



Changes to Northern Virginia Transit through the Pandemic

Xavier Harmony
*Senior Program Manager,
Transit Resource Center*

Sophie Spiliotopoulos
Program Analyst

Overview

Transit is an important aspect of Northern Virginia life. 11% of Northern Virginia residents use public transit for commuting, more than double the national average.

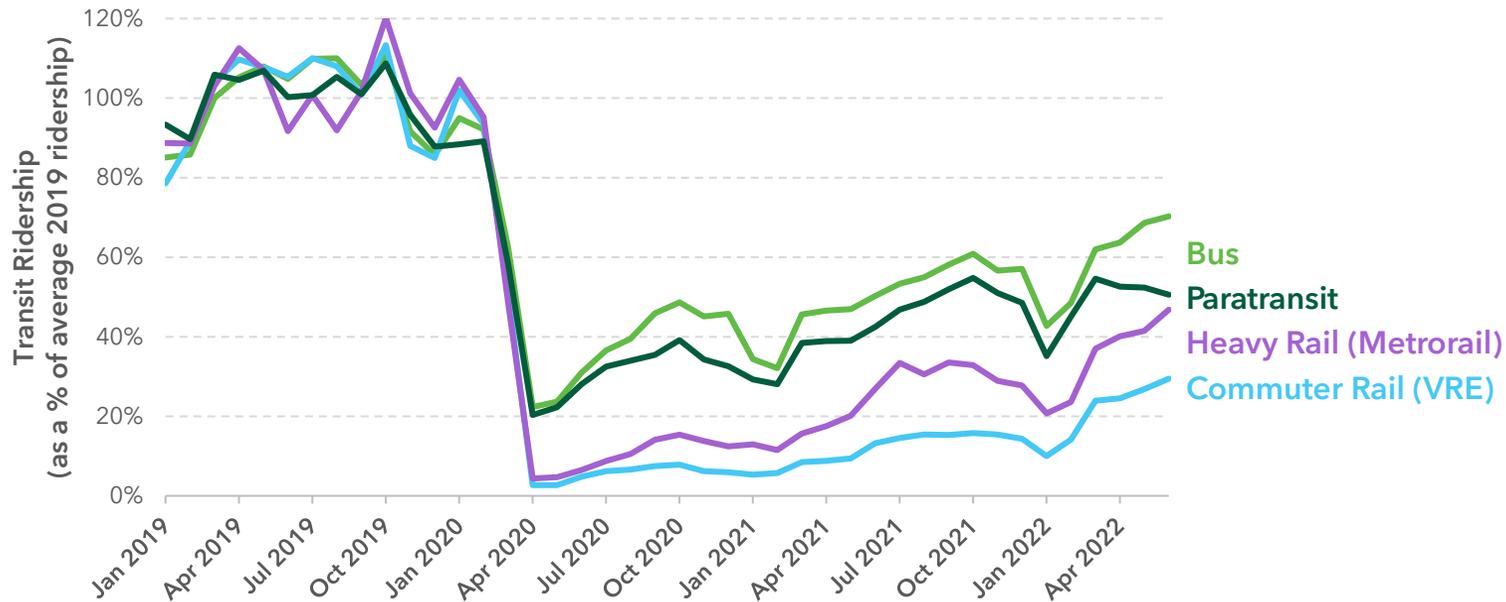
- NVTC recently conducted an analysis of ridership and service trends from 2019 to 2022
- There were four goals of this analysis:
 - a. Provide an overview of the major transit trends in Northern Virginia for the past three years
 - b. Explore how Northern Virginia travel patterns or habits might have changed
 - c. Explore how Northern Virginia transit services have changed
 - d. Summarize the analysis and findings to provide transit takeaways for the region



Ridership Trends

How people travel has changed.

- **Bus** and has reached **70%** of pre-pandemic levels
- **Heavy Rail** and **Paratransit** both hover around **50%**
- **Commuter Rail** is just below **30%** of pre-pandemic ridership
- Pre-pandemic, rail had almost **3x** the ridership of bus, then for almost two years they were on-par, and recently rail has seen a stronger increase.
- Differing recovery rates may reflect which transit populations have more access to alternative travel options, like telework or cars



Source: DRPT OLGA data

Riders are moving away from classic weekday travel.

