TriMet STEPS to MOD & MPI

Integrated Mobility Innovation (IMI) Demonstration Program
Statement of Work Framework for Project Award

OVERVIEW

The Tri-County Metropolitan Transportation District of Oregon (TriMet), in partnership with a consortium of private partners (VISA, moovel (or potentially a replacement vendor), Uber, INIT, Ready Credit Corp., etc.) and the City of Portland, proposes to develop and demonstrate technologies to provide information, trip planning, payment, and travel that will encompass transit and all other available shared use modes for customers. The proposed IMI project will build on TriMet's history of innovation in transit data and fare payment technology. TriMet was instrumental in the development of the General Transit Feed Specification (GTFS) and the Open Trip Planner (OTP) initiative as well as being the first US transit agency to launch virtual transit cards with Google and Apple. The IMI project includes expanding open payments to make this payment channel accessible to all fare categories through TriMet's partnership with VISA and INIT by building on the functionality in the existing Hop Fastpass® ("Hop®") solution's account-based fare system. Hop® is the first US system to truly support open application programming interfaces, open payments, virtualized fare cards and fare capping. TriMet will evaluate the option of expanding the accessibility and functionality of the Hop® smart/virtual card systems, and improving access for unbanked and underbanked populations. The project will also develop a framework of metrics to assess transit quality beyond traditional measures, incorporate these metrics into data sharing agreements, and establish qualitative and quantitative metrics to evaluate the effectiveness of integrated fare payment and the customer's experience.

Funding: $1,812,282 (49 U.S.C. § 5312)

Goal: TriMet's project seeks to advance the future of mobility by leveraging innovative, transferable, and technology agnostic solutions for extended payment; an improved travel experience for all customers; and data frameworks for assessing impacts, improvements, and efficiencies in transportation.

Objectives: Collecting and maintaining program data throughout the project; explore an empathetic approach that meets customers where they are, regardless of customers' travel preferences or level of technical expertise; increasing the understanding, improving the

effectiveness of, and broadening the positive impact of Mobility on Demand (MOD) programs.

Benefits: The project will enable all travelers in the Portland region to have more and easier ways to pay for their travel, as well as improved real-time transit data among other customer experience enhancements.

Project Participants

Organization	Role	Contact
TriMet	Lead Agency	Bibiana McHugh mchughb@trimet.org
IBI Group	Project Management / Trip Planning Development	Jon Campbell jon.campbell@ibigroup.com
Fehr & Peers	Data Collection/ Management	Marshall Ballard M.Ballard@fehrandpeers.com
INIT	Payment System Integrator	Thomas Schaich tschaich@initusa.com
VISA	Fare Payment	Josh Martesian jmarties@visa.com
Clevor Consulting Group	Business Model Development	Chris Tucker chris.tucker@clevorgroup.com
moovel (or potential replacement vendor)	Mobile Fare Payments	TBD
Ready Credit Corp.	Prepaid Cards / Retail Network Provider	Brian Hedberg bheadberg@readycreditcorp.com
Uber	Mobility Provider	Chris Pangilinan chrisp@uber.com
PLUS QA	Customer Experience Surveyor	Emmanuel Bonnet manu@plusqa.com
City of Portland	Local Government Partner	Eric Hesse Eric.Hesse@portlandoregon.gov
Nelson/Nygaard	Transit Analytics	Velez, Jean Paul JVelez@nelsonnygaard.com

Full Statement of Work

The Project Team will develop, after award of the cooperative agreement, a full Statement of Work, to includes tasks in areas including: project management (development of a project management plan, project progress reporting to FTA via periodic meetings and quarterly reports), data collection, evaluation and coordination with FTA's Independent Evaluator, Knowledge Transfer, development of a draft/final project report, among other assigned tasks.

