



WEDNESDAY, JUNE 21, 2017

2:00 p.m. Eastern

National Aging and Disability Transportation Center

**HOW NEW INFORMATION AND SCHEDULING TECHNOLOGIES SUPPORT  
MOBILITY ACCESS FOR ALL**

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**Operator:** Good day, ladies and gentlemen. Welcome to the Mobility Access for All conference call. At this time all participants are in listen-only mode. Later we will conduct a question and answer session and instructions will follow at that time. If anyone should require operator assistance, please press \* then 0 on your touch tone telephone. The host for today's conference is Virginia Dize.

**Virginia Dize:**

Good afternoon, welcome to the webinar, hosted by the National Aging and Disability Transportation Center or NADTC. Today we'll be discussing how new information and scheduling technologies support mobility access for all.

This is Virginia Dive, co-director of the NADTC. The NADTC, as you can see on this slide, is intended to promote the availability of accessible transportation, particularly for older adults

and people with disabilities. It is a partnership between the National Association of Area Agencies on Aging and Easterseals and is funded by the Federal Transit Administration. A few housekeeping items before we begin today. Closed captioning is available for this webinar. I would like to thank our captioner for being with us and providing this valuable service.

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Just to make everyone aware this webinar is being recorded and it will be archived on the NADTC website. The archive will be available on the website in the next week or so. And our website address is [www.nadtc.org](http://www.nadtc.org).

If you've dialed in on the phone today, we ask that you mute your speakers to eliminate feedback on the recording. If you are connecting today both by phone and webinar, please ensure your computer speakers are muted at this time to eliminate any feedback.

This webinar is being presented as part of a broader NADTC initiative on the topic transportation information and assistance, which includes varied approaches that communities may adopt to respond to rider requests and answer questions about options. It includes such things as one-call/one-click transportation resource centers, mobility management, aging and disability resource centers, area agency on aging or Center for Independent Living, information and referral lines, as well as 2-1-1.

Our plan is to publish six blogs on this issue. We will be holding a follow-up webinar in August on August 23rd.

We welcome questions at the end of this webinar, and in addition we've already received a number of excellent questions that have been submitted by people when they registered. As the webinar gets underway, if you have a question you can post it in the webinar chat box at any time. If you are connecting to the webinar by phone only, please save your questions until the end. Participants can ask questions either by phone or by using the chat box. When it's time for questions, we will be giving you some specific instructions on how to ask questions and we will answer as many questions as time allows, including questions that were pre-submitted.

If we are not able to get to every question during the call, please know that we will follow up after the webinar. And you can always email us a question that occurs to you after the webinar is over.

We have wonderful presenters with us today. And I would like to welcome and thank both Will Rodman and Dan Berez, both of whom work with Nygaard Consulting Associates for being with us and sharing their expertise on this topic. Will has four years of experience in transportation planning and is an expert on paratransit and other on-demand transportation services that enhance access and mobility.

Dan specializes in the intersection of emerging mobility and paratransit with increased focus on using innovative technologies to improve access to transportation service information. So with that I want to welcome Will and Dan. Will will go first, and he will be followed immediately by Dan. And we will turn the webinar over to you now, Will. Thank you.

**Will Rodman:**

Okay! Hello, everybody, and good afternoon. Boy, with all of you and this session being recorded I promise to be on my best behavior.

So as Virginia said, I'm with Nelson Nygaard Consulting Associates and I was the principal investigator for an NHCRP research study which revealed recent innovations in the convergence of one shop stop mobility manager systems and paratransit booking and scheduling software and mobile technologies. Both the report and the toolkit, volume 1 and 2, as shown on your screen, are now available online. The easiest way to get at them, Google NHCRP Report 832 and it will pop up.

So today in the first half of the presentation I'm going to discuss what we found in this study. My colleague Dan Berez, who was a co-author of the NHCRP research project report, in the second half is going to discuss how we use the toolkit in our efforts to help the District of Columbia Department of Transportation and its partners plan a mobility management linkage for the District.

Okay. So to tee it up, there are many types of customers, as you all know, including those who depend on some kind of specialized transportation. Also, the general population who have trouble getting around to different places and for different purposes. And some urban areas there are many different types of services available. Other areas, especially rural areas, there are fewer options. But in both urban and rural settings, many of the individuals who don't drive or who don't have access to a car are often not aware of the full range of mobility options that match their needs or they may know some but don't know how to access them.

So accordingly, planning organizations and transit agencies and senior agencies and 2-1-1 organizations have spearheaded new efforts or enhanced older efforts to provide a linkage to the centralized repository of transportation resources that provide a one-stop shopping for

individuals and their families and caregivers, provides information that is more up to date and is more accessible and is easy to use.

In addition, some of the more advanced linkages offer something similar to Match.com. It won't necessarily match you up with your true love they do allow you to put in specifics about you and your transportation needs and will sift through the options to find an actionable list of available services that match you and your needs.

This is similar to what 2-1-1 systems do but with a better set of transportation options in the database. And some of the more advanced systems also offer trip planning services and even allow you to directly book a trip request on a particular service. For some, you can do that from your smartphone. This will be a focus of our findings.

So what do we find out there? Okay. So in our research we discovered three main take-aways. The first was that FTA's 119 VTCLI grants that totaled \$64 million over two years accelerated linkage development and resulted in advanced functionality that was not really on anybody's radar when the program was first conceived. The second take-away and focus of our presentation is that these new linkages fall under a continuum of functionality from simple to advanced as portrayed in the graphic below.

The linkages at each level have a unique set of challenges, benefits and opportunities. Because of those differences there are different ways to market and evaluate each of them. Specific to the evaluation, the data needs associated with each linkage level and the collection of that data needs to be built into the linkage designed from the get go. And this and the ways in which the linkage should be advertised is something that for several grant recipients was an afterthought.