Pre-pandemic, weekend trips were **35%** of weekday trips.

As of December 2020, weekend trips are now **58%** of weekday trips.

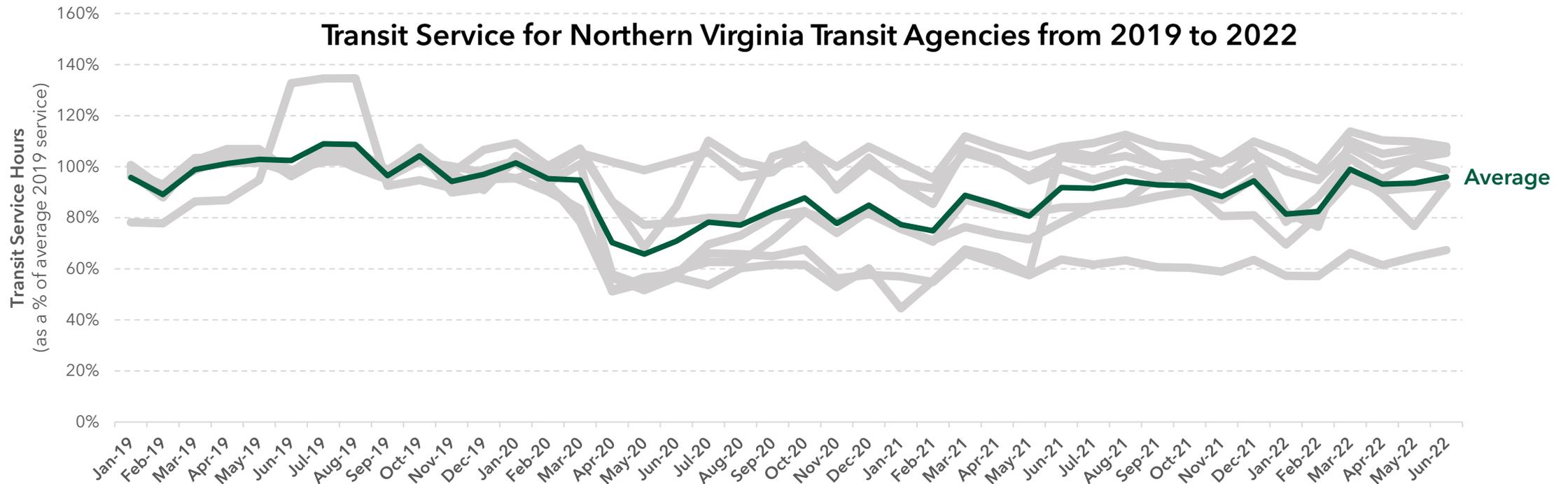


Source: Northern Virginia bus operator data

Service Trends

Transit service in the region still largely reflects the same type of service patterns as pre-pandemic.

- Most transit in Northern Virginia has returned to pre-pandemic service levels
- Service patterns still mostly focus on weekday and peak period travel, though there is variability among specific agencies
- Transit agencies offering commuter-focused services have generally seen the biggest and most prolonged changes to their services



