
Emerging Technology Implementation Study

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Description

Over the past five years, emerging technologies like ride-hailing, micromobility, and electric vehicles have changed how people get around the Portland area. Metro is responsible for long-term transportation planning in the Portland region, and we need to take into account the impacts that emerging technology has on our transportation system. Metro's 2018 update to the Regional Transportation Plan included an Emerging Technology Strategy that identified how Metro and our partner agencies can harness new developments in transportation technology to make our region more equitable and livable. The Strategy created a policy framework for emerging technology, but it did not go into much detail in identifying implementation actions for transportation agencies across the region due to a lack of available data, a dearth of relevant best practices, and uncertainty in the technology sector.

The Emerging Technology Implementation Study will identify near-term opportunities for public agencies in the region to ensure that emerging technology benefits their communities, including projects, programs, regulations, policies, and follow-up planning activities. The Study will identify how, when, and where to apply different strategies by drawing on newly-available data and research on emerging technology and on lessons learned from technology pilot projects in the Portland area and peer regions. It will provide information and practical guidance that Metro's agency partners can use to better plan for and manage new developments in technology.

This study will last through December 2021, with a total budget of \$290,000, and is divided into two phases. The first phase, which will last through May 2021 and cost \$175,000, will identify opportunities and strategies for Metro and its partner agencies to deploy emerging technologies in a way that improves transportation choices and advances equity and sustainability. This phase consists of four tasks:

- Task 1 (March-May 2020) – Background Information: Update the information in the Emerging Technology Strategy on the usage, impacts, and potential growth of different emerging technologies in the Portland region based on the most recent information.
- Task 2 (June-November 2020) – Equity Analysis: Identify the most pressing barriers that communities of color and other historically marginalized communities face to benefitting from emerging technology, as well as effective measures to overcome these barriers.
- Task 3 (July 2020-January 2021) – Readiness Assessment: Identify specific areas within the region where there are opportunities to deploy different emerging technologies in a way that benefits communities.
- Task 4 (January-March 2021) – Implementation Plan: Recommend projects, programs, and policies that Metro and its partner agencies can implement to realize these opportunities.

A second phase of the project, costing up to \$115,000 and lasting through December 2021, will support selected implementation actions identified during the first phase, such as drafting model policy language, writing solicitations for emerging technology services or projects, updating local development codes, or providing technical assistance to selected Metro partner agencies with specific plans and projects. The nature of this second phase will be determined in the course of the first phase. Roughly 85 percent of the overall project budget will go toward consultant services, and

roughly 15 percent will fund Metro staff time to manage and support the project. The cost and schedule information below describes in more detail the work that will be completed on this project during FY 2019-20.

Overall Objectives

- Describe the usage, impacts, and potential growth of different emerging technologies in the Portland region.
- Recommend strategies to address the most pressing barriers that communities of color and other historically marginalized communities face to benefitting from emerging technology.
- Identify areas within the region where there are opportunities to deploy different emerging technologies in a way that benefits communities.
- Recommend projects, programs, and policies that Metro and its partner agencies can implement to realize these opportunities.

Previous Work *(through June 2019)*

- In November/December 2018, JPACT and the Metro Council approved the Regional Transportation Plan, including the Emerging Technology Strategy, which included an Emerging Technology Strategy that identified how Metro and our partner agencies can harness new developments in transportation technology to make our region more equitable and livable. The strategy included policies to support electric vehicle adoption, and identified new opportunities to support vehicle electrification in the Portland region. Several companies offer shared electric vehicles, scooters, and bikes, which creates an opportunity to provide a larger number of people in the Portland region with access to a shared electric vehicle at a much lower cost than if Metro or its partners were to fund EVs and chargers directly.
- In 2018, Metro moved forward with many of the next steps identified in the Emerging Technology Strategy, including issuing grants for emerging technology pilot projects through the PILOT program and initiating two different data projects – a pilot test of a new data platform, Replica, and a platform for sharing and analyzing data from shared electric scooters and bicycles – that can provide new insights about how emerging technology usage in the Portland region. These projects will provide data and best practices to inform the Emerging Technology Implementation Study.

Methodology

This project consists of four tasks:

Task 1: Background information – The selected consultant will summarize current knowledge about emerging technology in the Portland region in a way that informs the work of Metro and its partners. The consultant will review available research and data and summarize information on different emerging technologies, such as current usage in the region, impacts on regional goals, trends that may affect future growth, key issues for public agencies to consider, and relevant best practices.

Task 2: Equity analysis – This task will examine how emerging technologies impact communities of color and other historically marginalized communities (HMCs) in the Portland region and identify a set of key strategies for public agencies to make these technologies more accessible to, and beneficial for, HMCs. After conducting background research on equity and emerging technology, the consultant will develop and execute an approach for gathering the information needed to fill gaps in our

knowledge directly from community members through surveys, focus groups, and other outreach methods.

Task 3: Readiness assessment – This task will Identify places in the region where there are opportunities for public agencies to work with emerging technology to provide better, more equitable travel choices. The consultant will identify specific communities within the region that are good candidates for different emerging technologies and services based on factors such as the built environment, transportation needs, public agency readiness, and the market for different transportation services.

Task 4: Implementation plan – This task will identify policies, plans, programs, and projects that Metro and its partners can undertake to ensure that emerging technology helps the region achieve its goals, with a focus on actions that can be accomplished within the next five years. The consultant will select potential strategies based on research, case studies of peer agencies’ projects, and knowledge of best practices. The consultant will assess the feasibility of these strategies by conducting interviews with public agency staff and other stakeholders in communities where there are opportunities to implement the relevant emerging technology.

Major Project Deliverables/ Milestones	
1st Quarter	•
2nd Quarter	•
3rd Quarter	• Select consultant team
4th Quarter	<ul style="list-style-type: none"> • Initial engagement with working group • Impacts assessment memo and presentation • Equity analysis approach memo
Ongoing	<ul style="list-style-type: none"> • Project management • Presentations to working group and Metro committees

Project Lead

- Metro

Project Partners

Metro’s Emerging Technology Working Group will serve as the advisory committee for this project. The Working Group consists of staff from Metro’s agency partners and transportation management associations in the region, including representation from the following organizations:

- City of Beaverton
- City of Gresham
- City of Hillsboro
- City of Portland
- City of Troutdale
- Clackamas County Department of Transportation and Development
- Explore Washington Park
- GoLloyd
- Metro
- Multnomah County
- ODOT
- Portland State University

FY 2019-20 Unified Planning Work Program

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- TriMet
 - University of Oregon
 - Washington County
 - Westside Transportation Alliance

FY 2019-20 Cost and Funding Sources

Requirements:

Personal services	\$ 48,125
Requirement	\$ Amount
Requirement	\$ Amount
Requirement	\$ Amount
Requirement	\$ Amount
Requirement	\$ Amount

TOTAL \$ \$48,125

Resources:

Local	\$ 48,125
Resource	\$ Amount
Resource	\$ Amount
Resource	\$ Amount
Resource	\$ Amount
Resource	\$ Amount

TOTAL \$ 48,125

The budget shown above reflects approximately \$35,000 in consulting services and \$13,125 in staff time.

Full Time Equivalent Staffing:

Regular Full Time FTE: 10%