So the first two levels that we found were basically a centralized repository and directory and level 2 being going one step further, a service matching. In the first level it's really a self-matching arrangement and level 2 uses triage questions to identify services that meet a customer's needs and eligibility requirements.

The weaknesses of level 1 often it's difficult for customers and mobility specialists to quickly identify services especially in a larger directory. Large directories could be out-of-state and updating requires staff time and expenditures. Access to hard copy directories is a direct function of how widely they are distributed and while online directories can provide a wider distribution, many prospective customers may need help in finding that online information.

In the case of level 2, again the Match.com example, it does provide better matching, but customers still have to contact the services that best match their needs. In terms of opportunities, in level 1 the directories can be designed to mimic the usability of web-based interfaces, providing users with a guide to identify applicable services and more easily navigate to provide information. I'll show you an example of that in a second. By using this

format agencies can readily identify potential gaps in available specialized transportation services in their area.

Portals to services in the resource directory can also facilitate the updating of information. That's the reference to the level 1A you see over to the right.

In level 2, in the case of phone-based matching assistance services, one opportunity that was identified is that it would be able to make it even easier for the customer by sending an email with contact information and links to match services.

So I'll show you an example of a hard copy directory that we put together for Will County, Illinois, ten years ago. It is designed to mirror the various ways that customers might do a search, similar to the way a level 2 system, for example, search might work. So the pages, the one that is shown summarizes the dial a ride services by town and whether they are available to seniors and people with disabilities and or the general public. And if the customer sees one that matches their needs it gives you the numbers of the pages where the details can be found and it's up to the customer to contact that particular service.

As they are portrayed here, it is easy to see where the geographic and eligibility gaps are. In fact, this is going to be a theme. You know, one of the things that we found in the survey is that regardless of what the level is, there will be cases that unveil situations where there isn't a service available for a particular person, whether it be a geographic gap, whether it be a temporal gap, whether it be an eligibility gap or a trip purpose gap. This helps the transportation planners of the lead organization or in the area help identify where services need to be expanded or developed.

An example of the 2-1-1 system, a level 2, comes from Los Angeles. In truth, most 2-1-1 systems worked exactly the same way, but we like the one from L.A. County a lot. The way it works is by inputting zip codes and keywords or phrases into the search field. The one in Los Angeles actually provides those key phrases and words for you. The 2-1-1 system will sift through all the services to narrow it down to the transportation services that reflect the search criteria. And one can do this skimming herself -- do this him or herself online or call a 2-1-1 call taker who can do the search for the customer.

The system produces for the customer or the call taker detailed information for each service on the list, including how to contact them.

One of the cool things that I've always liked about the 2-1-1 systems is that the agents follow up with the customer to see if the customer was able to use the information to get a ride, or if not to redo the search for them. They are basically problem-solvers. That's why I like a number of these one call one click systems that piggyback on 2-1-1 systems.

On to level 3. Level 3 systems work similarly to online transit trip planners by providing applicable services based on a specific trip request. Indeed, most level 3 systems are integrated with public transit schedules via open trip planners using the general GTFS and potentially through the being developed GTFS flex for public transit, general public transit demand response services. These systems can also link with bicycling and walking directions, with car pool and van pool matching services, taxi fare finder systems, et cetera.

The weaknesses of level 3, if the trip booking is required, customers are required to contact that service provider directly and it is somewhat difficult to coordinate trips that include transfers between services that require advanced booking. That kind of comes into play with level 4 which we'll get to in a second.

In terms of the opportunities, the agencies can make these API links available that allow third-party developers to create their own trip planners or integrate specialized transportation information in already existing app or website. In fact, agencies can even sponsor hackathons to encourage use of specialized transportation information by developers. That's something that we, Dan and I will probably mention in the course of the District of Columbia work we did.

Here is an example of a trip planning that resulted from the souped-up 2-1-1 VetLink system from inland empire of southern California, down near San Bernardino. Again, through links a particular trip request from a person who uses a wheelchair unveiled there are three different bus systems that serve the systems as well as the regional paratransit service. It provides when that trip can be taken on that route or that service and what the fare is.

From there, if a customer does select a particular solution over on the right with those select buttons, it gives the customer or the call taker details of that route or service. So onward to levels 4 and 5.

With a level 4 linkage, mobility specialists receive requests from customers, use the tool to help narrow down the services and then to directly contact service providers on behalf of the customers to speak with service call takers and arrange trips again for the customer.

And this in certain circumstances may also be to set up a three way call as needed to help a customer facilitate a transfer trip.

With level 5 linkage the customer and or mobility specialist can directly book a trip without speaking with a provider's call-takers. The weaknesses with level 4, the main weakness is that the mobility specialists do not know if the customer is able to take the trip or not before contacting the.

And level 5, directly booking is already linked with via an IVR system. So you are not improving the functionality, so to speak, but you are able to get there through another door

and that is key to several systems that have made it available or made it known to paratransit users that there are some transit services available and in specific, there was a region in Florida that experienced just that, a shift of paratransit trips to transit trips. The opportunities with level 4 is for an agency who has a limited size staff could focus on assisting the trips that are more difficult to book such as transfers. And as I mentioned just a second ago with a level 5 linkage, you enhance the customer awareness of other modes by putting everything in one place and that often involves a shift.

There is also the potential to integrate vehicle tracking and ETA apps, the where's my ride appears such as MOBI which provides information on the up to the minute ETA and the vehicle location to the folks waiting for their ride, as well as fare integration for multiservice trips. Kind of like when you use Travelocity and your going trip is on American and the return trip is on Delta but you can pay for both in one fell swoop.

An example of level 5 is in Pennsylvania where in a progression of screens on your smartphone an individual can find and book a trip on a specific service with his or her smartphone. Knowing that the system is currently available in a seven-county area of the state that is in the process of being expanded to other parts of the state.

