POPTRAIN

A Proposal for the Cameron Rian Hays Outside the Box Competition

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This is a proposal to create **pop-up** BRT projects in cities around the United States.

Pilot projects are quickly deployed proofs-of-concept that can sell an idea to a community, an elected official or an entire city. New York City produced a memorable case when it closed off Broadway to cars, now one of the most prominent and permanent pedestrian malls in America. Imagine an overnight change along a typical, congested urban corridor where once people spent hours in their cars, they now travel at unprecedented speeds on bus rapid transit (BRT). The image is difficult to conjure because the time it takes to plan and program a BRT project is counted in years, not months. BRT isn’t new, but how we will deploy it has the potential to transform cities. **This is a proposal to create pop-up BRT in cities around the United States** to give riders, drivers and politicians a chance to see why BRT deserves support at local levels and national attention in funding legislation. Our public agencies need a chance to try new things, a chance to figure out what’s best, and a chance to engage a community looking for progress. This proposal provides those opportunities.
**BACKGROUND & PURPOSE**

Bus rapid transit (BRT) is a mode of public transportation that provides riders with fast and comfortable service. It was intended to be deployed much faster than rail systems because of its lightweight infrastructure and the inherent flexibility of using buses for vehicles. At its core, BRT only requires a lane on a street, a way to pay for fares before boarding, and a sharp brand. With just these few ingredients, highlighted in Figure 1, a BRT system can attract new riders from the driving public and reap the benefits often attributed to high-capacity transit: decreased carbon emissions, improved travel times and a better use of commuting time.

**Figure 1: BRT vs. Bus Comparison**

- Dedicated right-of-way
- Stand-apart branding
- Frequent service
- Multi-door boarding

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Unfortunately, we often find that achieving these systems is challenging at the most local level. Transit agencies generally only make meager improvements to their systems, communities are decreasingly engaged in supporting transportation causes they believe in, and local governments are too scared to innovate. These issues require an innovative solution that:

- **Breaks the cycle of incremental and lackluster improvements to urban buses.** Enhanced bus. BRT Lite. Express. By any name, the trend in many cities has been to make minor improvements to existing routes that do little but leave the public unenthusiastic about transit and skeptical of BRT. *True BRT* is transformational, permanent and has the capacity to make new riders out of drivers. We need real BRT and we need it to be so different, so much better than a regular bus route that it astounds and draws new riders.

- **Builds civic engagement and social capital in cities where stalemates prevail in the public forum.** Social capital in cities is on the decline. We are less likely to get involved in causes we believe in and less interested in cooperating with others to affect change. This puts those agencies involved in service delivery at a disadvantage. The people they serve are unengaged and speak up only when they are adversely affected. We need communities that are inspired to collaborate with their local government and trust that they are working in the community’s best interest.

- **Positions local governments and agencies to succeed in delivering great projects.** The national goals of improving transit access and use among cities can only be achieved if local agencies are willing and eager to put those systems on the ground. Too often, public agencies are stuck in a cycle of maintenance and small changes that takes years to implement. We need to have local agencies that have the flexibility and resources needed to successfully deploy great projects in their communities.

The project that answers this call is PopTransit.

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PROGRAM DESCRIPTION

PopTransit is a federal program that will deliver true BRT service to five cities for three months each. It is ambitious, innovative, and most importantly – achievable.

Cities around the United States will be invited to apply for PopTransit to provide them with three-months of BRT operations on one of their corridors. Leading up to each roll-out, the PopTransit team will work with the host city to identify the routes and stops that exhibit the most potential to help a community. While it’s in each city, PopTransit will be a fully functioning BRT system with high frequency service, dedicated lanes, off-board fare payment and new system branding. As a final push to encourage participation and ridership, the city that best utilizes its BRT system will win the PopTransit fleet of vehicles to run their route permanently.

City Selection

One of the goals for PopTransit is to generate civic engagement and local interest in transit options for cities. The city application process is designed to do just that. In 2011, Google held a competition to install its 100gbit high speed internet in a community in the US. Each applicant community saw a groundswell of support from local residents who grasped the tremendous possibilities for such a transformative project. Even more impressive was the willingness of cities to clear the usual administrative, legal and bureaucratic barriers to deployment. As another example, Code For America leveraged its offer of coding expertise by soliciting pledges from municipalities to adopt and support the long-term outcome of their products. These examples show that when the carrot is large enough, communities and neighbors come together and cities overcome the traditional resistance and delays typical of local politics. The selection process will judge cities based on their level of civic engagement, the identification of possible routes and the willingness of cities to be proactive in delivering the project.

Deployment

PopTransit will operate in each host city for three months. While federal organizers will be the primary deployment agents, each host city will coordinate to provide basic levels of local support. Host cities will provide existing right-of-way for dedicated BRT lanes and ensure clear stop areas. The use of existing lanes for PopTransit must be emphasized because of both the substantial cost savings and the desire to incentivize transit over automobile travel during the project. Upon deployment, PopTransit will arrive with buses and drivers and will install a fully integrated mobile infrastructure that sells and validates tickets while providing real-time
information to waiting passengers. By splitting program responsibilities between the local and federal levels, as shown in Figure 2, PopTransit builds inter-organization trust. The program utilizes local expertise of the municipal government and agencies, while leveraging the national investment in capital by reusing the mobile infrastructure and buses as part of the program.