Project Management

IBI Group will be responsible for managing the project with assistance from the TriMet project manager. This task provides for the overall project's management and coordination. Included in this effort are:

- An initial kickoff meeting
- Development of a project management plan (PMP)
- Maintenance of a project scope, schedule, and budget
- Project progress reporting to FTA via periodic meetings and quarterly reports

TriMet will conduct the project in accordance with the FTA Master Agreement (https://www.transit.dot.gov/funding/grantee-resources/sample-fta-agreements/fta-master-agreement-fiscal-year-2019) and Circular 6100.1E (https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/research-technical-assistance-and-training-program).

Deliverables:

- Kickoff meeting, including meeting materials and notes
- Draft PMP
- Final PMP
- Periodic meetings (e.g., conference calls, site visits)
- Quarterly progress reports

Task 1- Innovative Payment

The focus of Task One is to expand innovative payments such as open payments and the virtual transit card for all TriMet riders. This work builds on TriMet's groundbreaking, account-based, open architecture fare payment system, Hop Fastpass®. Through a discovery phase, TriMet will begin to build a seamless payment experience for customers by:

- Developing a white paper outlining the Business Case for Integrated Payment,
- Expanding open payment functionality within the Hop® system,
- Expanding the accessibility and functionality of the Hop® smartcard and virtual card systems,
- Improving access for the un-/underbanked.

Subtask 1.1 - Business Case for Integrated Payment

Fully integrated payment would allow customers to pay for all legs of a multimodal trip as a single transaction through a single transportation account. Many agencies and industry experts have discussed extending eFare Platforms such as TriMet's Hop Fastpass® to serve as that transportation account and backend clearinghouse to distribute payment to mobility providers for legs of the multimodal trips. This approach, however, introduces significant technical and policy challenges and risks including legal and regulatory implications, so agencies have been hesitant to implement or pilot such an initiative. The subtask will culminate with the development of a white paper that defines integrated payment and provides the business case/rationale for transit agencies to determine if pursuit of fully integrated payment through their eFare platforms offers sufficient return on investment, while also exploring alternative approaches that aim to achieve the same goals.

Partner(s): TriMet, Clevor Consulting Group, Visa, Uber
Deliverable(s): Business case white paper

Subtask 1.2 - Expanding Open Payments

Open payments allows customers to use a contactless bank card or virtual payment credential to pay for transit fares. Because these payment credentials are already accepted by most third-party mobility providers, open payments offer the potential for a seamless payment experience without the same level of cost and risk as full integration of payment. This subtask will focus on building upon the open payment capabilities of TriMet's Hop Fastpass® system to work towards a seamless payment experience, and make open payment more accessible to a broader spectrum of TriMet's customers. This subtask will involve the design, evaluation, and demonstration of open payment improvements/expansions.

Activity 1.2.a - Explore and demonstrate adding concession fare to open payment systems

TriMet currently accepts open payments at its Hop Fastpass® validators, however, all customers using this method are charged the full adult fare. There is currently no support for concession (discounted) fares. TriMet has two concession fares - Youth and Honored Citizen/Low Income, both of which require proof of eligibility. This activity would explore several policy and technical solutions to enable linking eligibility for a concession fare to an open payment credential. Research that answers widely applicable industry questions such as "How can transit agencies mitigate risk associated with expanded open payment functionality?" will also be included.

Partner(s): TriMet, Visa, INIT
Deliverable(s): Demonstration & evaluation

Activity 1.2.b - Explore and demonstrate extending open payment to offer monthly capping

TriMet currently offers a monthly fare cap when customers use a Hop® card (physical or virtual), but this feature is not currently available for those paying their fare with open payments. When a fare is paid with an open payment credential, a day cap is the only cap available. This restriction on open payment functionality was implemented due to the limited information available about open payment customers, making it difficult to offer an elegant customer service experience. Research conducted as part of this activity will include answers to widely applicable questions such as:

- How can payment industry concepts such as Payment Account Reference (PAR) be leveraged to facilitate acceptable levels of customer service for open payment customers?
- In this changing transit environment where "third party mobility packages" are becoming more popular, what are the strategic and revenue implications of fare revenue policies such monthly capping for open payment?

Partner(s): TriMet, Visa, INIT, Clevor Consulting Group
Deliverable(s): Demonstration & evaluation

Subtask 1.3 - Expanding/Extending Hop® Functionality

Account-based fare collection systems such as TriMet's Hop Fastpass® offer cutting edge functionality and convenience to the customer, such as the Hop® virtual card. This subtask will explore expanding existing Hop® virtual card functionality to lower barriers and broaden access to these new technologies.

Activity 1.3.a - Explore and demonstrate expanding Hop® virtual cards for Honored Citizen and Low Income accounts.

Personalized Honored Citizen/Low Income (HC/LI) fare cards are given only to those who meet special eligibility standards (medical disability, low income, etc), and contain additional information beyond a standard Hop® card, such as a photo ID and expiration date, which currently is not transferable to a virtual card system due to personalization requirements. This activity will explore policy and technical changes needed to support this functionality, culminating in a demonstration of the new feature. This activity will result in access to the Hop® virtual card for individuals who qualify for a personalized HC/LI card.

Partner(s): TriMet, INIT, moovel (or replacement vendor)
Deliverable(s): Demonstration & evaluation

Activity 1.3.b - Explore and demonstrate expanding Hop® virtual cards for Institutional accounts

TriMet issues Institutional fare cards to community benefit organizations, higher education systems, hospitals, and other major employers. These Institutional fare cards contain additional information beyond a standard Hop® card, such as a customer's name and institution, which currently is not currently transferable to a virtual card system.This activity will explore policy and technical changes needed to support this functionality, resulting in a demonstration of the new features. This activity will result in access to the Hop® virtual card for many vulnerable populations that rely on institutions to supply

them with a transit benefit, and eliminate the need for them to carry and keep track of a physical Hop® card.

Partner(s): TriMet, INIT, moovel (or replacement vendor)
Deliverable(s): Demonstration & evaluation

Subtask 1.4 - Improving access for the un-/underbanked

Outside of transit, the universe of mobility options is largely inaccessible to those without access to a bank card or payment credential. As technology continues to evolve, transit agencies struggle with the need to adopt new technology to maintain relevance with their customer base and ensure equitable access to these new technologies to all riders. This subtask focuses on lowering barriers for the unbanked and underbanked and increasing their access to new technology and mobility.

Activity 1.4.a - Explore open-loop payment solutions that can serve as an additional means for the un-/underbanked to better access mobility services.

This activity will focus on existing industry models and reevaluate them with the intent to increase cost-effective access for un-/underbanked populations. The outcome of this activity would be exploration into providing improved digital payment solutions for un-/underbanked populations to use on transit and other modes of mobility.

Partner(s): TriMet, Visa
Deliverable(s): Exploration & evaluation

Activity 1.4.b - Explore expanding the ability to load cash funds to virtual card accounts through the retail network

The Hop Fastpass® program already has a robust network of retailers where cash can be loaded onto a physical Hop® card. However, to load funds onto a Hop® virtual card, the customer currently must have a bank card. This activity will focus on exploring and identifying the technical solution necessary to facilitate the loading of cash through the Hop® retail network onto a Hop® virtual card. This activity will result in an agreed upon solution by all parties on how to convert cash to Hop® virtual card funds for the un-/underbanked communities, eliminating the need for them to carry and keep track of a physical Hop® card.

Partner(s): TriMet, INIT, moovel (or replacement vendor) Ready Credit Corporation
Deliverable(s): Technical documentation and implementation plan

Task 2 - Customer Experience

The focus of Task Two will be on initiatives that can be embedded into or used to further expand TriMet's Mobility on Demand platform to encourage customer behavior change towards more sustainable, multimodal trip options. This work largely builds off of TriMet's multimodal trip planner, to which shared use modes were incorporated as part of the 2016 MOD Sandbox Grant program. While the trip planning tool helps customers

discover travel options, the initiatives under this task will help nudge customers towards accessing and utilizing the increasing mobility services in the region. This task will address travel stress with better transit vehicle arrival predictions. It will also move beyond technical solutions to explore an empathetic approach that meets customers where they are, regardless of their travel preferences or level of technical expertise.

Subtask 2.1 - Explore enhanced customer communication around fare capping as a traveler incentives and rewards program

Incentive/reward programs and value strategies can be a mechanism to help customers make sustainable travel choices a habit. Under this subtask, TriMet will partner with INIT to evaluate the effectiveness of the Hop® fare capping loyalty program. TriMet is the first US transit agency to implement both a day and month fare capping loyalty program to equatibly reward customers for frequent ridership. Based on learnings from the program, TriMet will explore enhanced customer communication around fare capping to market it as a traveler incentives and rewards program. This activity will result in enhancing customer communications around fare capping. TriMet will also explore and plan for future, more extensive incentive or reward programs to begin to build the business case for agency investment in such a program as part of a broader Mobility on Demand platform.

Partner(s): TriMet, INIT
Deliverable(s): Framework, exploration & evaluation

Subtask 2.2 - Reducing Travel Stress by Making Transit Arrival Predictions More Accurate

A key barrier that keeps customers from taking multimodal trips is the stress and uncertainty that comes from having to transfer between modes. Trip planning tools are used prior to a trip; trip monitoring tools allow riders to monitor a trip once underway. Currently both trip planning and trip monitoring tools suffer from transit arrival predictions that rely on limited real-time information, namely real-time bus locations. Both tools would provide more accurate predictions and an improved user experience, especially for transit dependent populations, through incorporation of a range of additional sources of real time conditions data, such as roadway incident and congestion information from both the transit agency and third party providers. These innovations would serve to reduce customer uncertainty around making connections between modes. This subtask will integrate real-time transit location data gathered by TriMet with other novel sources of data about real-time conditions. To do so, the project team will develop a proof of concept demonstration of a cloud-hosted, machine-learning model to generate more accurate transit arrival predictions. The subtask will also include an analysis of the real-time arrival predictions currently provided by TriMet.

Partner(s): TriMet, IBI Group
Deliverable(s): Proof of concept demonstration of open source, smart arrival prediction engine and prediction analysis model

Subtask 2.3 - Partnering to Scale the City of Portland Transportation Incentive Program

The Portland Bureau of Transportation (PBOT) at the City of Portland has developed and is implementing / piloting a transportation incentive program that provides select residents access to free transportation options, like transit passes, bike or scooter share memberships, rideshare and carshare credits based on different criteria, such as forfeiting parking permits or residency in affordable housing. This subtask will work to provide seamless interoperability between the City's Transportation Incentive Program and the Hop Fastpass® system so that participants can have their transit credits deposited directly into an existing Hop® account linked to either a physical or virtual Hop® card. Ways to improve information sharing between partners about program utilization and efficacy will also be examined, and the possibility of distributing other mobility credits, such as bikeshare, carshare, shared e-scooters, or ridesourcing through the Hop® accounts of program recipients will be explored.

Partner(s): TriMet, City of Portland's Portland Bureau of Transportation, INIT
Deliverable(s): Demonstration/exploration & evaluation

Subtask 2.4 - System Integration

This subtask will focus on the integration of the initiatives described above into the existing TriMet Mobility on Demand platform for demonstration and evaluation. In addition, this subtask will include user experience heuristic testing of new functionality to ensure effective design. The result will be a demonstration and evaluation of additions to the open source Mobility on Demand platform that:

- Reduces traveler confusion and frustration by improving customer data with more accurate arrival times
- Extends the platform to allow more direct integration of other mobility programs, increasing customer convenience, and extending the benefits of transportation demand management efforts

Partner(s): TriMet, IBI Group, PlusQA
Deliverable(s): Updated mobility on demand platform

Task 3 - Mobility Data

This task is focused on using mobility data to measure the effectiveness and impact of mobility management programs, including mobility on demand and mobility payment integration initiatives.This task will include working with MOD firms to:

- Define a framework of metrics for assessing transit quality beyond traditional measures such as ridership.
- Incorporate consistent measurement into data sharing agreement terms.
- Establish qualitative and quantitative metrics to evaluate the effectiveness of Tasks One and Two.

- Create an analytical methodology to evaluate barriers to effective service for complete trips.

Apply the framework and benchmarks for analysis of the initiatives proposed in Tasks One and Two, with the goal of understanding the extent to which innovations in payment technology and incentive programs can actually drive changes in travel behavior.

Subtask 3.1 - Define Framework for Assessing Improvements in Transit Quality

This subtask will focus on the development of a framework that allows agencies to meaningfully assess how mobility quality/effectiveness improves with the implementation of new innovations. The goal is to develop an approach that is flexible enough to be applicable to transit agencies outside the Portland area, but detailed enough to yield actionable insights. TriMet will engage consulting and research experts to develop the analytical framework, with elements such as:

- Key variables and hypotheses for testing and how they relate to the goals of the project.
- Metrics to measure mobility quality/effectiveness of implemented innovations.
    - Identify which metrics can be measured directly, and which would require proxies
    - Use of the FTA Mobility Performance Metrics (MPM) for Integrated Mobility and Beyond to provide context and align with FTA's MOD guiding principles.
    - Identify decisions that can be informed by particular metrics
- Identification of all core datasets to use in analysis, as listed in the data management plan
- Understand how data availability is changing due to the economy and ever shifting mobility modes and their associated data resources.
- Desired outcomes of the analysis and how data can help realize those outcomes.
- Sources of data for analysis/how data will be collected for analysis.
- Data privacy/confidentiality concerns.
    - Application by data resource and by Transit and or Mobility provider
- Identification of PII and exempt data sourcesTools that will be used to store, manipulate, and visualize data as part of the analysis. A data dashboard system integrator will be selected, allowing for guided development of an analytics and visualization tool.

By the end of this subtask, a set of transit quality/effectiveness measurements, causal and dependent variables, and testing approaches will be established that can be applied to TriMet and beyond. These transit quality/effectiveness measurements are anticipated to go beyond basic ridership and productivity measurements to take into account other related impacts on commute behavior, mode shift, vehicle miles traveled by commuter, congestion mitigation, and impacts on sustainability.

Partner(s): TriMet, Fehr & Peers
Deliverable(s): Framework document

Subtask 3.2 - Mobility Analysis Benchmarks

Once the framework for analysis has been established, benchmarks will be defined. TriMet will clearly define the benchmark(s) for use in before/after analysis and scenario planning. Using accessibility analyses with identified data from the data management plan will enhance the before/after analysis. These benchmarks are standards meant to provide answers to the following questions:

- Should new mobility business and service models focus on traveler centric needs?
- What are existing levels of transit quality/effectiveness in the Portland region?
- Have the goals set for transit quality/effectiveness been met?
- How much must transit quality (as defined in the previous subtask) improve in order to be considered significant?
- Understanding current ridership, its trends, and current alternative mobility use and trends, does increasing mobility on demand decrease transit ridership?
- What are the costs per service hour per passenger by all modes?
- How are services provided comparable to one another by travel time, distance traveled and cost effectiveness?
- Is the availability of new mobility services in TriMet's identified equity concern areas comparable to their availability in the rest of the region?

Alignment with TriMet's business plan and reflection upon other leading transit providers in inter-modal integration business plans will help guide the generation of applicable and contemporary benchmarks. The benchmarks will also be used in the subsequent subtask to guide the analysis process. While the benchmarks will initially be computed for TriMet's service area, the process will be flexible enough that it can be applied in other jurisdictions.

Partner(s): TriMet, Fehr & Peers, Nelson\Nygaard
Deliverable(s): Report detailing benchmarks and the approach for calculating them

Subtask 3.3 - Demonstrate Framework for Assessing Improvements in Transit Quality

This subtask combines the framework and the benchmarks to gauge the effectiveness of the initiatives in Task One and Task Two. Applicable pre-demonstration data shall be evaluated in the framework, thus establishing the ability to accurately conduct an analysis of the demonstration. Often agencies do not have access to commute travel pattern data, or Uber origin/destination and passenger miles traveled data to assist in a before analysis. These data resources will provide unique opportunities to analyze commuter patterns and identify potential service improvements including shared-use mobility partnerships. Evaluating metrics of success for the demonstration is dependent on identifying the goals of the implementation. Using the data framework and benchmarks established in subtasks 3.1 and 3.2, TriMet will work with subject matter experts to apply the framework and benchmarks in order to answer questions such as:

- To what extent do the expansion of open payment and extended Hop® functionality impact travel behavior and overall transit quality/effectiveness?
- What is the impact of enhanced customer communication around fare capping on travel behavior and overall transit quality/effectiveness?
- Is there a relationship between reduced uncertainty for multimodal travel and changes in modal choice in travel behavior?
- Is there a relationship between reduced uncertainty for multimodal travel and overall transit quality/effectiveness?
- Is there a relationship between improved MOD payment integration and transit quality/effectiveness and travel behavior?
- Using identified data resources in the data management plan, how do multi-criteria analysis prove the validity of the pilot in reducing barriers to multimodal mobility and connectivity?
- Why will shared-use mobility services be part of the integrated mobility of Portland's future?
- Understand ways to reduce trip uncertainty, missed transfers.
- How will shared-use mobility services integrate with TriMet transit services? Will this result in a reduced service model?
- What are the next steps in policy and infrastructure to support mobility service integration with transit in Portland?
- What is required to create an extensible analysis to allow replication and implementation nationally?

Leveraging a data dashboard to visualize and provide a platform for analysis and KPI viewing will be defined by metrics identified within the framework of the project and their associated benchmarks. Detailed analysis outside of the developed dashboard will allow for more refined and specific analysis from pre-defined analytical solutions or custom analysis based on data requirement. Lastly, it is pertinent to the completion of the project to enable the framework, benchmarks and analysis to be fully extensible for implementation at other transit and mobility providers nationally.

Partner(s): TriMet, Fehr & Peers, Nelson\Nygaard
Deliverable(s): Report summarizing results; Data used for analysis, analytical methodologies and workflows.

BUDGET

Below is the budget for the project, by task.

Task	Partner(s)	IMI Demonstration Grant Federal Amount ($)	Local Cost Share Amount ($)	Total Cost ($)
Project Management	IBI, INIT	$ 415,872	$ 47,128	$ 463,000
Task 1 + contingency	TriMet, Clevor Consulting Group, Visa, Uber, INIT, moovel (or replacement vendor), Ready Credit Corporation	$ 768,834	$333,410	$1,102,244
Task 2 + contingency	TriMet, City of Portland, INIT, IBI Group, PlusQA	$ 258,476	$360,077	$618,553
Task 3 + contingency	TriMet, Fehr & Peers, Nelson\Nygaard	$ 334,100	$ 150,000	$484,100
PM + Tasks 1-3		**$1,777,282.00**	**$ 890,615**	**$2,667,897**
Travel & Incidentals	TriMet	$ 35,000	$ -	$ 35,000
Project Total		**$ 1,812,282**	**$ 890,615**	**$ 2,702,897**

SCHEDULE

The estimated duration of the project from project execution in TrAMS to completion is 22 months (July 2020 – May 2022).

Project Item	End (FTA quarters)	Responsible Parties
Task 1 Innovative Payment	Q1 2022	TriMet, Clevor Consulting Group, Visa, Uber, INIT, moovel (or replacement vendor), Ready Credit Corporation
Subtask 1.1 Business Case for Integrated Payment	Q1 2021	TriMet, Clevor Consulting Group, Visa, Uber
Activity 1.2.a Explore adding concession fare to open payment systems	Q2 2021	TriMet, Visa, INIT
Activity 1.2.a Demonstrate adding concession fare to open payment systems	Q1 2022	TriMet, Visa, INIT
Activity 1.2.b Explore extending open payment to offer monthly capping	Q2 2021	TriMet, Visa, INIT, Clevor Consulting Group
Activity 1.2.b Demonstrate extending open payment to offer monthly capping	Q1 2022	TriMet, Visa, INIT, Clevor Consulting Group
Activity 1.3.a Explore expanding Hop® virtual cards for Honored Citizens and Low Income accounts	Q2 2021	TriMet, INIT, moovel (or replacement vendor)
Activity 1.3.a Demonstrate expanding Hop® virtual cards for Honored Citizens and Low Income accounts	Q1 2022	TriMet, INIT, moovel (or replacement vendor)
Activity 1.3.b Explore expanding Hop® virtual card for Institutional Hop® accounts	Q2 2021	TriMet, INIT, moovel (or replacement vendor)
Activity 1.3.b Demonstrate expanding Hop® virtual card for Institutional Hop® accounts	Q1 2022	TriMet, INIT, moovel (or replacement vendor)
Activity 1.4.a Explore open-loop payment solutions that can serve as an additional means for the un-/underbanked to better access mobility services.	Q2 2021	TriMet, Visa
Activity 1.4.b Explore expanding the ability to load cash funds to virtual card accounts through the retail network.	Q2 2021	TriMet, INIT, moovel (or replacement vendor), Ready Credit Corporation

Activity 1.4.b Demonstrate expanding the ability to load cash funds to virtual card accounts through the retail network.	Q1 2022	TriMet, INIT, moovel (or replacement vendor), Ready Credit Corporation
Task 2 Customer Experience	Q1 2022	TriMet, City of Portland, INIT, IBI Group, PlusQA
Subtask 2.1 Explore enhanced customer communication around fare capping as a traveler incentives and rewards program	Q4 2020	TriMet, INIT
Subtask 2.2 Develop methods for reducing Travel Stress by Making Transit Arrival Predictions More Accurate	Q2 2021	TriMet, IBI Group, Fehr & Peers
Subtask 2.2 Demonstrate methods for Reducing Travel Stress by Making Transit Arrival Predictions More Accurate	Q1 2022	TriMet, IBI Group, Fehr & Peers
Subtask 2.3 Partner to Scale the City of Portland Transportation Incentive Program	Q2 2021	TriMet, City of Portland's Portland Bureau of Transportation, INIT
Subtask 2.3 Demonstrate/Explore scaled Transportation Incentive Program	Q1 2022	TriMet, City of Portland's Portland Bureau of Transportation, INIT
Subtask 2.4 Develop System Integration	Q2 2021	TriMet, IBI Group, PlusQA
Subtask 2.4 Demonstrate System Integration	Q1 2022	TriMet, IBI Group
Task 3 Mobility Data	Q2 2022	TriMet, Fehr & Peers, Nelson\Nygaard
Subtask 3.1 Define Framework for Assessing Improvements in Transit Quality	Q4 2020	TriMet, Fehr & Peers
Subtask 3.2 Mobility Analysis Benchmarks	Q2 2021	TriMet, Fehr & Peers
Subtask 3.3 Demonstrate Framework for Assessing Improvements in Transit Quality	Q1 2022	TriMet, Fehr & Peers, Nelson\Nygaard
Draft Report	Q1 2022	TriMet, Fehr & Peers
Final Report	Q2 2022	TriMet, Fehr & Peers