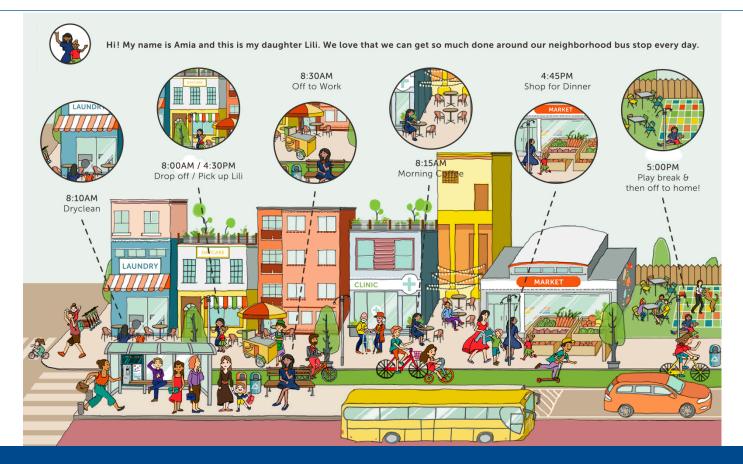# Transforming transit stops into nodes with goods and services

Partner with the community to create exciting ideas

- Free Virtual Library Launched in a Philadelphia Train Station.

- San Antonio's VIA Metropolitan Transit has already started custom branding their shelters to create unique experiences for their visitors as you see here with their zoo themed bus shelter.

Creative approaches to financing transit projects

Benefits of creative approaches to financing transit stops via public-private partnerships

- Create unique experiences
- Cost-effective
- Low maintenance
- Less manpower
- World-class transit stops

Robots

Hitachi Humanoid robots are transforming the passenger experience in the UK

- Capable of approaching customers
- Moves at same pace as humans
- Increases sophisticated services
- Connects to cloud-based systems
- Can access information from the web
- Ability to access indoor network cameras
- Provides accurate guidance
- Ability to control multiple robots at various locations

Wi-Fi

Robot Assistance

Goods & Services

Delivery Station

Public-Private Partnerships

Rider Amenities

Community Themed & Integrated

Thank You!

Thank you to those who reached out and wanted to help with this project.
Your time and input really shaped our approach and research.

- Amy Fimbel, Project Manager of Capital Improvements - TriMet
- Jesse Stemmler, Project Manager of Engineering and Construction - TriMet
- Alex Carr, Section Manager of Service Information – Ottawa Transportation
- Jim Mersereau, Transit Systems Engineer – HDR
- Jennifer Criscuolo, Senior Project Manager - Clever Devices

Q&A

APPENDIX

Image Sources

Slide #20 - https://plasticpipe.org/pdf/designing-hydronic-snow.pdf

Slide #21 - https://www.hitachi.com/rd/research/mechanical/robotics/emiew3_01/index.html

Slide #22 - https://transloc.com/tag/future/

https://www.forbes.com/sites/hilarybrueck/2016/11/18/pavegen-energy-generating-sidewalk/#4e4ee28078da

https://www.komando.com/online-shopping/get-your-amazon-order-in-under-2-minutes-heres-how/413921/

https://transitcenter.org/wp-content/uploads/2018/12/Families.pdf

https://www.bloomberg.com/news/articles/2014-09-18/a-basic-shelter-can-make-the-wait-for-the-bus-feel-shorter

https://www.masstransitmag.com/technology/facilities/shelters-stations-fixtures-parking-lighting/article/21093924/creating-a-sense-of-place-at-bus-stops-improves-the-customer-experience

https://www.viainfo.net/2018/03/13/via-announces-zoo-themed-bus-stop-shelters-just-time-spring-break-visitors/

https://www.pps.org/article/how-a-humble-bus-stop-can-anchor-a-whole-neighborhood

https://www.shareable.net/how-to-turn-a-bus-stop-into-art/

http://markova3011.weebly.com/blog/unusual-bus-stops

https://www.dailymail.co.uk/travel/travel_news/article-4278448/Tech-infused-bus-stop-books-smart-boards-SWING.html

https://the-digital-reader.com/2013/04/05/virtual-library-launched-in-a-philadelphia-train-station/