![Figure 2: PopTransit Responsibilities]

**Project Award**
During the time that PopTransit is visiting other cities, each host city is expected to engage communities in revising or developing a plan for a new BRT route. The final component of the PopTransit program is the opportunity for one city to win the buses and mobile infrastructure for use on a new BRT line. This award covers a significant portion of the costs involved in deploying a new service. The award criteria will include total community participation in PopTransit before and after the operation, the potential for positive impact in the city, and the total ridership for the trial BRT system.

**Funding and Federal Role**
While the typical federal role in local transit involves complicated allocation processes with a number of intermediary agencies, PopTransit will provide a means for the Federal Transit Administration to directly leverage the power of its national funding on a local scale. PopTransit will leverage existing funds within MAP-21 such as New Starts and the Bus and Bus Facilities Program. Included in the program cost is a 25 person team of PopTransit expert employees that will market and implement the BRT operation. Based

![Average cost per mile for new BRT systems. -Government Accountability Office](image)

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on documented figures and planned service characteristics, the entire 18 month trial program would cost roughly $26 million, or 0.22% of the current FTA budget. The main reason for the small cost estimate is the use of existing lanes. BRT capital costs can range from $200,000 per mile on an arterial street all the way up to $55 million for a completely separate busway. This program eliminates all paving and construction costs as well as the planning costs associated with that construction. Amounts are detailed in Figure 3.

Figure 3: PopTransit Cost Breakdown

<table>
<thead>
<tr>
<th>Capital Costs</th>
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<tr>
<td>$4,020,000 Vehicle purchases</td>
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<tr>
<td>$1,000,000 Ticket vending machines and signage</td>
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<tr>
<td>$928,000 Dedicated-lane materials</td>
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<tr>
<th>Operating Costs</th>
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<tr>
<td>$7,560,000 Driver and vehicle operation</td>
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<tr>
<td>$2,494,800 Vehicle maintenance</td>
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<th>Implementation Costs</th>
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<tr>
<td>$1,957,500 PopTransit support employees</td>
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<tr>
<td>$1,500,000 Marketing</td>
<td></td>
</tr>
<tr>
<td>$579,000 Administrative</td>
<td></td>
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<tr>
<td>$6,000,000 Right-of-way closure</td>
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$26,039,300 Total Program Cost

Assumptions
6 cities | 90 days per city | 6 buses | 10 minute headways
5 mile route length | 10 stops per route | 20 hours per day
$175 per hour operating cost | $670,000 per bus

EXPECTED IMPACTS
The team expects PopTransit to shift the paradigm of interactions between local communities, transit, and local and federal agencies. It represents both a trial run for a great BRT system in every host city and a way to give

agencies and communities the capacity to effect change in unprecedented ways.

Community Acceptance of Transit
Providing communities with high-capacity transit will help overcome negative attitudes that come from piecemeal transit service that rarely saw much improvement. The transit trial will remove the inherent uncertainty that accompanies large investments in “untested” services. This risk-free situation will allow communities to legitimately assess the quality of the product and objectively determine its value with very little cost to them. The marketing industry has shown us that providing customers with a trial period can have a significant effect on their decision to support or use the service. PopTransit will knit together communities that were previously inaccessible by non-auto modes and highlight the necessity of transit in urban environments.

Growing Social Capital
PopTransit offers a rallying point around which communities might begin to grow social capital. The program will engage citizens early and often through social media, active marketing, and the crowdsourcing of ideas. As a result, the team expects that it will stimulate higher citizen participation in local policy and decision making. The post-project engagement process to help cities decide on BRT will offer the venue to act on this newfound social and political capital.

Regaining Community Trust in Local/Federal Agencies
The successful operation of PopTransit will break down community mistrust and wariness of government. ‘Rapid’, ‘lightweight’ and ‘efficient’ seldom accompany the term ‘government,’ but PopTransit certainly embodies these characteristics. By delivering PopTransit effectively, local agencies can expect future transit plans and programs to be met with substantive concerns from communities rather than opposition from those simply against the efficacy of government.

Building Confidence within Local Agencies
The atmosphere within local agencies often suffers from the side effects of long-term decision making and planning: namely, very little ever changes. The status quo and unnoticeable incremental changes tend to stifle innovation and excitement. PopTransit offers a radical project through which to break this pattern because of its rapid-fire and short-term nature. Agency staff will experience a surge of confidence and pride in their coordination and implementation skills upon realization of PopTransit in their community. The deployment will also revive their perception of urban infrastructure from a fixed system to a malleable, imaginative landscape.
Novel Research Opportunities

An anticipated but secondary impact of PopTransit is to give researchers access to study the impacts of introducing BRT to an urban corridor by taking an existing travel lane. This case is unique because its expedited deployment avoids the externalities that often plague the study of incremental projects. To this end, researchers will be supported actively with free and open access to PopTransit data, such as real-time vehicle locations.
CONCLUSION

When we visit cities with great transit, we often ask ourselves, “How can we replicate this within our own communities?” Yet, these demands for better transportation alternatives are met with decades-long approval, design and implementation processes. These delays divorce our initial enthusiasm from the final product, deflating community momentum and keeping voters from committing their support for an innovative transit service. PopTransit leaps over these obstacles, satisfying a community’s demand for revolutionary change immediately. The effect will be to show a community the tangible benefits of transit and encourage them to make a lasting investment in a more livable, sustainable and transit-oriented future.

Figure 4: Before and During PopTransit Deployment
“Government is risk averse. Really risk averse. And fearful of failure. But more and more cities recognize that not only is it important that there be innovators in their cities, but that they themselves have to be innovators. They have to be willing to try new things and if they’re going to fail, fail fast and then move onto the next thing.”

-Harriet Tregoning, Director, DC Office of Planning