Source: DRPT OLGA data

Key points

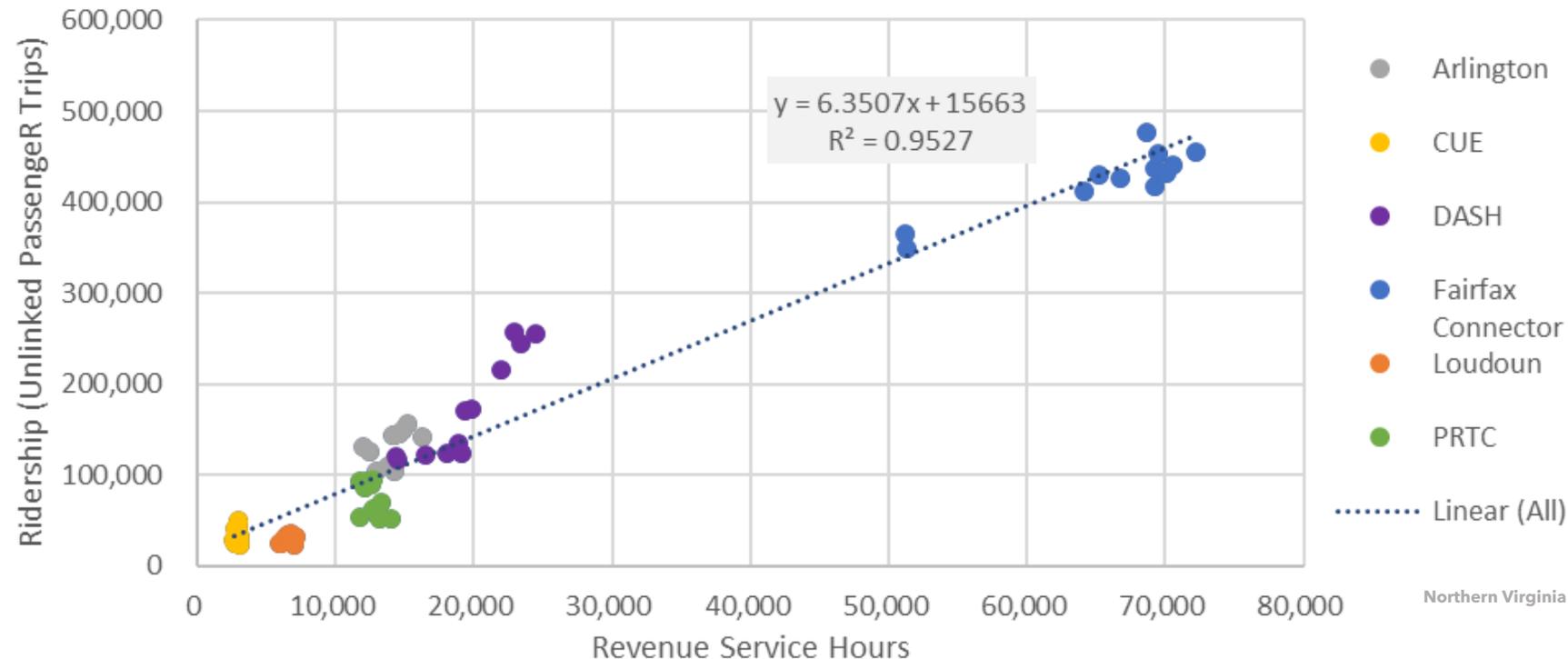
What can this analysis tell us?

- Returning service has been correlated with ridership recovery
- One size doesn't fit all
- There is an opportunity for the region to re-evaluate what transit ridership looks like today
- There is also an opportunity for the region to redesign transit services for how people use transit today

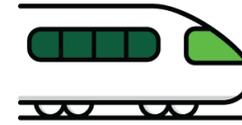
Relationship between service and ridership

- Most of us probably know there is a relationship between transit service and ridership, but that relationship can change based on a variety of factors
- Region's trend has changed through the pandemic
 - **Pre-pandemic:** Adding 1 bus service hour correlated with 10.0 additional riders ($R^2=0.96$)
 - **Now:** Adding 1 bus service hour correlated with 6.4 additional riders ($R^2=0.95$)
- Ridership was correlated with returning service but "one size doesn't fit all;" each agency has their own story to tell

Pandemic bus service and bus ridership (Jul 2020 - Feb 2022) (DRPT OLGA data)

