



WASHINGTON STATE ROAD USAGE CHARGE

Forward Drive Project Update

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Washington State
Transportation Commission

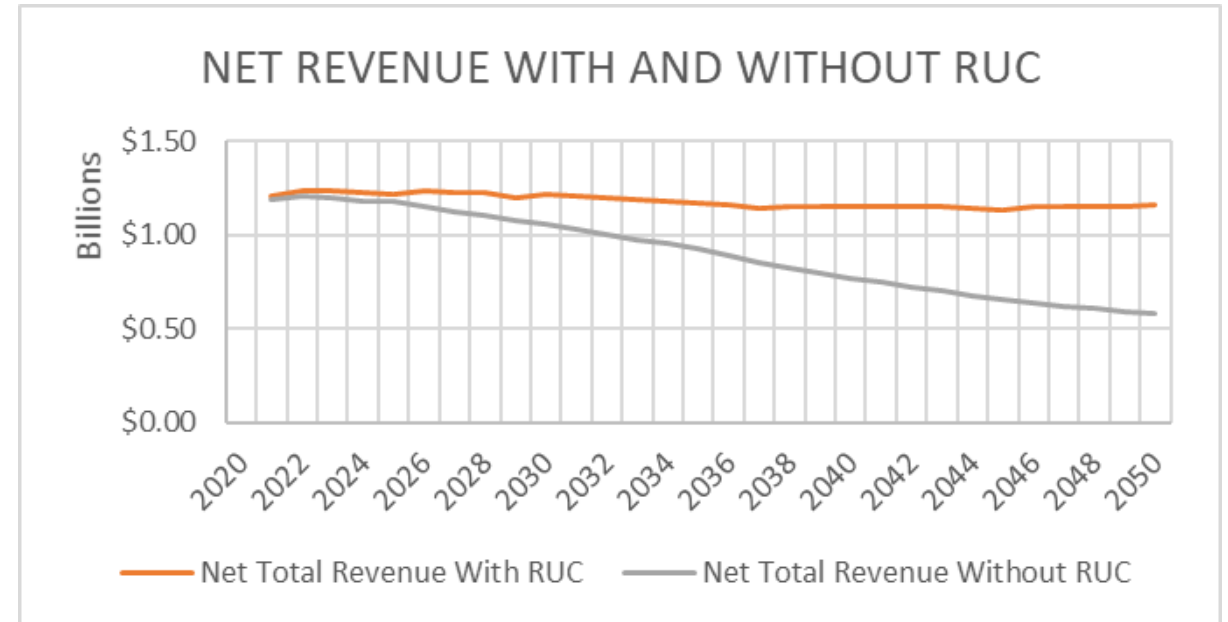
Update Items

1. Status of research tasks
2. 2022 pilot planning
3. Next steps

Status of Research Tasks

Task 1: Financial Analysis

- **Purpose:** Update the Commission’s RUC financial model to incorporate impacts of electrification, autonomous vehicles, ride-sharing, and tele-working on long-term transportation revenue.
- **Key findings/activities:**
 - Crafted range of scenarios about future of vehicle fleet, technology, and commuter trends
 - Created simple user interface for exploring scenarios
 - Documented assumptions and model capabilities in a user guide and report
- **Status:**
 - Two new scenarios being added for fleet electrification
 - Final report and user guide under final review
 - Knowledge transfer to Commission and legislative staff underway
 - RUC Steering Committee spotlight session on May 23 will highlight key scenario outputs and findings