So, that is what we found out there. And we also, as I mentioned, created a toolkit that helps folks design and develop and prepare for these kind of linkages. And we actually used that toolkit in helping the District of Columbia. That's what Dan is going to talk about right now.

**Dan Berez:**

So my name is Dan Berez. I work with Will at Nelson Nygaard and worked on the NCHRP Report 832 and the D DOT study I'm about to talk about. So as part of the NHCRP Report 832 we identified seven steps to developing a linkage service. While these steps are in chronological order there's a lot of feedback loops. So as you go through this process you'll often find yourself at step 4 but kind of going back to step 3 and then returning to step 4. It is not necessarily a purely linear progression.

But the seven steps just for folks on the phone are one, identifying your geographic scope. Two, selecting your target users, trips and modes president basically who you are going to serve and what types of trips they are going to take.

Then you want to analyze the existing linkage functionality. What linkages exist in your area already. And determine where you want to go, what linkage functionality you are looking to get as part of the program.

As part of determining where you want to go you want to develop evaluation criteria and build that in right from the beginning. Once you started identifying the program you want to evaluate how you want to fund it and how you market it.

I will go step-by-step through what we did in the District to give you an idea how this toolkit can be applied in practice.

So in the fall of 2016 we began working with the District Department of Transportation in Washington, D.C. on an inclusive coordinated transportation study known as AccessDC and the District had come to the study after starting to analyze the services they were providing for people with disabilities and older adults and realizing while they are doing a pretty good job there were a lot of potential room for improvement. They hired us to identify ways to get people with disabilities and older adults better access to multiple different transportation services in the District and kind of have a better way of identifying what option makes the most sense for a certain trip.

Then we also identified service tweaks and coordination opportunities between the twisting services. This was funded by an Administration for Community Living grant.

So the District had identified before we started the study, had identified some challenges and opportunities that they wanted to address through the study. The biggest challenge they were facing was that a lot of their services while they've done a fairly good job of coordinating them, some of the standard problems you see in human service transportation and paratransit where you have advanced booking requirements, some agencies and services get utilized at a higher rate and people aren't aware as much of other services.

Then often times you'll have customers that are eligible to use services that they've just never heard of or don't understand how they work. That was a big focus in our study was figuring out what services customers like using now, what they would like to use, what they haven't heard of that they might be eligible for, and finding ways to really proliferate high quality transportation information throughout current customers and as new customers start using District services.

So I just want to say before we start going through the toolkit, this is still an ongoing study. We haven't finished our final report yet. This stuff is definitely preliminary, but I think it's a good sneak preview of where we're at and will be helpful as you all start going through this process.

The first thing that you want to do when developing a linkage service is identifying what area you are serving. Now, in the District, like many of the places that you work in, there is a defined geographic scope for the study. The client was the District Department of Transportation primarily focused on services within the District and serving District residents.

And for the most part a pretty hefty percentage of trips within the District are within the District. As you look for your geographic scope it is important to look at trip patterns. If you have a lot of trips that are going beyond a municipal or county boundary you might want to consider opening up your services to a broader region. And you definitely, no matter what



scope you're looking at, want to design your services with potential expansion in mind if you find out that travel patterns change or that maybe you didn't identify the right geographic scope initially.

Also a lot of the recommendations that we are looking at have some pretty significant initial capital costs. If you want to have a really advanced linkage, you probably want to make sure your geographic scope includes enough customers to justify that level of investment.

So for our scope, we looked exclusively at the District, but we definitely also communicated with some agencies and had partners as part of our study that were serving the broader Washington metropolitan area.

So once the scope was identified we also had a relatively defined scope for users. So the study was targeting people with disabilities and older adults, as well as many people who fall within these categories in different combinations. It turns out to be a pretty significant percentage of the District residents fall into these two categories in some way.

So we first set out to identify what transportation services are currently available. They fall into three buckets. The first bucket is services that serve both people with disabilities and older adults. In the District those are primarily public transit options. The District is somewhat unique among East Coast cities in that its transit system has a very high level of accessibility. The subway stations are all accessible and have elevators. The D.C. streetcar system is fully accessible. And both D DOT and Metro bus operate low floor buses that are easier to access for folks using wheelchairs.

We also looked at services that were primarily for people with disabilities. So in the District that's the ADA paratransit service, Metro Access, as well as an alternative service for ADA customers, taxis called Transport D.C.

For older adults the District had previously coordinated a lot of its human services transportation for seniors through the Seabury Connector Service, a contracted service from the District Department on Aging, with a resource center called Seabury. The District office on aging also offers a transportation subsidy for older adults called connector card, which allows them to get a debit card that they can use for transportation for Metro bus, taxi, or Uber or Lyft.

We next took a look at the existing linkages within the system. The District has a lot of transportation linkages and other resource centers providing transportation service information. Most of those are telephone based or person to person programs. So there's the D.C. 2-1-1. There's information and referral line from the office on aging. Several of the aging and disability resource center also provide transportation linkage services for their constituents. There was a fairly comprehensive regional transportation services database

called reach a ride which offers some of those match.com services that Will was talking about earlier, through the website and also through the phone.

Each of these transportation linkages had their own transportation information repository. They were using staff time to update to contact providers on a regular basis to ensure updated information, but they were all doing it separately. That was a key finding early on in the study.

There were also several level 3 trip planning assistance linkages focused primarily on public transportation. One was WMATA, the regional transportation agency and D DOT had a riding app which focused on District services.

And one of the really interesting findings we had during this stage was that WMATA had amassed a pretty robust database of bus stop data, they had information on whether the stop was ADA accessible or whether there was a seat or shelter, information -- all that information was available through their trip planner -- which is a level of information that isn't always available for public transit.

