



# Washington State Road Usage Charge Assessment

**Recap:**

## **Steering Committee Meeting #1**

**Jeff Doyle**

**State Project Director**

**Washington State Road Usage  
Charge Assessment**



Washington State Transportation  
Commission



Washington State  
Department of Transportation

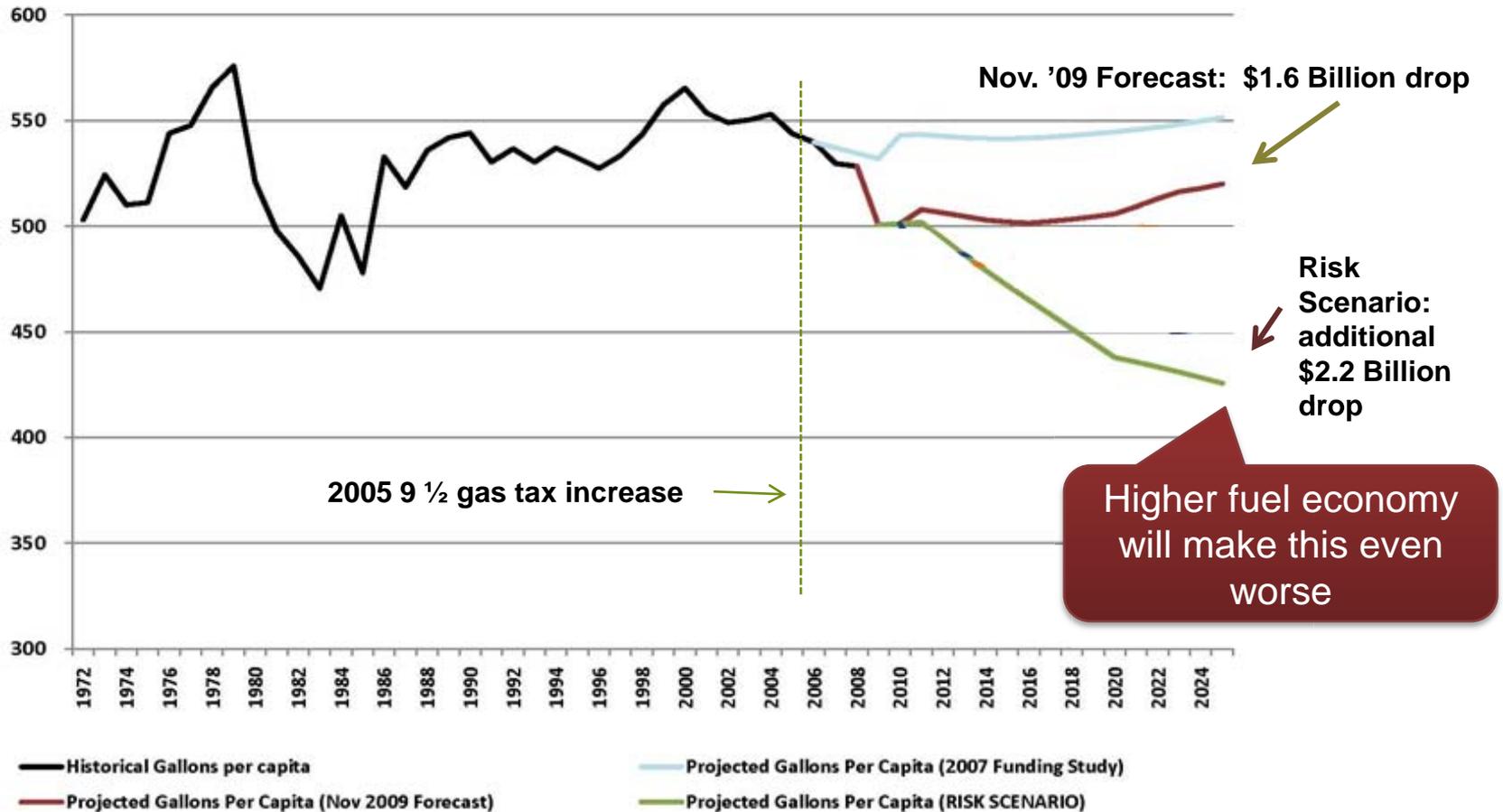
**FOR THE FULL PRESENTATION & MEETING MATERIALS:**