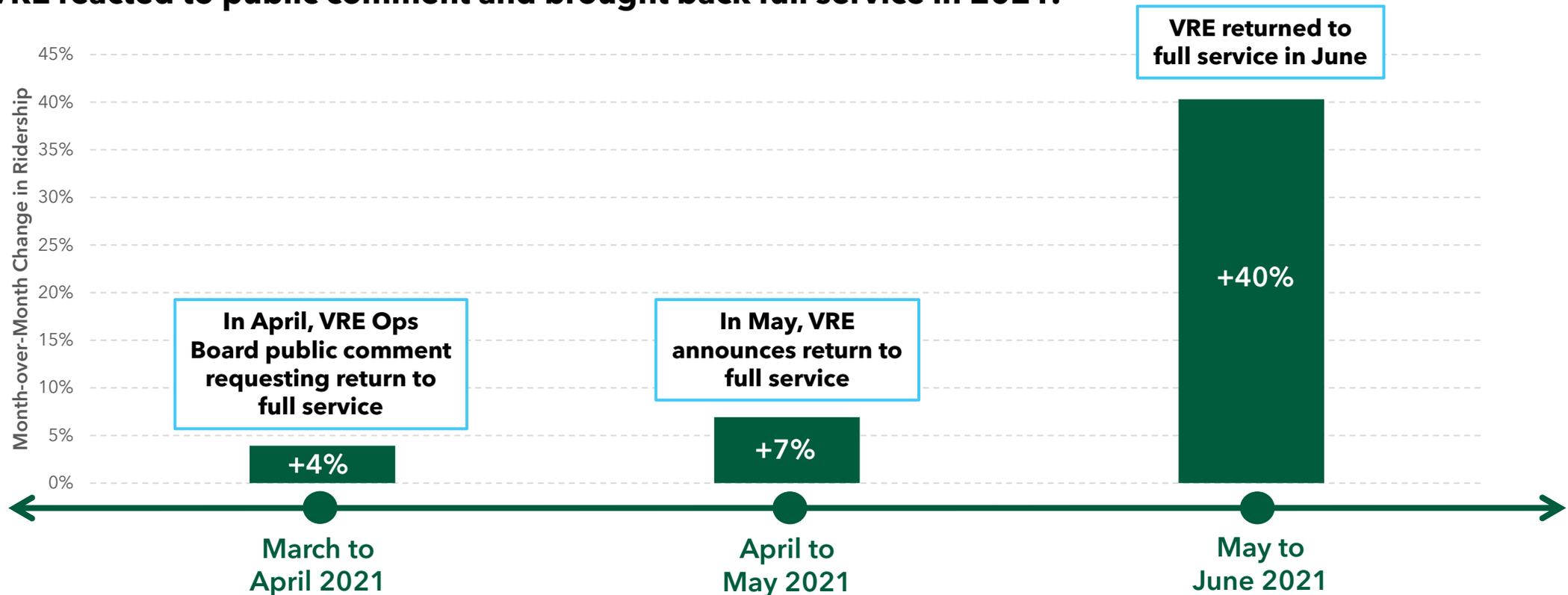


Change in the Region



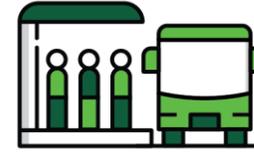
This is a moment to reevaluate and effect real change to better serve Northern Virginia. And not all transit modes are going to recover the same way. **VRE** and **DASH** both made changes to their service to meet rider's needs.

VRE reacted to public comment and brought back full service in 2021.



Source: DRPT OLGA data

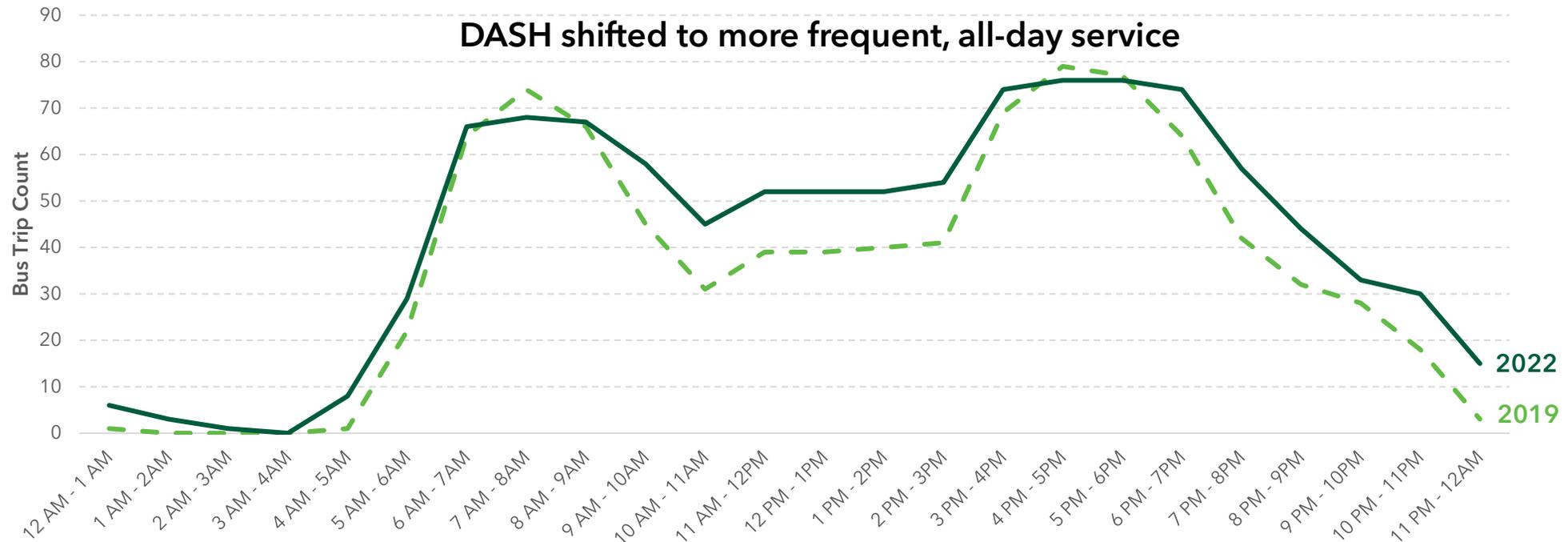
Change in the Region



DASH launched a complete bus network redesign in September 2021.

- Renewed focus on frequent (15-minute or less), all-day service, seven days a week
- Approximately 89% of low-income residents now have access to frequent, all-day transit (vs. 29% before the redesign)*
- Service changes reflect some of the ridership changes we saw in the region

After the redesign and elimination of fares, DASH ridership grew from less than 50% of average pre-pandemic levels, one of the lowest levels in the region, to more than 70% of average pre-pandemic level, one of the highest recovery rates in the region.



Source: DASH GTFS data

*Alexandria Transit Vision Plan <https://www.alexandriava.gov/transportation-planning/program/alexandria-transit-vision-plan>

What do we do with this?

- Some of the negative impacts of COVID to transit will resolve themselves as more employers return to the office
- Bus is a flexible transit mode and can adapt to the changing travel patterns of the region
 - **Regional partners have already begun analyzing and adapting**
 - DASH has completed their redesign
 - Fairfax Connector is in the process of reviewing their bus service
 - WMATA Bus Network Redesign is underway
 - **NVTC's Regional Bus Plan** (*RFP expecting to go out October 2022*)
 - Purpose is to connecting individual transit agency strategic plans with a regional plan
 - Identify regional transit gaps, potential cross-jurisdictional transit corridors, and opportunities to share infrastructure and resources between agencies
 - **Transit Marketing**
 - NVTC and other regional transit organizations are implementing marketing campaigns to further encourage ridership

What's next for us

- Advancing data management and visualization using Power BI and a soon to be coming dashboard
- Increased coordination to facilitate data gathering and regional expertise
- Variety of other projects in the pipeline including regional bus plan, transit speed evaluation, and environmental benefits of transit

Thank You.

Xavier Harmony

*Senior Program Manager,
Northern Virginia Transportation Commission*

xavierharmony@novatransit.org

703.967.8908

Sophie Spiliotopoulos

*Program Analyst,
Northern Virginia Transportation Commission*

sophiespilio@novatransit.org

571.483.3236