So we worked with our client early on to kind of discuss what they were envisions for the District. And we initially targeted a level 5 one call/one click system. There was interest in looking at potential for direct trip booking on the various services available in the District. And as we went through that process we noted some challenges. And you know, this is an important stage because as you are thinking about what level of linkage functionality, you start to think about: What do my customers need? What are the potential challenges that I might face in getting to that level that I think would best serve my customers? In some cases you might find that the initial level you were targeting doesn't make as much sense once you start going through the process.

We found ourselves coming back to this level and rethinking what made sense for the District throughout the process and as we were developing our initial recommendations. One of the things we found was that one call/one click systems are pretty expensive. We noted that in the NHCRP report and it's something we encountered here. Often times you want to make sure you have the largest customer base. You want to make sure you have a fair number of services that can serve a lot of different customers.

Then in the District, one of our concerns was that such a system would result in a lot of customers being shown that their primary opportunity was just a few services and it might create a demand imbalance between some of the services that are in the District now and not really show people new options but kind of direct them to options they already understood.

So once we had kind of taken a step back from the level 5 functionality we took a step back and looked at what building blocks are available in the District because in the end of systems make, are often most effective when you are leveraging existing resources instead of building

something completely from scratch. What we found was that the District has a lot of different call centers already providing linkage services. There are a lot of resources being expended and that have been created to help customers find transportation services and various other services available in the District. Some of those have trained social workers, had really good protocols in helping people find services that they need, had access to case information, so we wanted to find a way to leverage all those existing resources that the District had invested in so heavily and get them up to snuff on transportation services.

We also found there were a lot of robust and regularly maintained transportation service information repositories. And we found that reach a ride was potentially a good option as a base for improving the transportation service information. And it is especially improving the process in which that information was created and maintained and updated. There are some opportunities to potentially consolidate all of these various repositories that had been created into one district-wide repository that folks could access regardless of what organization that they were in and was designed with all of the different agencies needs in mind.

And then we also noted that there was a lot of really incredible transportation accessibility data that wasn't really available in a lot of other cities we've worked in, in that there was interest in continuing to expand the range of data and keep it updated. So the District, for example, was looking at sidewalk accessibility, which is a big part of when you are making a public transit trip, it's important that the stop is accessible, but it's also important that you are able to get from that stop to wherever you're going to. There's definitely an opportunity to leverage that existing data set as well.

So these are our preliminary recommendations that we've presented to our partners in the District. And there was kind of two overarching strategies that we looked at, as well as a series of interim strategies and smaller tweaks and coordination efforts that could really benefit District customers and service providers.

The first layered strategy that, this kind of bigger strategy that we looked at was using the no wrong door model for transportation. So what the no wrong door model does and it's common in a the look of long-term services and supports and is a strategy more commonly utilized in the District, and they are pursuing a no wrong door model for other services in the District already. What it does, it essentially allows customers to continue calling the services that they are most used to using. So let's say I have a really good relationship with someone at my aging and disability resource center. I like calling them to find information. I can continue calling that person.

What the no wrong door model does, it gives the person at the aging and disability resource center access to a centralized information repository and as importantly it gives that staff member training on how to handle different types of transportation requests and make sure that the customer is able to fulfill a trip, basically get a trip booked without having to call a ton of different numbers. So that person is either at the aging and age - disability resource center

will be able to know how to help that customer directly or do a warm hand off, transferring that customer in a way so that the customer doesn't have to repeat all the information about themselves over and over again as they try to find the right transportation to complete their trip.

It is a resource-intensive strategy, but it allows the District to leverage the existing call center staff and infrastructure to provide trip booking assistance across a ton of different services and linkages that people are already used to calling and interacting with.

We also recommended that the District pursue kind of a publicized main entrance. So there is no wrong door, but there's a main entrance that folks who aren't necessarily familiar with any of their potential transportation linkage options are able to call, that the District really publicizes. And in transportation that's really important because most people aren't looking to make a trip for the sake of taking a trip. They may find that they are not able to use a transportation resource that they are used to using or may find they have to go to a new place or have a new accommodation requirement that requires them to find a new transportation service. They might just not know who to call. So we have recommended that there's a publicized main entrance so folks kind of know that initial point of contact that will help them find the transportation resources that they need.

Now in summary, the no wrong door model will take the District from a level 2 matching assistance linkage that is being provided by four or five different agencies to a level 4 trip booking assistance where a customer can not only get matched with the service but they can get connected to the person who is going to help them book that trip.

That's one of our, that's the first of our larger term strategies we recommended. We also recommended that the District find a way to leverage all of their accessible trip, or accessibility information for transit to create some form of accessible trip planner. So this will be a trip planner that would allow similar, you know, it could take a form similar to Google maps where you can say I'm making a trip from my house to the senior center and I use a wheelchair and I'm not comfortable going on steep sidewalks. And it will be able to give you a transit option or it will tell you that maybe transit isn't your best option, either through an online app or by calling a call center.

I think this is a great opportunity to think about technology in general. You know, a lot of older adults and people with disabilities and other customers you might interact with are not necessarily always looking for the highest-tech solution. When you make something online like an online trip planner like this you kind of open up the range of people who can be providing assistance. So what this would allow is for customers to either on their own or by calling someone or talking to someone find a public transportation trip that works for them. Kind of breaking down the barrier to using public transportation for a lot of customers where maybe they are able to identify a public transit option, but they are not able to figure out whether that option will actually work for them given their accommodation needs.

And so what this really does is helps the District leverage their existing transit accessibility resources in various different ways. So the District could create a trip planner with a third-party developer. They could make this data accessible to folks that are already making trip planners to incorporate in their existing trip planner.

We really recommended that the District explore the ways to make this data as open and widely available as possible and to develop strategies to make sure this data stays updated. I think one important point I glossed over is that this strategy really makes it so that public transit information is available through any door that a customer uses. So whether they call an aging and disability resource center or they are at a hospital, for example, the customer is going to be able to find a public transportation option that works for them or figure out that maybe public transit isn't the option.