**[WWW.WaRoadUsageCharge.wordpress.com](http://WWW.WaRoadUsageCharge.wordpress.com)**

**CONTEXT:**

**TRANSPORTATION FUNDING  
ISSUES IN WASHINGTON**

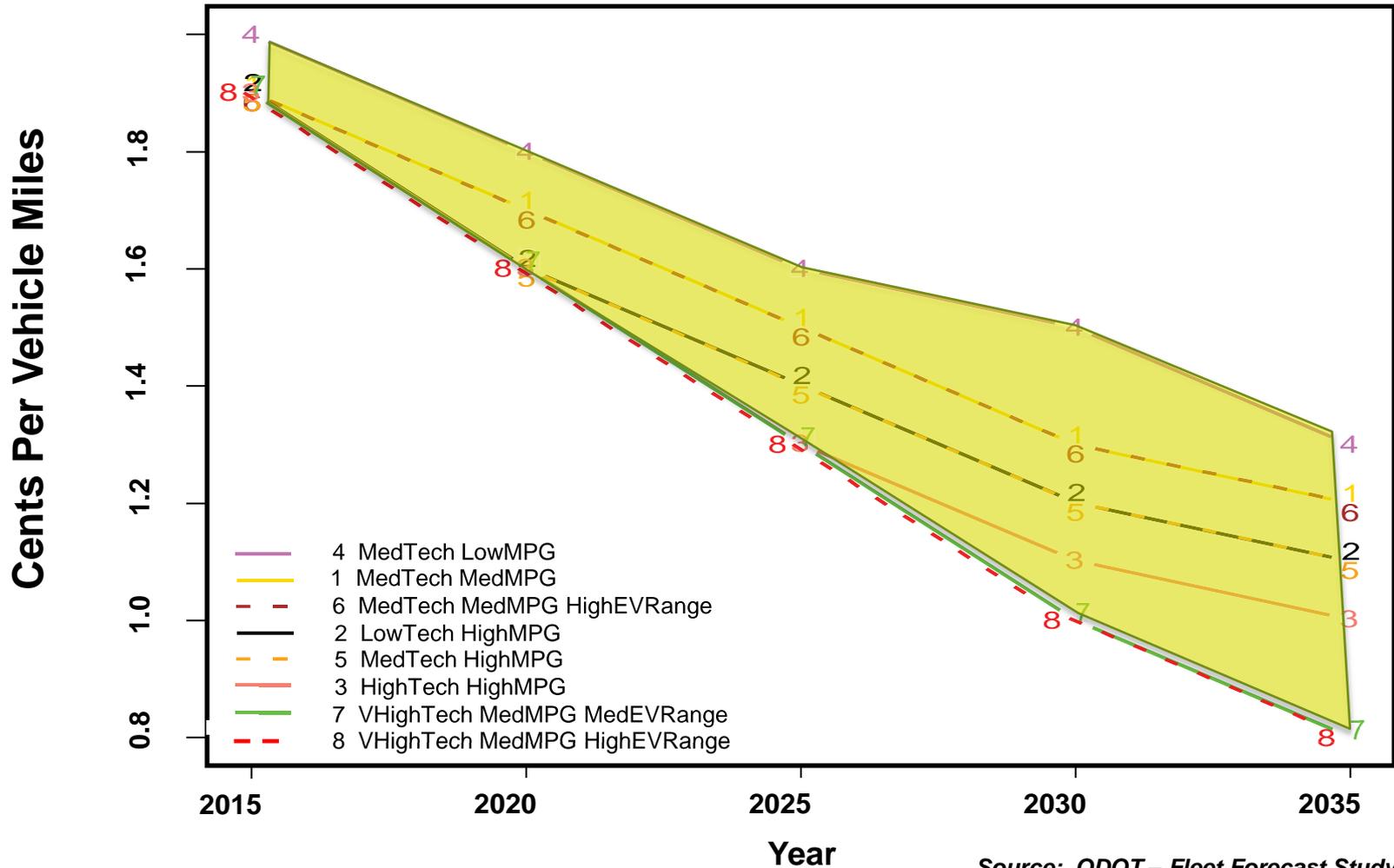
# “Risk Scenario” of Gas Tax Revenue



Source: Joint Transportation Committee – Implementing Alternative Transportation Funding Methods, 2009.

# Oregon State Fleet Forecasts

## Gas Tax Yield per Vehicle Mile



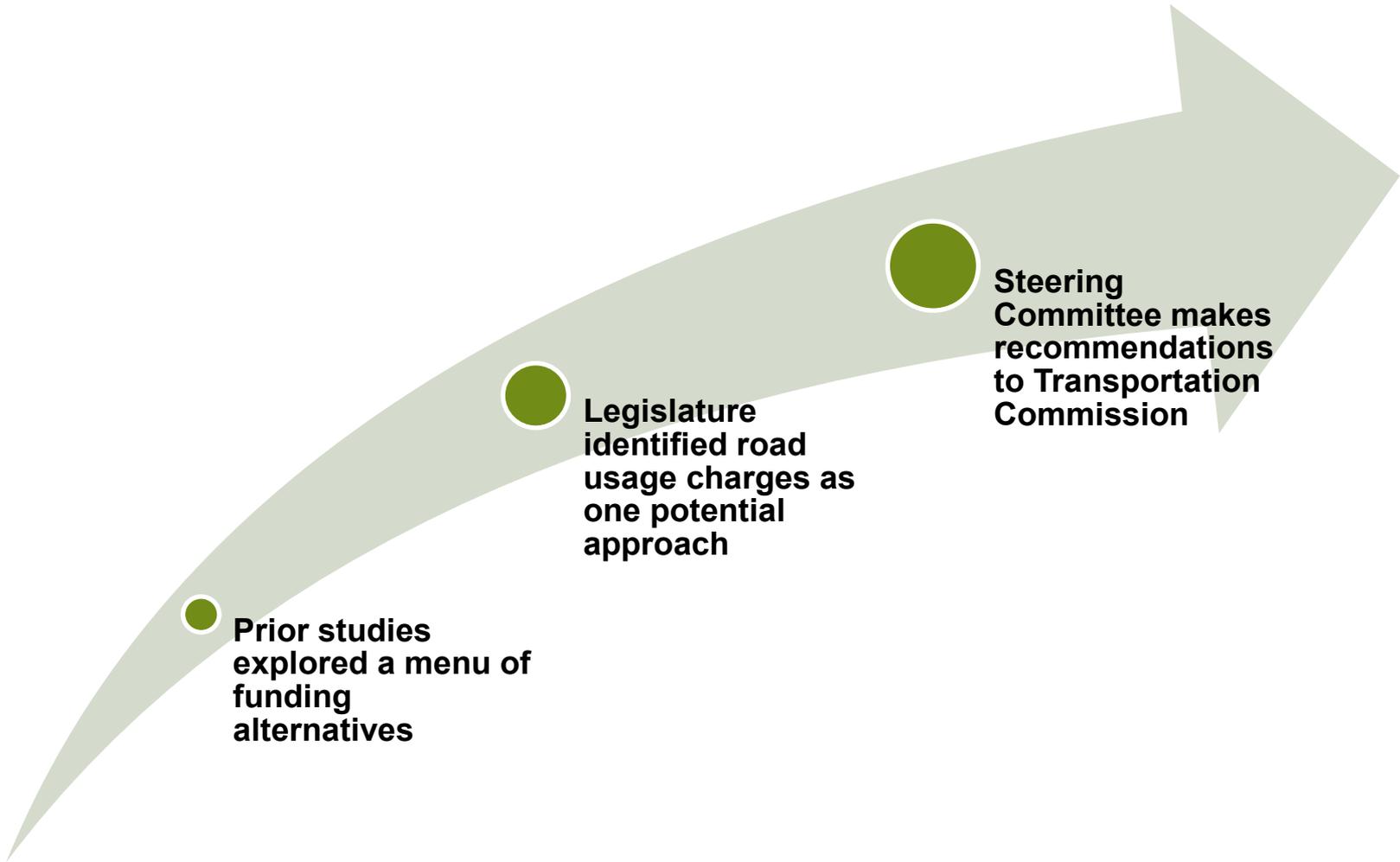
Source: ODOT – Fleet Forecast Study, OIPP, 2011