Based on “Neutral” Scenario

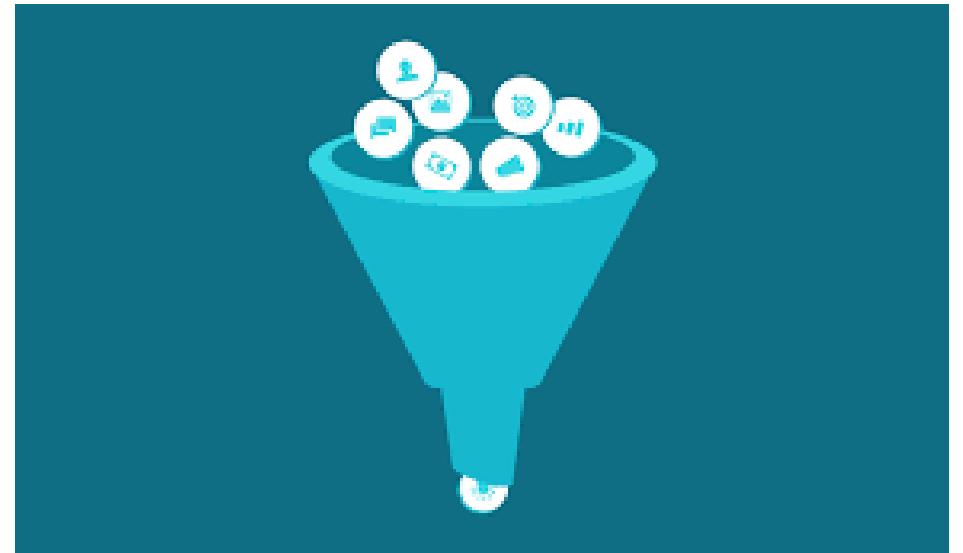
Task 2: Equity Analysis & Outreach

- **Purpose:** identify and measure potential disparate impacts of RUC to communities of color, low income households, vulnerable populations, and displaced communities
- **Key findings:**
 - Under RUC, higher income households would generally pay more and lower income households would save
 - Outreach yielded lack of familiarity with how transportation is funded, impressions that low-income workers drive more
- **Status:** final task report approved and will be ready for publication by end of May












Task 3: RUC Innovation

- **Purpose:** incorporate emerging technologies and business models for mileage reporting and road usage charge system implementation
- **Key findings/activities:**
 - Created a framework for understanding and assessing mileage reporting technologies
 - Explored new sectors and partnerships for enhancing RUC as an end-user service
 - Built RUC experience “scenarios” as the basis for pilot testing
- **Status:**
 - Research being incorporated into pilot testing
 - Additional research into in-vehicle telematics opportunities ongoing



Task 4: Cost of Collection Workshops

- **Purpose:** work with DOL and partner state agencies through a series of workshops to identify opportunities for streamlining RUC functions and reducing the cost of collection
- **Key findings/activities:**
 - Hosted workshops on three topics: customer service, enforcement, and procurement
 - Identified the importance of communication and high-quality user experience for reducing costs
 - Identified cross-state system opportunities including standards creation
- **Status:**
 - Research being incorporated into pilot testing
 - Report on activities in progress

	Identify subject vehicle & owner/lessee —connect with vehicle registry & set up account
	Generate road usage data for subject vehicle over designated time —report data
	Access road usage data —receive reporting of road usage data
	Apply per-mile charging rates —process data to determine amount of charges
	Provide invoice to owner/lessee —issue notice of the charge
	Collect payment —provide one or more ways to pay
	Issue acknowledgement of payment —create a receipt
	Enforce payment —apply mechanisms for ensuring everyone pays
	Remit revenue to appropriate fund —integrate revenue collection with financial systems

Essential functions of a road usage charge system

2022 Pilot Planning

Objectives of next phase of research



Understand and improve the user experience



Identify and demonstrate viable approaches to reducing cost of collection



Honor and incorporate equity through policy and system design

Components of next phase of research

User experience research to inform RUC policy choices and system operations

Features:

- Self-reporting of odometer readings at registration renewal
- Installment payment plans
- Mileage reporting choices, including in-vehicle telematics
- Out-of-state and off-road exemptions without GPS
- Accommodations for low-income vehicle owners
- Alternative invoice designs

Field research to enhance RUC systems

Features:

- Unregistered vehicle research
- Vehicle transaction research
- Mock standards committee

User Experience Research: Two Phases

- 1) User research
- 2) Pilot testing

User Experience Research: Two Phases

- 1) User research: concept development and refinement
- 2) Pilot testing: prototype deployment and evaluation