This whole thing came out of some feedback we got from customers through our outreach stage of the project, which is kind of ongoing throughout the whole project. We found a lot of folks want to be able to use public transit because it is one-call/one-click the most frequent and readily available transportation option they have, but they don't necessarily feel comfortable using it for all the trips.

Those are kind of our recommendations. One of the things that's really important that I want to drill down on a little bit more is evaluation. As we are developing recommendations for the District, we are throughout that whole process we are thinking about, you know, once these systems are in place, how are we going to evaluate them. If you design something first and you don't think about how you evaluate it. Second, you will often miss opportunities to build an evaluation mechanism into your strategy that gives you interesting information that only becomes available when you start thinking about transportation more comprehensively through a linkage. Definitely building evaluation into the initial design is very important. It allows you to evaluate both the linkage program that you developed and the services that you're linking people to. So you can figure out how many people are using the transportation linkage, if they prefer, if you're providing multiple options as we recommended in the District, whether folks are using one of those options more than another, if they are returning to them again and again.

You always want to evaluate whether the information you're providing is accurate because if you provide inaccurate information you're just going to turn your customers and constituents off immediately and they won't want to use it again.

Most importantly you can use the linkages especially as if you get to the more advanced technologies to determine whether customers are able to successfully make a trip or whether they face a barrier, especially a barrier due to a service gap. You know, there isn't a service at a certain time or that serves a certain customer's accommodation requirements. In this, the services really give you data to, or these linkages can give you some robust data to then go back to your organization or to your funders and say hey, there's a really big need here. We

need to figure out how to solve that need and here is a bunch of data we have to support that that need really exists.

So for the no wrong door evaluation we looked at three different types of strategies. The first is looking to see whether service providers are actually participating in the program and whether that information that they are providing is updated. With a no wrong door model you really want to try to have a wide breadth of potential doors. If only a few people or organizations are participating, the program doesn't really work that well. So you also want to make sure that when there's turnover at these agencies, that the no wrong door training is going. You don't want to leave the training behind after you do the initial rollout or it will breakdown pretty quickly. Again, providing updated service information.

You also want to evaluate how this strategy actually is working, how customers are being linked to services. First you want to know the number of customers that are calling each participating door or provider. And the percentage of calls that are resulting in a call transfer. You might find that providers are, that customers really like calling the reach a ride because they know it will give them as many options as they need and maybe have options that other providers are providing. Maybe a lot of people are calling to learn about the transportation subsidy service, if the reach a ride is providing information about the card, it might be worth getting training for the call center people about the card so they can have one call, potentially allow sea bury to use their resources for other services.

As customers are calling providers, they will keep track, we are recommending that they keep track of where calls are being transferred to and from and what characteristics of those calls are common to identify patterns that maybe can be addressed, better customer service could be provided through additional training or programs.

And then we also recommend that they similarly use this information to conduct a gap analysis. Basically what percentage of calls don't result in a successful trip and what are the types of calls that people are making, requests that people are making that don't result in a successful call. So, keeping track of destinations or trip types as well as the customer demographics.

And you know, if you don't build evaluation in from the beginning of a program like this you are either going to have to spend a lot of time backtracking and designing or you will not be able to get all of your participants on board with this type of evaluation. It has to be built in from the beginning. This is just one example that as you go through this process you'll see that this becomes really important even for marketing programs, for relatively simple applications. You still always want to make sure that you're tracking usage and trying to identify gaps as much as possible.

**Will Rodman:**

The toolkit, by the way, does include evaluation criteria for each level.

**Dan Berez:**

So just wrapping up, the last two steps. Once you have kind of identified what you actually want to implement, you have to figure out how to fund it. In the District we identified three primary pools of funding. The District itself can fund some of these programs through existing sources of money or identifying new sources. There's also an opportunity to work with the MPO to identify grants. There are also federal grants for mobility management services that either currently exist or will exist in the future to help fund these types of programs.

And then the last stage, which is something that we definitely are considering as part of the study but it is actually part of our recommendations for next steps, is creating a marketing plan. So every time you develop a linkage service, it is only going to work if you effectively market it. If you create the best -- and we saw this in the VTCLI grants. If you create the best transportation linkage ever, if no one uses it, it doesn't matter.

**Will Rodman:**

If no one knows about it.

**Dan Berez:**

If they don't know about it, it doesn't matter how good a thing you created. It is hard to justify to investors later why you need more money for a program if no one has used it.

This is something you will implement towards the end of your development cycle. So it is really important that customers are involved in developing the marketing plan and materials. Especially older adults and people with disabilities, they are often kind of bombarded by service information. They have been marketed to a lot. I think our society has moved towards more marketing in general.

So people know what works for them, what doesn't work for them. So it is really important to involve customers from the beginning. In the District we recommended that D DOT leverage a lot of existing groups and boards that exist at the District government level and with the transit agencies, where there are already existing groups of customers who can participate in this process.

You also want to make sure that your marketing materials don't just target your customers but the service providers that you are linking customers to. They should be aware of what is going on, how their customers are reaching them. You also want to make sure that you are marketing to a disbursed group of linkage operators, you want to market to them about new features you are adding. You want to make sure that everyone is involved and has good information.

You also, it is really important not just to market the linkages themselves or the services, but market the whole package so that folks are able to figure out: This is why I call this number.

These are the services that are going to be available for me if I use this website. You've got to kind of -- some of these things are pretty simple, but some are a little bit more complex. You have to make sure the whole picture is available to your customers as you are developing markets.

So we included some strategies that, a chart with strategies on this slide that was created for another project. And this should look familiar, but it is something that is really, really important when you are trying to disseminate information, especially when you are disseminating information about a way to get more information.

So it is something that we thought a lot about as we were developing our recommendations. It is something that the District as they are implementing some of our recommendations, it will be a big focus.

**Will Rodman:**

Look at that, we're on time! (Chuckles.)

So I guess we are ready for questions. The other thing that I just want to leave you with before we start answering folks' questions is that this kind of a system can be a center piece for other kinds of mow bill management efforts in your region.

The accessibility databases, for example, that get woven into the trip planning process. Voucher systems or subsidy programs. Volunteer driver programs. They all kind of work together and feed off each other. On a statewide basis providing technical resources to other regional mobility managers.

So think of this as the centerpiece for a broader mobility management program, like the centerpiece, the center of a wheel. With that, let's see. How do we do questions? Virginia?

**Virginia Dize:**

Yes, Will and Dan. First of all, let me say thank you very much for this amazing wealth of information that you shared with us. I'm sure that many of us are still trying to wrap our minds around all this good information.

We did receive, as you well know, a number of you submitted questions ahead of time. We thought we would start the Q&A part of this webinar with going through a few, just a sample of those questions that we got. Will and Dan, I'm just going to read them. We'll have a conversation. And we've also had a couple of questions that fen posted in the -- that have been posted in the chat box. I'm hoping more will come in. After we go through a few of these questions we'll turn it over to the operator to see if there are any questions from people on the phone.



So let's start with question number one on my list is, "How many providers or communities are currently using a one-call/one-click system for individuals to schedule their transportation needs?"

**Will Rodman:**

I guess the quick answer is we don't know, but we can also say that the VTCLI grants, there were 119 of them. Many of them focused on developing one call/one click systems. In addition, there are 2-1-1 systems in most communities as well as aging and disability resource centers that all have referral services. They all have their own databases. While some databases are better in terms of the transportation resources than others, at least there's coverage.

**Virginia Dize:**

Thanks, Will. And one thing that we will do after this call is, there is a listing of all of the VTCLI grantees on the NADTC website. We will post a link to that listing so that people can access that information.

**Will Rodman:**

Right. It's also in the Report 832, Virginia. It's also there as well.

**Moderator:**

Oh! Even better, Will, because we've already got that posted on our website. So thank you. The second question is: "How can we create trip planning and ride scheduling systems and avoid numerous provider-based proprietary systems?" I feel like you've just kind of given us the ABCs of that. Do you want to add anything to your presentation about creating trip planning and ride scheduling?

**Dan Berez:**

This is one of our findings in the study is that while the VTCLI program accelerated the development of the systems the program wasn't set up to develop standards.

So there are some kind of open source platforms that were created through the program, but standards are still being developed. So one of the standards that is emerging is the GTFS flex standard. That will be important in giving that same commonality that is available to public transit agencies operating fixed route services to agencies and organizations operating demand response services.

That being said, one of the challenges to creating standards in this field is that, especially in the scheduling and booking side, they are created by private software companies that have proprietary software packages. What is really important there, as agencies and organizations adopt those packages that they think about including kind of open data requirements and APIs as a requirement into their contracts and their RFP process so take if you wanted to, for

example, add paratransit booking as a function on a one call/one click, that you don't come up into a barrier with your software package and getting an API or including the data. So that is a really important thing, in addition to just developing standards that more data becomes open.

**Will Rodman:**

Some of those national systems have been rather proprietary about that. And have opted to remain closed. One way transit agencies, especially, can help that situation is to require open access to these systems as part of the procurement process.

**Virginia Dize:**

Excellent. So how does the work that you all have been talking about and this whole process of creating systems that ensure access to transportation information and ride assistance actually connect with work that is being done under TCRP G16, which is concerned with the development of transactional data for demand response transportation?

**Will Rodman:**

Right. That's just what Dan was referring to. It is really, it is the -- what TCRP G16 is focusing on is the advancement of GTS flex which focuses on how information, how actual data, service data that evolved with general public especially transportation services that are demand responsive, can be used in the same way that transit information is being used now through just regular GTFS. It's mainly focusing on general public types of systems like flex transit, for example. But can work with things like ADA paratransit service and coordinated paratransit service and even human transportation services in the future.

**Virginia Dize:**

The next question I'm going to kind of combine with another question. So first, "What is the role of the mobility manager? And where do you usually find mobility managers? Where are they housed?"

**Will Rodman:**

I guess the short answer is the role of the mobility manager is anything you want it to be. You can house them anywhere you want them to be. Mobility Management focuses on -- if I have to give you a short definition -- focuses on the customer. It helps them with programs that enable them to better access transportation sources, coordinate the others that are out there. And so one click -- one call/one click systems, travel training programs, subsidy programs, they are all a way of making these services that are out there more accessible to customers.

And so a mobility manager, who can be an individual, can be an organization on any level, is really the person who helps that. We've seen mobility managers in regions that there's one in each senior center, for example. And a transit agency might have all these -- might go to these folks and help them to indeed help their seniors in their areas better understand the transit system, better understand what programs are available for them, and help them as the middle

person get over the hump. Some of them coordinate travel training programs that come to senior centers. Some of them organize bus buddy programs. It's really -- then in the meaning while you have mobility managers on the regional level and some even on the state level.

So they can be anywhere. They can be at any level. But the idea is that they will be advancing and helping to develop and implement and in some cases manage the programs that are again focused on the individual's ability to access the transportation systems out there.

**Virginia Dize:**

Okay. I want to return to a question that you have answered about trip planning and ride scheduling and perhaps -- anyway, somebody wanted to follow up on it. And said that this whole business of creating an information system on transportation seems to fall pretty heavily on individual transit providers, many of whom as I'm sure you know are not well resourced.

So the question was asked, and it is sort of a loaded question: "Shouldn't FTA take a leadership role and push that the necessary data be shared?"

**Dan Berez:**

You know, I think there's definitely, it's definitely important for oversight agencies to be involved in developing data standards. You know, a lot of these relationships from software providers are agency by agency relationships. And it's not atypical in software development for software developers to want to hold some of their information as proprietary.

**Virginia Dize:**

Okay.

**Will Rodman:**

Well, you know, let me expand upon that. You know, is it the FTA's role to provide a slew of money, more money to develop these things? You know, would it be helpful to provide some additional money beyond what was available for the VTCLI program to jump start other such kinds of services? Sure! Any kind of funding like that would be helpful.

Short of that kind of designated funding, a lot of other communities, harkening back to one of Dan's slides about money that is available through the MPO, through the regular other FTA sources through transit agencies, and through other kinds of grants, have been used to help plan and design and eventually implement things.

And remember when Dan was saying, you know, the seven steps and they often kind of -- they aren't necessarily linear. That sometimes you get to a point where you are circling back. Well, one of those is the funding available. And if it turns out that there's only a limited amount of funding in your region to develop something like this, that might indeed be a factor are in determining what level of service you have. And that's okay. Because it's better than

what was existing to begin with. And one of the pieces of advice that we heard was that, don't develop a system that necessarily ends at a particular level of functionality but develop one that is potentially expandable. So should additional money become available and should a higher level functionality be your longer term goal that you haven't shut yourself off from expanding in that direction.

**Dan Berez:**

One more point to get to the heart of the caller's question. You know, the VTCLI program was in many ways a sandbox opportunity. There was money available and there was some strategies that were known, but a lot of the agencies kind of pursued that, that received grants kind of went in their own direction on how they were going to use the funds and what software they were going to use or pay to develop and how they were going to implement the strategies.

There's definitely room that as these strategies become more defined and there's different ways of handling standards, there's definitely room to push funding to proliferate some of the more well-received and successful designs so that folks aren't constantly recreating the wheel.

**Virginia Dize:**

Okay, great. Let's turn to the issue of accessibility features. We have a question about "If specific devices are discussed, what accessibility features do they have? And can the software types of programs that you all have been talking about, can they be adjusted so that people with disabilities can successfully use them?"

**Dan Berez:**

I think there are two important points here. One is about the software themselves. As, the second is more about people's comfort with technology in general and ability to use certain technological resources.

To the software itself, one of the things that has been important in this space and has been somewhat successful is that as agencies and organizations are developing these softwares and programs, they are thinking about accessibility from the beginning. So reach a ride, for example, as they were developing their website worked with a focus group of people with disabilities and older adults as well as an organization that looks at website accessibility for folks with different visual impairments as they were designing the website. And you know, through our District study, for example, we heard that some customers who are blind really liked the opportunity to get a smartphone app to request a trip, or customers who are deaf as well, because the smartphone app has accessibility features that make it easier for folks who are deaf and maybe can't use or are hard of hearing and have trouble with phone lines to be able to use an app instead. Apps also have read-out features that allow customers with visual impairments to use them. There are definitely a lot of tunnels to use technology to improve access.

The second point, though, I think is also really important. A lot of customers are not comfortable using the Internet or don't have access to the Internet or a smartphone. And you really have to think about the importance of technology in improving access points.

So if you put a trip planner on the web or service information repository on the web or on a smartphone you are opening up that information to a whole slew of new potential access points that wouldn't exist if it was one call-taker with a hard copy directory. You're making it so a nurse at the hospital might be able to help a patient find a transportation member or family member or variety of different call centers. Because something is on the Internet kind of in the background doesn't mean that customers have to use the Internet to access the information.

It actually makes it a lot easier for them not to use the Internet to access the information. That's something we heard a lot about in the District study. Folks want to make sure that they can continue accessing information through a channel they are most comfortable with and not rely on a smartphone. It doesn't make sense only to have something available on a smartphone. A lot of customers who use these types of services either aren't comfortable or don't have access to it. A lot of agencies tried to look at and make sure that these systems were available with a call center or some kind of call or in person during the process.

Will Rodman:

Two very important points. To harken back to the first one just for a second, several entities have used organizations that certify the accessibility of sites. That's always a good idea. They could often, along with the working groups, suggest ways that sites can be even more, better organized for persons with visual impairments and to make sure that all the major readers are able to access these sites. So it is hugely important that these sites be fully accessible and that they be organized well.

Virginia Dize:

Great, thank you. We still have some questions in the hopper, but I don't want to neglect people who are only joining us by phone. So let's turn our attention to the phone lines and I'll ask the operator to provide instructions for anyone who is eager to ask a question by phone.

**Operator:**

Absolutely. Ladies and gentlemen, if you have a question at any time please press the \* and the number 1 key on your telephone. If your question has been answered or if you wish to remove yourself from the queue, press the pound key. If you have a question at any time, please press \* and 1 on your touch tone telephone. One moment for questions.

Will Rodman:

There is a question in the chat room that we can address. Or is that what we should be doing, Virginia?

**Virginia Dize:**

Well, I just wanted to see if anyone on the phone, you know, was eager to ask a question. But yes, there are definitely questions in the chat box that we should address. And I think one of those questions has to do with these kinds of services in rural areas. And "How do you start to develop a program like this in an area that is more rural, less compact and what kinds of advice would you have?"

**Will Rodman:**

This one is from Lisa, this seems more for metropolitan area. I'm from Morgantown, West Virginia, home of the Mountaineers. Dan and I are from Pitt, so we're used to the backyard brawl here. I know West Virginia well. It may be appropriate not only to go with a regional approach but maybe even a statewide approach. A great example is Michigan who has gone about it through the regional network of 2-1-1 systems. So in that particular case, you have a built-in situation. So many one call one click system management systems have done is to piggyback on the 2-1-1 system and make sure that the transportation resources in the database, that 2-1-1 uses are more comprehensive and up to date. And so that the 2-1-1 system becomes effective as a match.com kind of service. The State of Virginia did the same thing, by the way starting out in a very rural area near Norfolk and building from there as part of a coordination effort.