# **STEERING COMMITTEE ORGANIZATION**

# ***Implementing the Legislative Directive***

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# ***Our Charge***

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- **Legislative funding to**
  - » **Transportation Commission**
    - “Solely to determine the feasibility of transitioning from the gas tax to a road user assessment system of paying for transportation”
  - » **WSDOT**
    - “Solely to carry out work related to assessing the operational feasibility of a road user assessment, including technology, agency administration, multistate and Federal standards, and other necessary elements”
- **Both efforts combined and under guidance of Steering Committee, which will make recommendations**

# ***Implementing Our Charge***

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- **By January 2013, make recommendation to Legislature**
  - » **Is road usage charging feasible? If so...**
  - » **A research and development plan and proposed budget for the 2013-15 fiscal biennium**
    - **Examine the issue in more depth**
    - **Experiment with such a system through technology demonstrations, pilot projects, or system trials either separately or in conjunction with other states**
- **Only then might the Steering Committee make a recommendation for a specific road usage charge program**

**No decisions have been reached about whether Washington State will pursue road usage charging**

# What is “Feasible”?

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Desirable?

Feasible?

Possible?

# ***Committee Products***

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## **January 2013: Steering Committee recommendations to the Legislature and Governor**

- **Feasibility assessment...if feasible, then...**
- **Research and development plan**
- **Proposed budget for the 2013-15 fiscal biennium**

## **June 2013: Progress Report**

- **Policy Parameters**
- **Public opinion and consumer acceptance parameters**
- **Preliminary operational concepts**

# **STEERING COMMITTEE MEMBER INTERVIEWS**

# **DEFINITION OF ROAD USAGE CHARGES FOR THIS ASSESSMENT**

# Ways to Charge for Road Use

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## ● Traditional

- » Motor fuel tax
- » Tolls, HOT/Managed Lanes
- » Registration fees/taxes
- » Weight-distance taxes

## ● Nontraditional (from the U.S. perspective)

- » Congestion charges
- » Cordon and area charges
- » Vignettes (stickers or electronic)
- » Vehicles Miles Traveled or Engine Run Time

**The sole focus of this study is “general road usage charging,” which we are defining as an alternative means of paying for the road system in general**

# What “General Road Usage Charging” Is

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- **Network Wide**
  - » Entire network rather than for a single facility or corridor as with tolling
- **Charged 24/7**
  - » Like a basic utility
- **Revenue for General Highway Use**
  - » Revenue allocation would span a broad region or State, rather than a single facility or limited jurisdiction

# What “General Road Usage Charging” Is Not

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- **Congestion charging**
  - » Congestion charging is limited to congested zones or corridors in urbanized areas or other heavily traveled routes
- **Tolling**
  - » Road tolling is specific to particular facilities
- **Express lanes**
  - » Express lanes price only certain lanes

# Some Policy Objectives of General Road Usage Charging

## *Primary Objective: Revenue Generation*

### Revenue Dedicated to Highways

- New Zealand
- Washington state fuel taxes

### Revenue Dedicated to Transportation

- U.S. fuel taxes

### Revenue Partially Dedicated to Transportation

- Many European examples

### Revenue Devoted to a General Fund

- Many worldwide examples

# Some Policy Objectives of General Road Usage Charging *(continued)*

## *Secondary Objectives*

### Manage Demand/Congestion

- **Cordon/area pricing: Stockholm, London, Singapore**

### Protect Environment by Reducing Fuel Use

- **French “eco-tax”**
- **London’s “Low Emission Zone (LEZ)”**

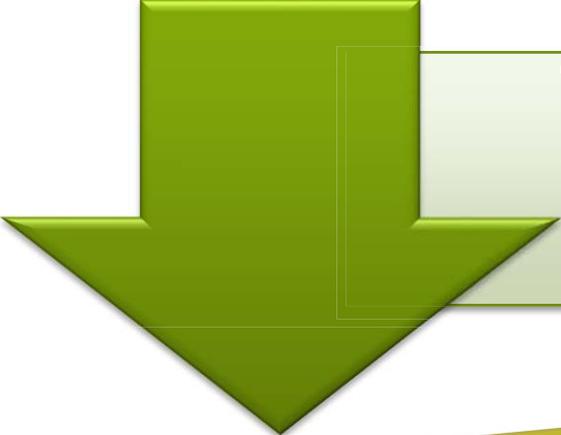
### Influence Travel Behavior and Other Decisions Such as Land Use

- **High fuel taxes in Europe**
- **Switzerland, Austria & Germany – truck tolling**

# Road Usage Charging

## *Two Basic Forms*

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### Time

- Vignettes
  - Prepaid stickers & electronic



### Distance

- Prepaid stickers
- Odometer reading
- GPS / e-hubodometer

# **DOMESTIC AND INTERNATIONAL REVIEW**

# Distance/Weight Charges on Trucks

- NZ – RUC (paper based & e-Hubodometer)
- Switzerland (Tachograph w/GPS checking)
- Austria – MAUT (DSRC)
- Germany – MAUT (GPS w/GSM)
- Czech Republic – MAUT (DSRC)
- Australia – IAP (GPS)
- Slovakia – GPS
- France – Environmental Tax (GPS)
- Sweden – ARENA Project (GPS)