Phase 1: User research

Objectives

- Gauge comprehension, perceptions, and preferences
- Explore wide range of possible
- Refine designs for prototype based on feedback

Features

- 48 participants
- 1 participant per session
- <2 hours per session
- Moderated sessions with interactive Q&A centered around a simulated online RUC mileage reporting and payment process

Choices and interactions to explore

Mileage reporting choices

- Self-reporting
- Odometer image reporting
- Smartphone app
- Plug-in device
- Telematics

Payment choices

- Pre-paid installments
- Lump sum
- Post-paid installments

Mileage exemption choices

- Exemption type (standard exemption, total miles, pre-selected mileage total, percentage of miles)
- Verification method

Low-income discount choices

- Eligibility
- Discount type (rate discount, exempt miles)
- Verification method

Choices and interactions to explore

- Relationship between RUC and typical registration renewal steps
- How and when to self report miles
- Whether and when to require odometer image as verification
- Content, placement and utility of FAQ and other informational content
- Invoice content and format
- Sequencing of choices and actions
- Look and feel

Phase 2: Pilot testing

Objectives

- Validate design from phase 1 by building a prototype
- Gauge user comprehension, perceptions, and preferences
- Measure scalability, cost, and performance of prototype features

Features

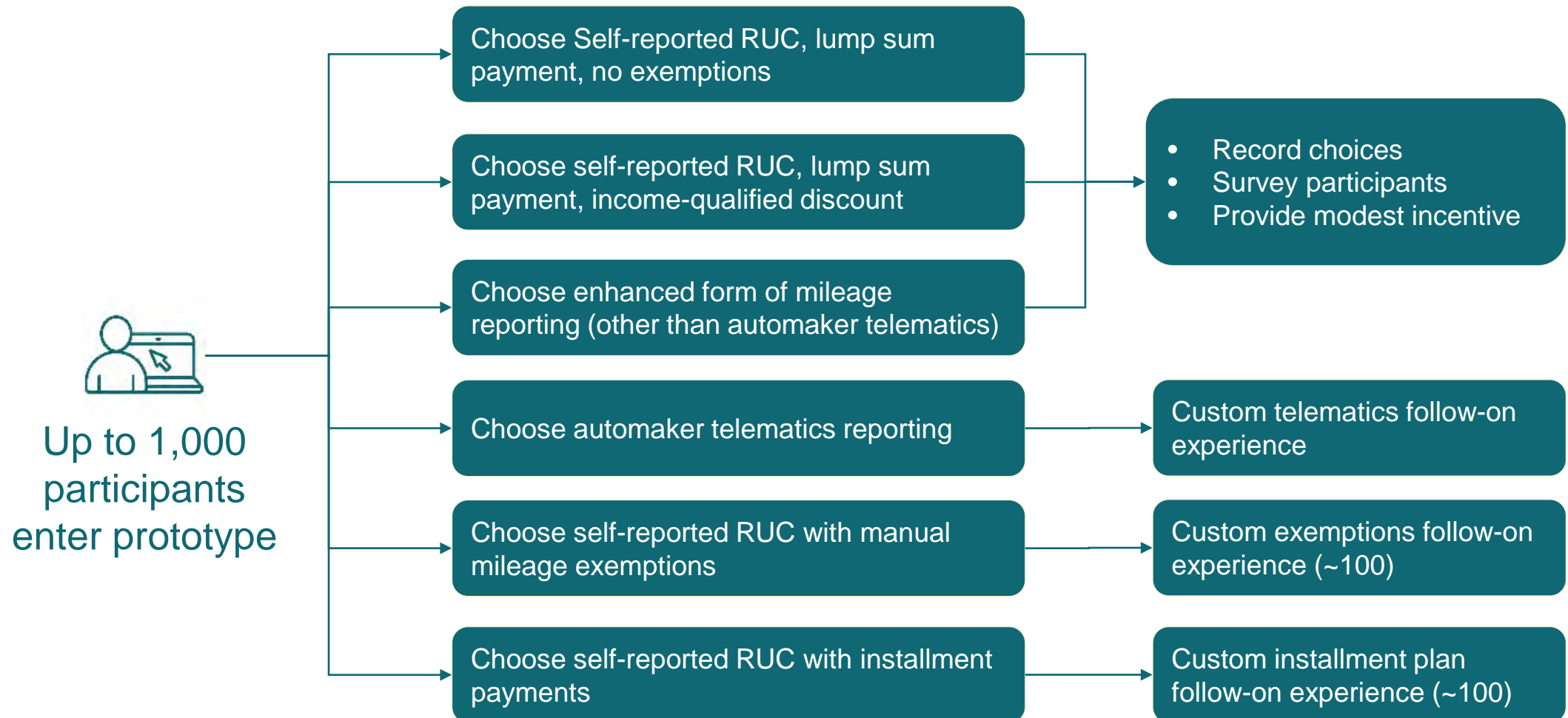
- Up to 1,000 participants
- Unmoderated “sessions” where participants interact with a RUC enrollment, reporting, and payment site
- Opportunity to experience “RUC simple” while making a range of choices reflecting interaction preferences
- Opportunity for follow-on experiences