**Virginia Dize:**

Yes. There is a 2-1-1 system that is statewide in Texas as well, that connects to a number of places that have specialized transportation information. So whatever works in the community, I think the community-based approach is a really critical one. And there is another question in the hopper, in the chat box that talks about how you start to figure out what is the right level that you should be aiming for. And then there is, "Is there a number where people can call to establish those levels?" I don't know if that kind of technical assistance is available from you guys. But you know, I know that Dan, you laid out in a very detailed way the steps that are identified in the report and in the toolkit. And I wonder if you want to add to that in terms of how people need to figure out the right level for their community.

**Dan Berez:**

So I think part of it is, it's kind of there are a number of different questions you need to ask yourself. The first is who my customers are and how they most like to access information. The second is what types of services are available in my area. So you know, if I'm in an area where there are 150 different types of services and they all have very specific requirements, it may be helpful to have a number that you can call or a really well searchable database for that information.

If you are dealing in an area where you don't have a lot of customers and you don't have a ton of services, it might be a lot easier to explain that information more cheaply in a hard copy repository. I think what is really important to emphasize here is that these options are not necessarily better than one another. Yes, as you go up the levels of linkage functionality you're

getting additional functionality, but a lot of communities, if I'm in a community where I'm being served by car pool programs and senior service transportation and human service transportation agencies, direct booking through an online system might not be the best a propose.

In a city where maybe there's five or six different operators that are booking with paratransit programs or potentially in Pennsylvania a relatively large geographic region where a number of paratransit services are using the same software, maybe that solution makes sense.

The answer to this is, it's very context specific and it's a process you need to go through. We talk about it a little bit more in the report, but it is very attuned to context and cost. If you already have kind of done the level 2 or level 3 systems, as we saw in the District, it might be a little bit cheaper to go to level 4. If you have no information in the repository at all it might make sense for you to start at level 1 and once you've done that, evaluate what customers really need in terms of additional functionality.

**Will Rodman:**

They could also be very low tech systems. For example, years and years ago we were doing a coordination project in Colorado and focusing on Denver. One of the products that came out of that was a colorful place mat that was laminated. On the place mat were all the resources available for senior transportation in the Denver area. It gave all the information in a lovely way. And we thought that if we laminated this thing and put them as place mats for congregate meals, all these seniors at lunch time would be staring at this information. And in a way that very low tech approach proved to be quite effective.

**Virginia Dize:**

Okay. We are really running out of time. I did want to try to ask this somewhat-related question. Talking about how you get buy-in from all the places that are providing some type of information and assistance, as well as kind of getting them to learn about all the transportation options that are available and committed to the whole notion of a warm transfer. I guess, "How do you bring all the parties together?"

**Will Rodman:**

Well, it is very similar to coordination kind of studies that are done pretty much everywhere. It is important that each person coming to the table representing their organization has their own needs, their own concerns, truth is a big one for transit agencies. They don't want to necessarily attract more trips to their ADA paratransit system which is quite costly on a per trip basis.

For example, in the District one of the goals of WMATA, the transit agency, was to make their customers more aware of more options that were available. In Jacksonville when they did just that, I think I referred to that earlier, a number of paratransit customers ended up seeing all the great ways to get around that were available on the fixed route system. There was an exodus

from the paratransit system on to the transit system. You need to listen -- as a facilitator, and I guess as a helper, we've called together all these potential partners. In the District project there were four or five of them. Really listened to why he they were at the table, what their needs were and different ways in which any different kind of, or any different level of functionality here on the referral and linkage systems would help them. And as they understand that it's a not only a win for their customers but a win for themselves, you know, they would be more likely to participate.

Certainly true, as Dan said, with no wrong door approach where you have all these different folks. Certainly one of the benefits is they'll all get better information available to their constituents. That's something that they all agree to be, to have a common goal. So when Dan was presenting this down in the District to all of them, he saw a bunch of nodding heads.

**Dan Berez:**

Not only better information, but it's a better process to update and maintain that information so that you don't have four or five different organizations expending the same amount or staff time doing the same thing and kind of contacting the same service providers. You not only created a better outcome for customers, but you've also created opportunity for a better process to create better information with the same or potentially even less resources.

**Will Rodman:**

So cost sharing for the support things.

**Dan Berez:**

Yeah. There's, you know, as Will is saying, with many of these strategies there's benefits not only for customers but there's benefits for providers in streamlining processes or providing better information or for potentially giving customers more options and allowing them to use different types of services.

**Will Rodman:**

In short, how do you get them to the table? You listen to what they need and address that through the design.

Virginia Dize:

With that we are going to have to leave that as the last word for now. (Laughter.)

Unfortunately we've reached the end of our session. I want to be cognizant of the time. I can't thank you, Will and Dan, enough for sharing all this great information. Not only did you do a fabulous formal presentation but your answers to the questions I think stimulated even more questions and issues.

So we will be in touch because there are still a few outstanding questions we didn't get to. I want to remind everybody that this session is recorded. If you missed any part of it you can hear it all. We will be posting it and making it available via our website in the very short time.



And we will also be sending everybody an evaluation, a brief questionnaire that we hope you'll fill out because I can't imagine that people are not a little overwhelmed with all the great information that you shared this afternoon.

I want to thank our operator and our captioner for making today's webinar possible. And just remember that your feedback is important to us. I just posted the last slide, which has our contact information. As I said, there are a number of outstanding questions that we did not get to. We will be in touch to respond to those questions, to follow up on the questions. But if you have additional issues or questions that occurred to you after the call, please, please get in touch with us. That's what we are here for.

So thank you again for joining us and I hope you enjoy the rest of your day. Goodbye.

**Will Rodman:**

Goodbye, everybody.

**Operator:**

Ladies and gentlemen, thank you for participating in today's conference. This does conclude today's program. You may all disconnect. Everyone have a great day.

(The webinar concluded at 3:30 p.m. Eastern.)