# Cordon/Area Charges

- Durham – Cordon
- London – Area Charge
- Stockholm – Cordon
- Singapore – Strategic Road network
- Norway – Cordons
- Italy – Zonal Charges
- Manchester – Double Cordon
- HK – Multiple Cordons
- Copenhagen – Layered Cordons
- Helsinki – Layered Cordons



# Vignettes in Europe: Stickers and Electronic

## ● Current (Examples)

- » Austria – car use of major motorways
- » Czech Republic – car use of major motorways
- » Hungary – all motorways electronic (ANPR\*)
- » Bulgaria – all motorways (cars & trucks)
- » Romania – all motorways (cars & trucks)

## ● Future

- » Poland – cars and trucks (DSRC\*\*)
- » Belgium – cars (electronic vignette)
- » UK – trucks for motorway network

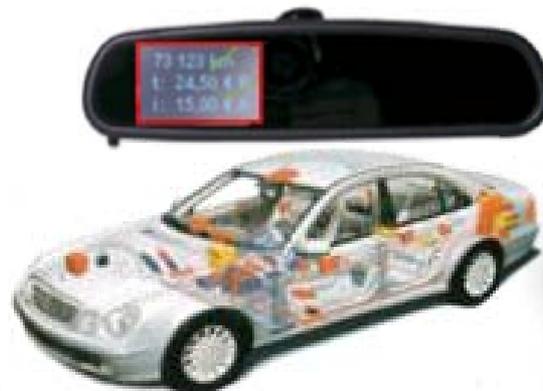
\*Automatic number plate recognition

\*\* Dedicated short range communications or “tag and reader”



# Distance Charges or Fees on Private Cars

- New Zealand (operational since 1977)
  - » Diesel and alternate fuel vehicles ONLY
  - » Paper based on Odometer or GPS/e-hubodometer by private service provider)
- Oregon
  - » Proposed legislation for high efficiency vehicles (>55mpg)



# Policy Overview of New Zealand Road User Charging (RUC)

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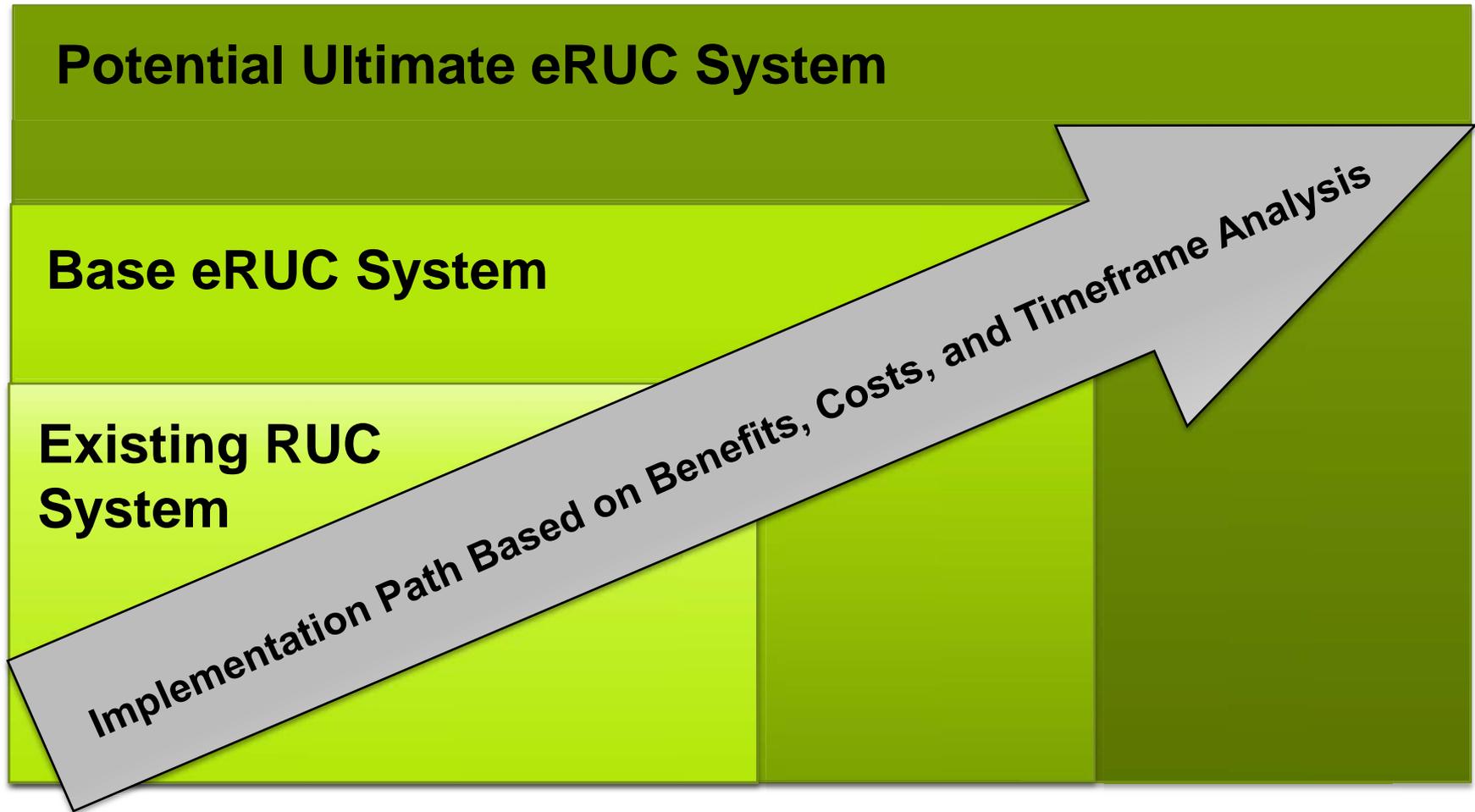
## ● Overview

- » The problem – growing VMT
- » Treasurer and Secretary of Transportation set rates
- » Revenue dedicated to Road Transport Fund
  - All RUC fees and 50% of Gas Tax
- » Land Transport Management Act changed formula

## ● RUC's role and approach

- » Applies to all diesel and alternate fuel vehicles
- » National approach – no regions
- » Truck formula: weight/mass and distance
- » Car formula: distance only
- » Rate setting: marginal social cost analysis
- » Some challenges – farming, dairy industry, logging industry

# RUC to eRUC Transition/Progression



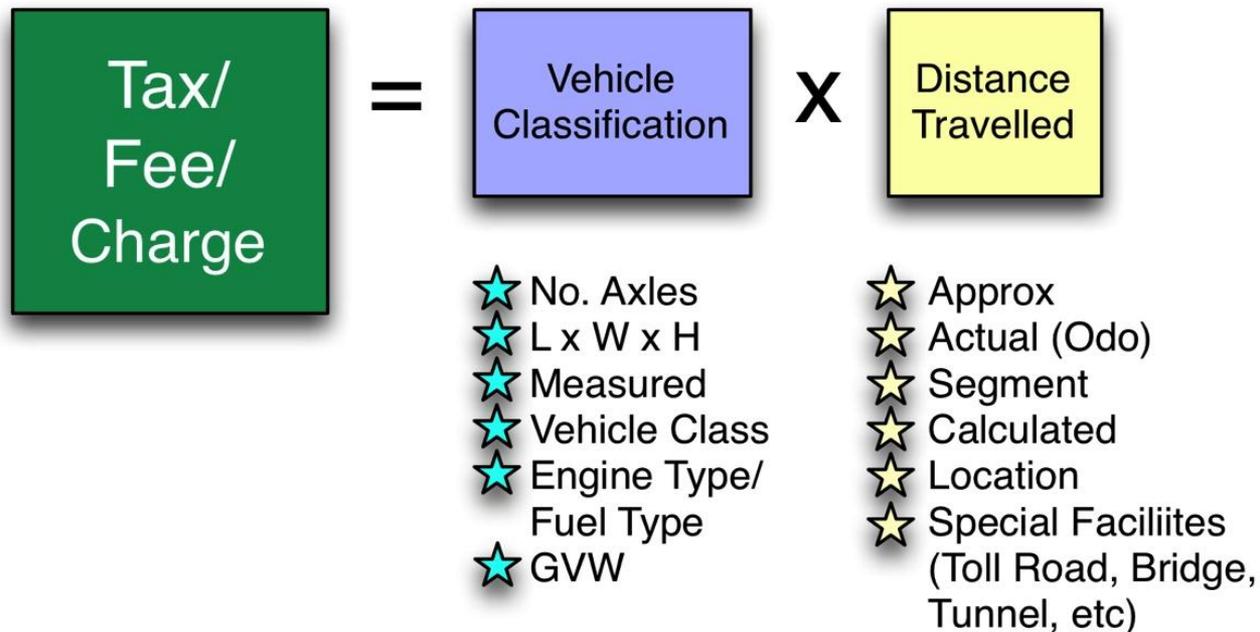
# National RUC to eRUC Strategy

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- **Need to determine long-term goals**
  - » **Best-fit technology with standards**
  - » **Open system architecture**
  - » **Interoperability to allow free roaming between providers**
  - » **Most efficient/least cost back office management system**
  - » **Advanced payment systems**
  - » **Apportion risks where they best fit**
  - » **Provider must demonstrate they can do it for less money than government (4% less)**

# eRUC Tariff can match Policy Objectives

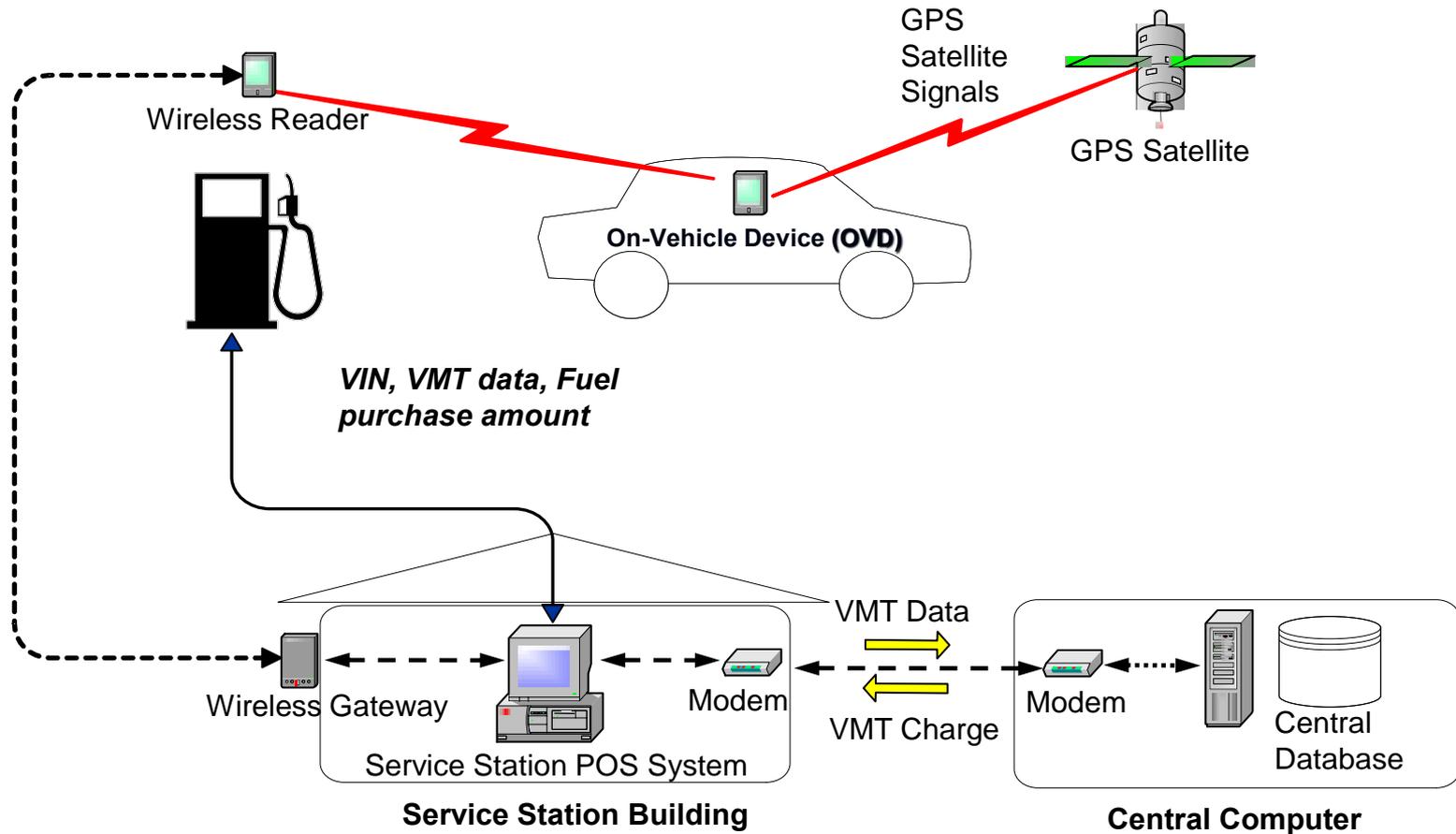
## Key Issue: What are the objectives?



## Keep It Simple

# Oregon 2006 Pilot Test

## *A Pay-at-the-Pump Model*



# Assessment of 2006 Pay-at-the-Pump Model

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- **Successful, met policy directives, yet ...**
  - » **Implementation potentially complex and expensive**
  - » **Slow technological evolution**
    - **“Stuck in time” – a closed system**
  - » **Public concerns about privacy**
    - **Required use of vehicle location technology**
  - » **Public concerns about fairness and equity**
  - » **Public concerns about a costly bureaucracy**

# New Vision In Oregon

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- **No Technology Push** – Government should not mandate or push motorists to particular technologies, especially GPS
- **Motorist Choice** – Motorists should choose from several collection methods and technologies to meet individual preferences
- **An Open System** – Allow for system technologies to evolve with marketplace capabilities and motorist preferences
- **Private Sector Account Handling** – Tap into market forces to allow the public to choose either government or private sector provision of data collection and payment services

# Global Lessons Learned

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- **Establish policy and legislative framework first – then select a solution to fit policy objectives**
- **Understand, refine, and test your objectives – be open and communicate clearly with the public and stakeholders**
- **Objectives drive the technology selection, not the other way around**
- **Tolling is NOT Road Usage Charging**
- **Cars are different than trucks**
- **“Choice” – establish choices in technology and payment streams**
- **Ensure simplicity and efficiency**

# Global Lessons Learned *(continued)*

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- **“Open market” approach and use of certified service providers reduces overall costs and ensures system sustainability**
- **Minimize exemptions and consider phase-in discounts**
- **Clearly define what will be done with the revenues – the public wants the money to be reinvested in road transport**
- **Enforcement and legal appeals process are critical – taxes have more “bite” than fees, tolls, or charges**
- **Political will is essential**

# POTENTIAL TECHNOLOGIES

# Technologies for Road Usage Charging

## ● Manual

- » Reading the odometer to record mileage, combined with enforcement by an officer
  - Examples: European vignettes and the New Zealand charge

## ● Wireless tag and reader

- » Emerged in the late 1980s for electronic tolling

## ● Location-based

- » Use GPS to determine vehicle location
- » Include stand-alone devices, smartphones, and in-vehicle telematics

## ● Non-location-based

- » Devices that record and potentially transmit data about miles traveled
- » Use information from automotive's OBDII port
- » Pay-As-You Drive insurance



# Connected Vehicle Technologies Potential Federal Mandate by 2013

- **Vehicle-to-vehicle for safety**
  - » Includes GPS location, speed, direction
  - » Safety Pilot
- **Vehicle to infrastructure for other applications**
- **Could be used to support road user charge**

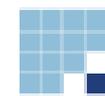


# Value-Added Services

- Any services that can be combined with RUC hardware
  - » PAYD insurance
  - » PAYD insurance intermediary – generate PAYD data to shop to insurance companies for lowest premium
  - » Automatic loyalty – loyalty points
  - » Parking payment
  - » Toll payment
- Private service providers have an incentive to offer to boost profit

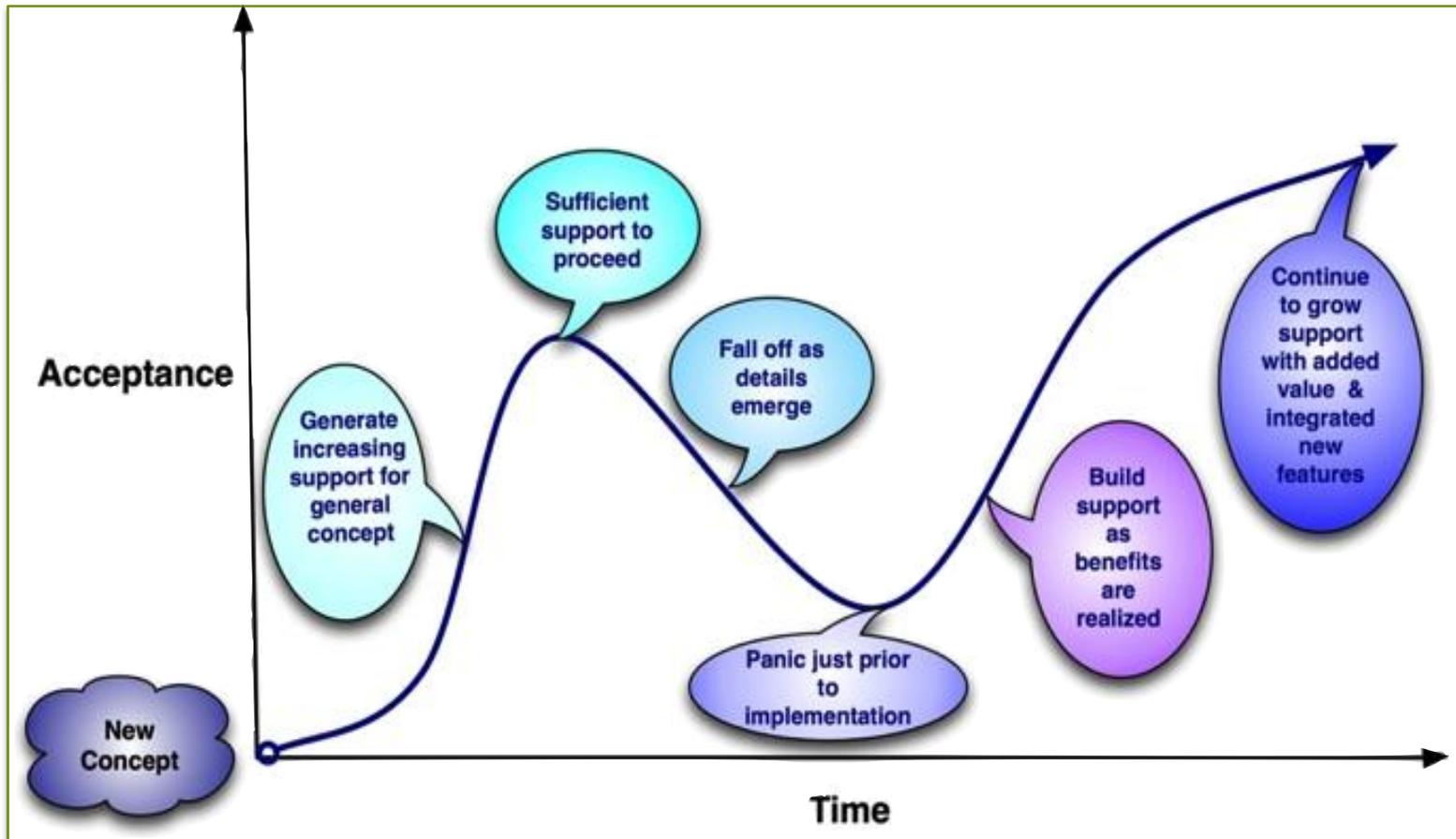


**Telanon<sup>SM</sup> Trusted Data Services**  
Maximum, No-Worry Savings From "Green" Car Insurance

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Safety | Security | Savings

# **PUBLIC ACCEPTANCE ISSUES**

# International Data on Public Acceptance



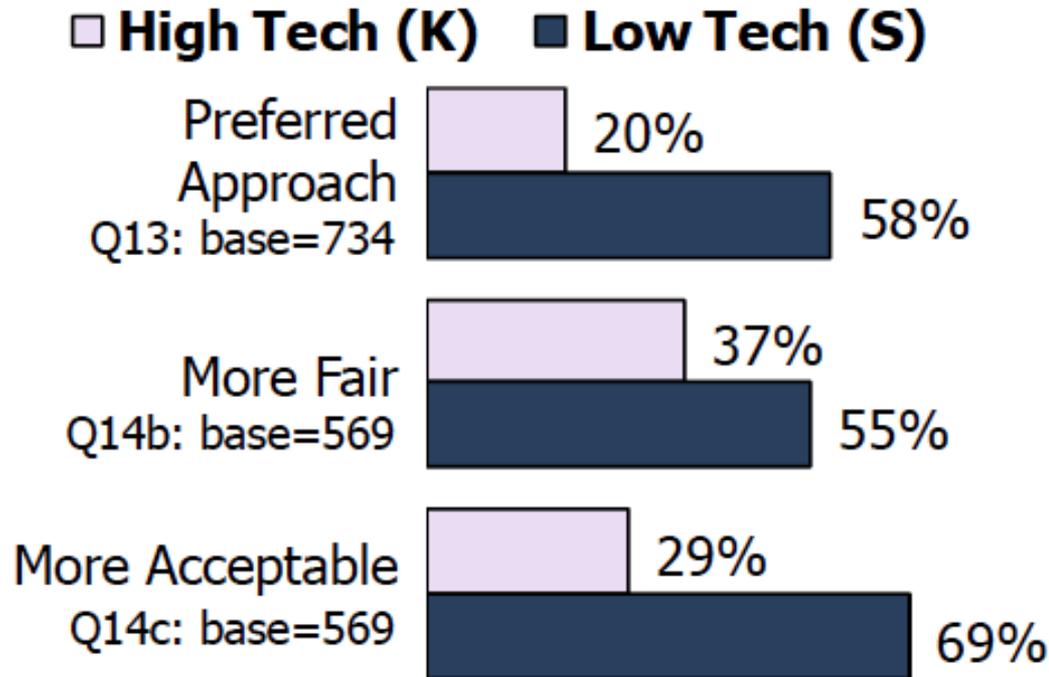
Source: Aggregation of public opinion surveys/polls on Edinburgh, London, Stockholm and Manchester

# Minnesota Public Opinion on “barriers”

	Total base=734
Fairness	36%
Costs/Administrative overhead	13%
Uncertainty of outcomes	13%
Won't work	12%
Inconvenience	11%
Loss of privacy	9%
Enforcement issues	7%
Base for fees	7%
Not needed	5%
Collection method	4%

Source: The Dieringer Research Group Inc. for Minnesota Department of Transportation, June-July 2009

# Minnesota Public Opinion on “Solutions”



“High Tech” = GPS device

“Low Tech” = Odometer reading

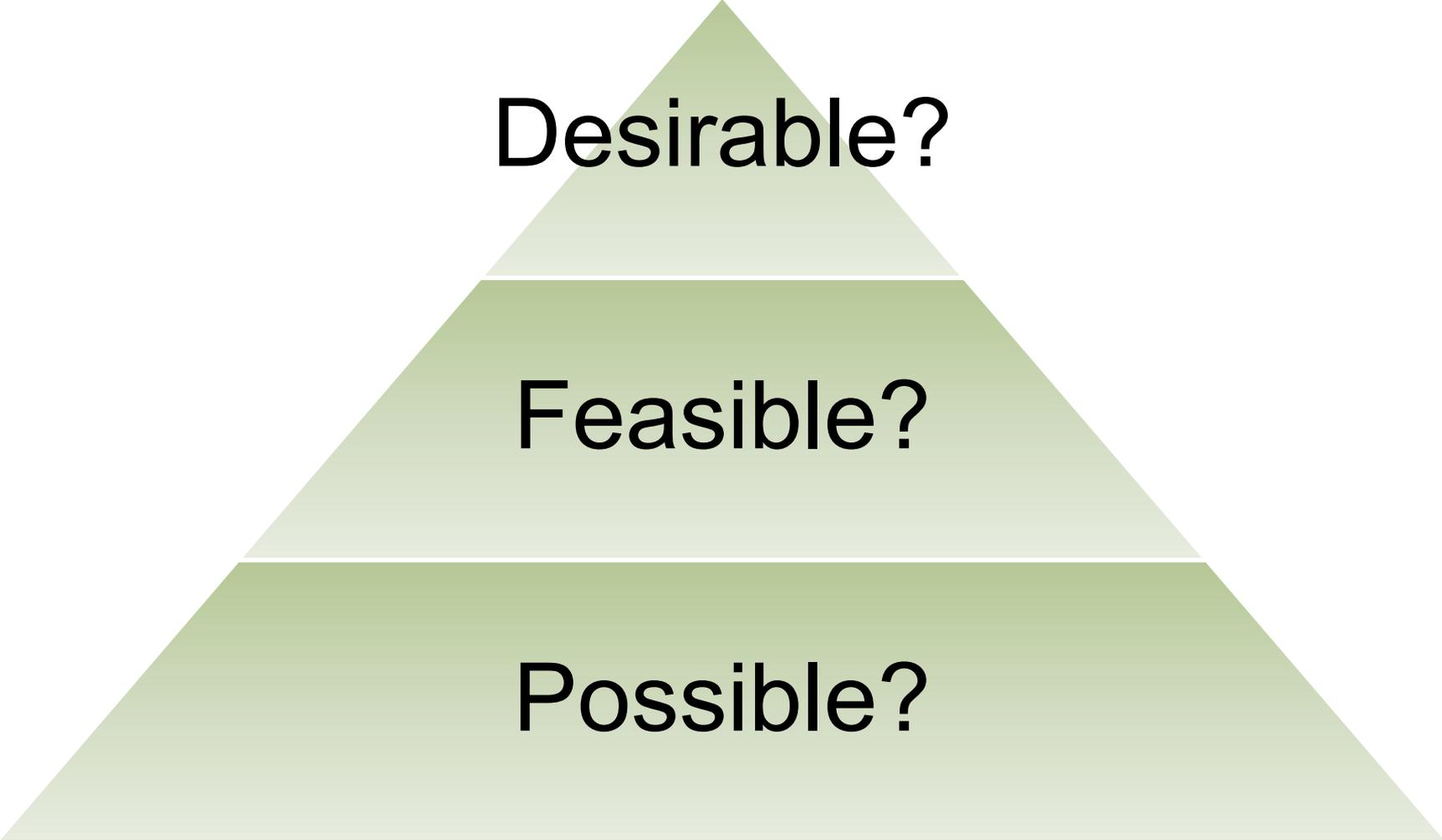
Source: The Dieringer Research Group Inc. for Minnesota Department of Transportation, June-July 2009

**FACILITATED DISCUSSION:**

**FEASIBILITY CRITERIA FOR USE  
BY THE STEERING COMMITTEE**

# What is “Feasible”?

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Desirable?

Feasible?

Possible?

# Four Discussion Questions:

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1. What do you propose as the potential purpose for the road usage charge?
2. What should our feasibility criteria be to make a decision by January 2013?
3. What do we want to know after January 2013?
4. Are there issues specific to Washington that we should consider?

# **SUMMARY OF ACTION ITEMS AND NEXT STEPS**

# For October 30 Meeting:

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1. Conceptual ideas for how to accomplish a RUC system in Washington, based on feasibility criteria discussion.
2. Steering Committee reaction and feedback to draft feasibility criteria.
3. Steering Committee discussion of the conceptual RUC, what they like/don't like

# Schedule through January 2013

Meeting	Date	Primary Topics
1	September 13, 2012	Steering Committee organization Definitions and report on road usage charge activities elsewhere Policy considerations in Washington State Potential technologies Public acceptance issues Steering Committee goal setting and criteria
2	October 30, 2012	Technology, administrative, and standards assessment Preliminary assessment of policy issues Preliminary road usage charge concepts for consideration
3	December 4, 2012	Draft Preliminary Feasibility Assessment Report Draft preliminary work plan and budget
4	January 11, 2013 <i>Note revised date</i>	Final Preliminary Feasibility Assessment Report Final preliminary work plan and budget Draft communications materials for use at Legislative hearing

# *Schedule after January 13*

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<b>Meeting</b>	<b>Date</b>	<b>Primary Topics</b>
5	Date TBD: March 2013	Refined work plan and budget based on legislative feedback Preliminary analysis or preparation for future system test or pilot
6	Date TBD: May 2013	Final analysis or preparation for pilot Draft Final Report (policy parameters, public opinion/consumer acceptance assessment, preliminary operational concepts)

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**For more information, contact:**

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