Pilot participants

Focus areas for recruitment

- Low-income vehicle owners
 - Urban, suburban, and rural
 - Diverse vehicle types and uses
- Residents of border regions
- Electric vehicle owners
- Overall representation of Washington residents

Pilot testing participant experience



Exemptions follow-on experience



What participants will experience

- Choices for what type of exemption to claim (e.g., mileage bracket, precise miles, percentage of miles)
- Choices for what type of documentation to substantiate claim
- Requests to provide documentation for review
- Feedback on documentation provided
- Survey about experience and preferences

What we will assess

- Level of interest among participants
- User experience including feedback on process, ease of use, convenience, and understanding
- Reliability and validity of documentation provided
- Cost and effort to administer
- Scalability

Installment plan follow-on experience



What participants will experience

- Choices for what type of installment plan to select
- Receive a cash card loaded with installment payment amount
- Receive reloaded installment amounts after making a payment
- Survey at conclusion of payments
- Note: card will not be reloaded if payments are not made

What we will assess

- Level of interest among participants
- Compliance
- Effectiveness of reminders
- Complexity
- Cost of administration

Telematics follow-on experience



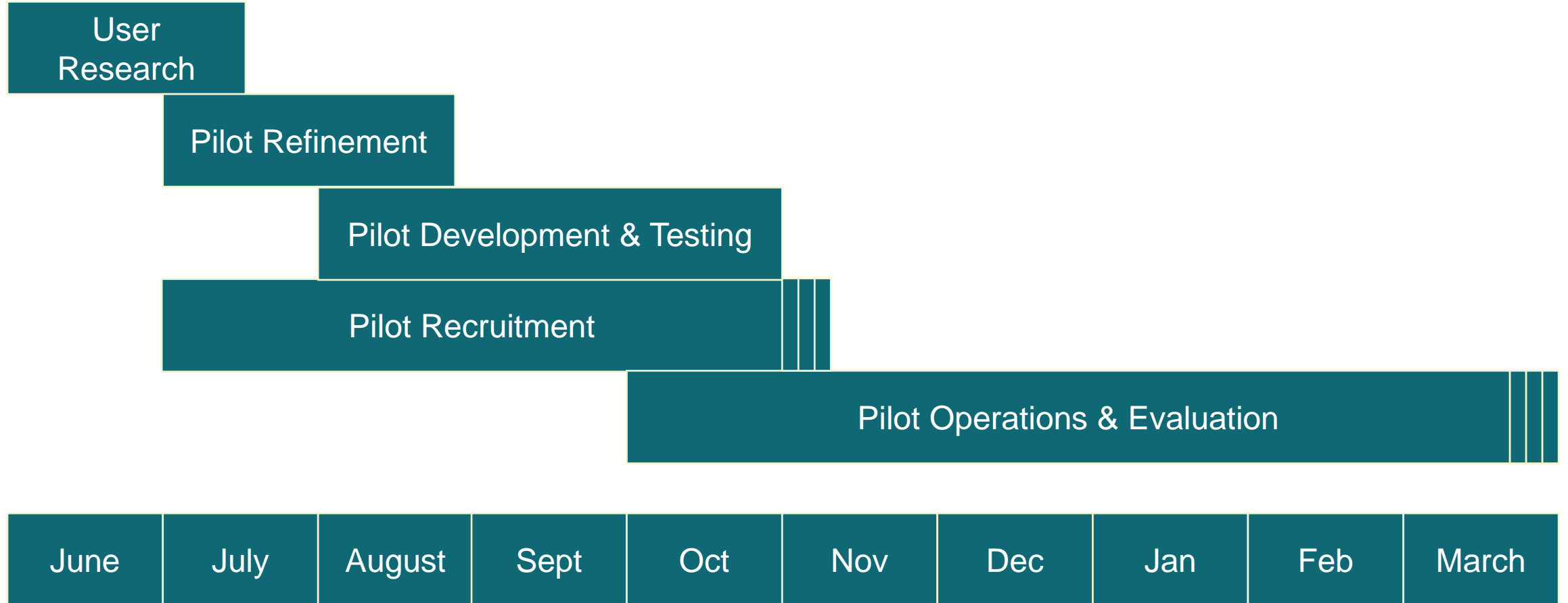
How participants will find their way to this option

- Option 1: Those who choose this method may or may not have compatible vehicles; those who do may be invited to activate their automated reporting account
- Option 2: Participants known to have compatible vehicles will be recruited and enrolled
- Mileage reported automatically from participants' vehicles
- Participants surveyed at conclusion

What we will assess

- User experience including feedback on process, ease of use, convenience, and understanding
- Cost to administer
- Scalability
- Accessibility/availability
- Pathways and configurations for telematics in the long term

User experience schedule



Field Research: Three Topics

- 1) Vehicle registration research
- 2) Vehicle transactions research
- 3) Mock standards committee

Unregistered vehicle research



Goal: Quantify the extent and duration of lapses in vehicle registration

Research:

- Review prior DOL reports
- Analyze anonymized DOL data relating to registration lapses

What we will assess

- Methodologies for measuring registration compliance rates
- Registration renewal non-compliance rates (short-term vs. long-term)

Vehicle transactions research



Goal: Uncover characteristics of vehicle-related transactions such as triggers, the processes associated with the transaction, transaction time, and user attitudes

Research:

- Participants journal transactions for a four-month period
- Reminders sent every two weeks
- Review and analyze data collected

What we will assess

- Frequency and location of existing vehicle-related transactions
- Suitability of existing touchpoints for RUC-related transactions such as mileage reporting and payments
 - User experience
 - Cost
 - Scalability

Mock standards committee



Goal: Establish a committee of peer states and private sector partners to identify a framework for standardization with potential to reduce costs and enhance user experience

Research:

- Invite and convene committee
- Design objectives, roles, procedures, and topics
- Record notes, decisions, and participant feedback

What we will assess

- What areas of RUC would benefit from inter-jurisdictional standardization?
- Are there areas where standardization could reduce RUC cost of collection?
- Which areas of standardization would benefit from state leadership?

Next Steps

Upcoming Activities

Project Activities

Q2 2022

- Finalize research plan
- Develop mock-up for user research
- Recruit user testing participants
- Conduct user experience research

Summer 2022

- Recruit participants for pilot testing
- Development and testing of prototype for pilot testing

Q3-Q4 2022

- Launch and operate pilot
- Evaluate pilot including surveys and participation incentives

Steering Committee Activities

May 23: Spotlight session: Financial analysis results

August 16: Full virtual meeting to review pilot test plan

November 17: Full in-person meeting where members can interact with the prototype

THANK YOU

Consultant support provided by:

