



Setting of Objectives and Demonstration Testing

D'Artagnan Consulting, LLP

Outline of Presentation

- Introduction
- Setting of Objectives
- Why perform a Demonstration / Marketing Test
- Conclusion – how it all ties together!



Answer Basic Questions

How does the system operate?

How much will it cost?

Who pays? Who is exempted? WHY?

How will the charges affect family budgets?

What will it cost me?

How will it affect business and commerce?

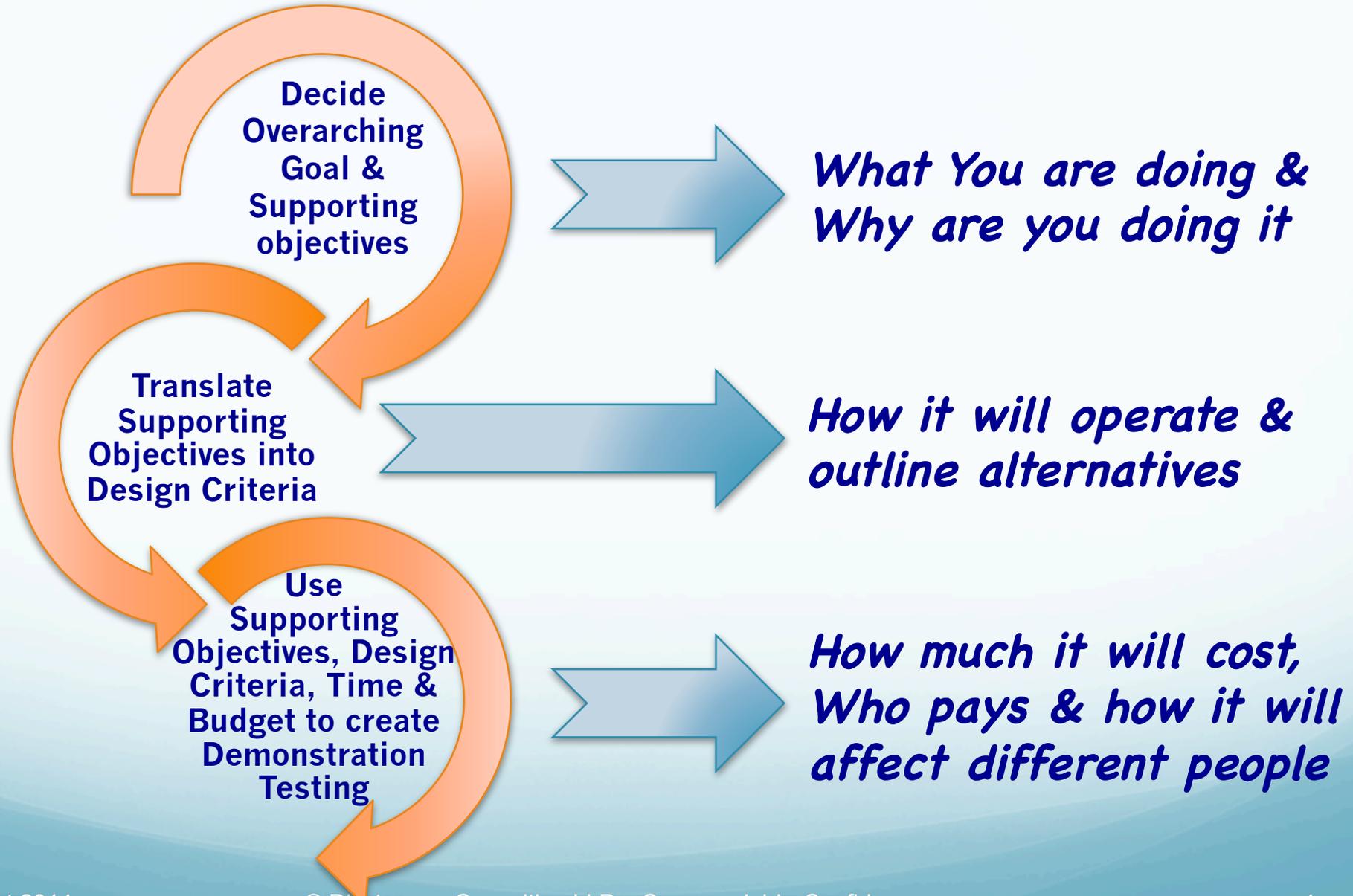
Are there any alternatives?

WHO WILL BE NEGATIVELY AFFECTED BY CHARGES?

What will Government do with the money?



How you address the Basic Questions





Setting Objectives

RUC Objectives are based on answers to the fundamental questions

■ Why introduce road usage charging at all?

- To raise revenues for transportation improvements?
- To improve the environment?
- To improve economic efficiency?
- For congestion relief?



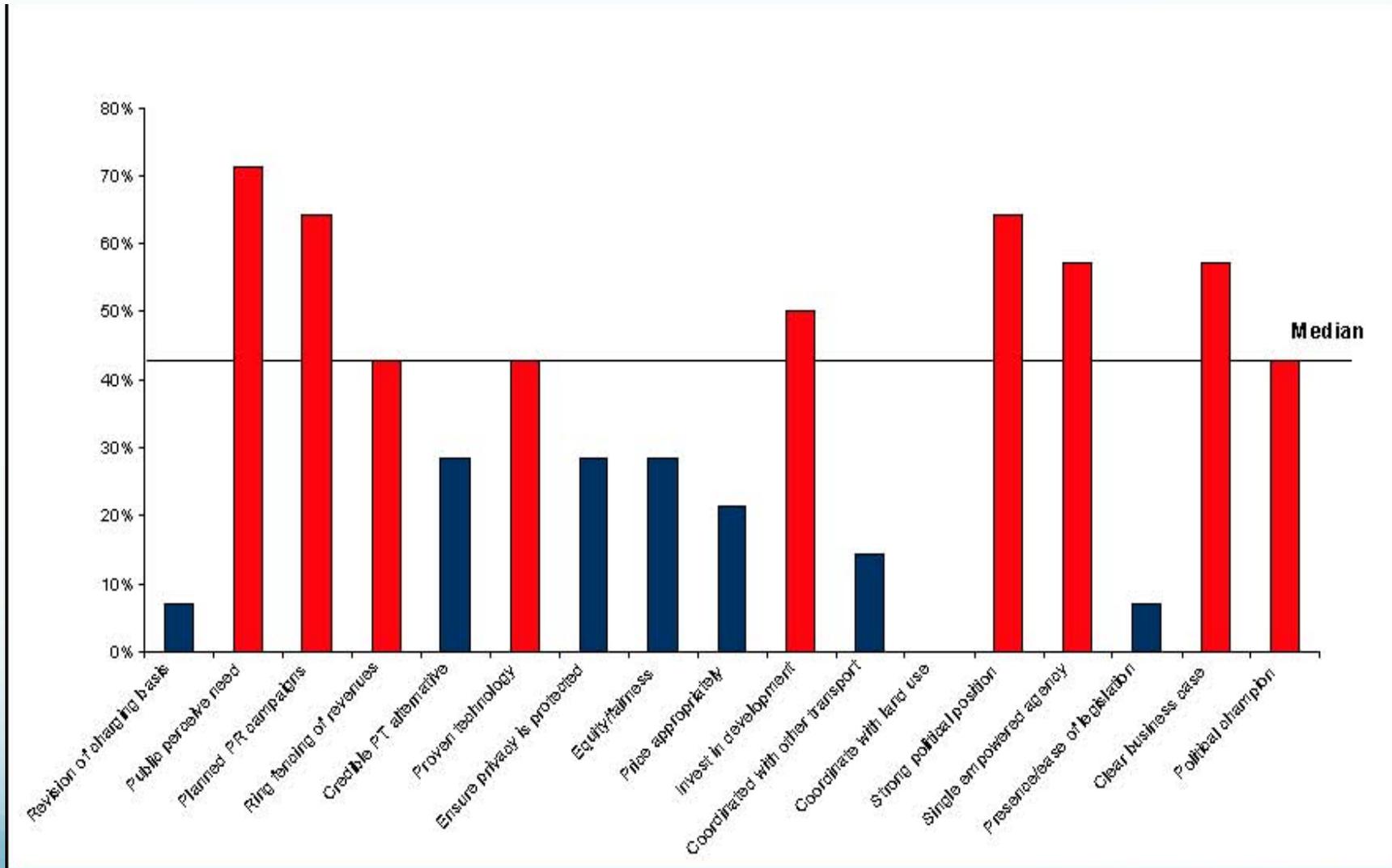
■ What are the measures of success for a road usage charging program? Which are the most important?

■ How ambitious should the project be?

- Should the project be extremely simple, e.g. replacement of the gas tax
- Should the project be fully flexible e.g. how to transition over time? What vehicles?
- Should the project be “future-proof”, enabling it to adapt quickly to future adjustment of rates to sustain revenues?
- What are the objective criteria to adjust?



Worldwide Objectives



*Reference: Booz Allen Hamilton Report to Ministry of Transport, New Zealand, "Congestion Charging Critical Success Factors", 2005

Road User Programs are more likely to be successful if objectives are clearly defined from the start

Location	Primary Objective
London	Congestion reduction & Revenue Generation
Durham	Congestion reduction
Singapore	Congestion reduction and modal shift / balance
Norway – to date	Revenue raising for infrastructure improvement
Stockholm	Congestion reduction, modal shift
Italy - Cities	Access Control – but results in reduction of congestion
New Zealand	Reduction in RUC transaction costs and Commercial Operations
Oregon	Pass RUC Legislation for sustainable revenue source
Washington	Sustainable Revenue Source to replace the gas tax
California	TBD

Any RUC project should be led by policy objectives (not technology led)

London Congestion Charging

Primary aim to answer four of Mayor's ten transport priorities:

- To reduce congestion
- To make radical improvements in bus service
- To improve journey time reliability
- To make the distribution of goods and services more reliable, sustainable and efficient.

Additionally:

- To generate revenue to improve transport
- To improve the environment



Netherlands ABvM Objectives/Tests

- The Cost of the on-board equipment must be less than €100.
- The Operating and Maintenance Costs must be less than 5% to 6% of the gross revenue collected.
- The system must be operated by commercial entities under the direction of the Treasury.
- Revenues to be swept into Treasury within 24 hours of collection.
- The revenues collected would be used for overall transportation improvements after the road network funding is satisfied.



Example: Oregon

Statutory Directives (2001)

- Reliability
- Ease of motorist use
- Enforceability
- Low capital costs
- Low relative operating costs

RUFTF Directives (2011)

- Protect motorist privacy
- No GPS Mandate
- Provide fuel tax credit
- Not charge non-Oregon road miles
- Open system
- Public private partnerships

Superordinate: TO PASS LEGISLATION!



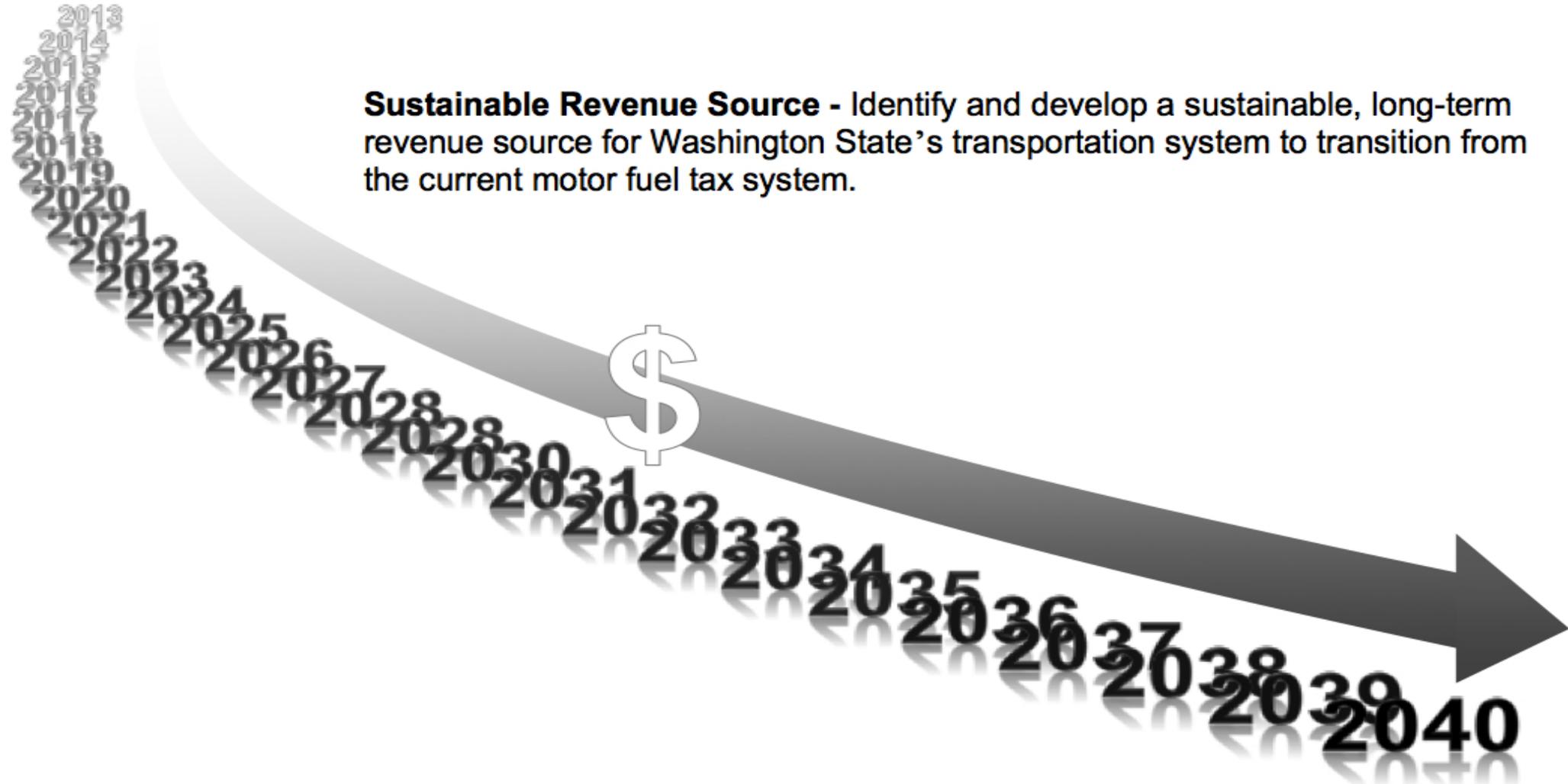
Oregon Design Principles

- Implement a **cost-effective and transparent program**
- **Provide RUC payers with choices**
- **Establish public-private partnerships**
- Implement a **government system as an alternative choice** and “provider of last resort”
- **Protect privacy**
- **Charge Oregon residents only for in-state travel**
- Provide **credits or refunds for travel on private property** within Oregon
- Provide **credits or refunds for fuel taxes paid** for vehicles that are subject to the RUC
- **Ensure efficient account management operations**
- **Base the system design on an open architecture using common standards**
- **Provide viable audit trail**
- **Promote compliance**
- Develop a system that will be **compatible with future RUC systems in other states**
- Develop a system design that does **not preclude future expansion**



Example – Washington State

Sustainable Revenue Source - Identify and develop a sustainable, long-term revenue source for Washington State's transportation system to transition from the current motor fuel tax system.



Example: Washington State Guiding Principles

Transparency	A road usage charge system should provide transparency in how the transportation system is paid for.
Complementary policy objectives	A road usage charge system should, to the extent possible, be aligned with Washington’s energy, environmental, and congestion management goals.
Cost-effectiveness	The administration of a road usage charge system should be cost-effective and cost efficient.
Equity	All road users should pay a fair share with a road usage charge.
Privacy	A road usage charge system should respect an individual’s right to privacy.
Data Security	A road usage charge system should meet applicable standards for data security, and access to data should be restricted to <u>authorized people</u> .
Simplicity	A road usage charge system should be simple, convenient, transparent to the user, and compliance should not create an undue burden.
Accountability	A system should have clear assignment of responsibility and oversight, and provide accurate reporting of usage and distribution of revenue collected.
Enforcement	A road usage charge system should be costly to evade and easy to enforce.
System Flexibility	A road usage charge system should be adaptive, open to competing vendors, and able to evolve over time.
User Options	Consumer choice should be considered wherever possible.
Interoperability and Cooperation	A Washington road usage charge system should strive for interoperability with systems in other states, nationally, and internationally, as well as with other systems in Washington. Washington should proactively cooperate and collaborate with other entities that are also investigating road usage charges.
Phasing	Phasing should be considered in the deployment of a road usage charge system.





Why Perform a Demonstration Marketing Test

Why Perform a Demonstration ?

- We learn from
 - Observation
 - Listening
 - Reading
 - Examination /Analysis / Evaluation
 - Reflection
 - Experiencing aka “doing”
- Demonstration participants “experience” the benefits of the system concept(s)
- Evaluation and analysis of the Demonstration provides “proof” of concept(s) to then formulate policy
- Longer Demonstrations will provide behaviour information and reveal new system interdependencies or seasonal variances.



Types of Demonstration / Market Testing

- “Small” Scale Demonstration
- “Medium” Scale Demonstration/Marketing Test
- “Large” Scale Demonstration / Marketing Test
- Comparison of Options



Why do a short or small Demonstration

- Prove a concept that is generally accepted
- Demonstrate a new aspect of an accepted concept
 - Systemic
 - Technological
- Reprove a concept to a new audience

EXAMPLE:

- Oregon 2012-2013 Legislative Pilot Test



Why do a Medium Demonstration / Marketing Test

- Prove a concept works
- Demonstrate a new concept and familiarize a representative group to its functioning and benefits
- Demonstrate some of the functions of a system and show that they work
- Demonstrate technology options or interoperability of multiple technology options (e.g. RUC & Tolling or Express lanes)

EXAMPLE:

- Minnesota RUC Technology testing



Why do a Large Demonstration / Marketing Test

- Prove a concept and its seasonal variances/modifications
- Demonstrate a new concept and familiarize a representative group to its functioning, benefits & value added services
- Demonstrate that all functions of a system work and reveal new system interdependencies
- Demonstrate several technology options or interoperability of multiple technology options (e.g. RUC and value added services)

EXAMPLE:

- Iowa RUC Technology testing & UK DfT TDP Field Trials



What do you do to ensure success?

A well-planned development phase entails investing appropriate amounts of time and funds to successfully take a project from inception to fruition. The steps involved are typically:

- scoping,
- options definition,
- options evaluation,
- forecasting and sensitivity testing,
- redefinition,
- risk management plan,
- functional and technical specification,
- tendering,
- contracting,
- Implementation,
- Evaluation.

Projects frequently fail because this process is truncated due to political deadlines or expediency.



What are characteristics of a small Demonstration

- Participants – 100 to 400
- Test Region – One (1)
- Time:
 - Time to Plan – 3 months
 - Time to Execute – 3-4 months
 - Total Time = 6-7 months
- Number of Technology Options: 1-4
- Number of Evaluation Surveys: 2-3



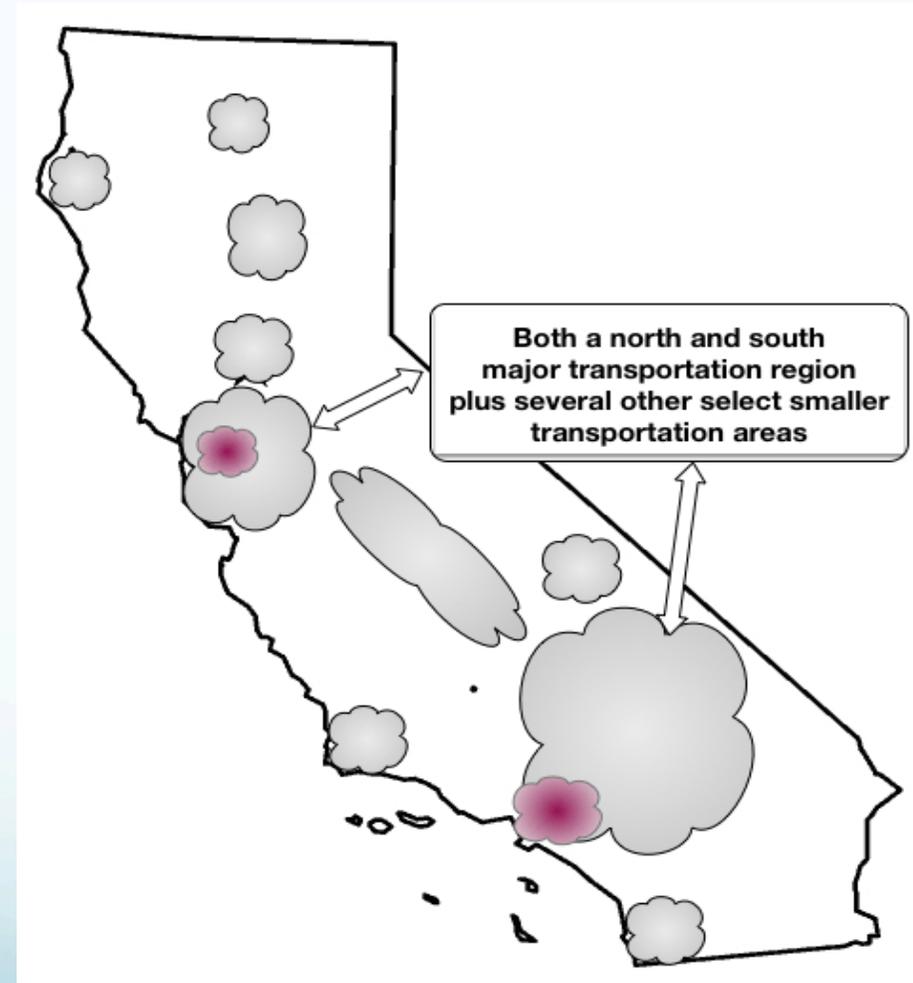
What are characteristics of a Medium Demonstration

- Participants – 1000 to 2000
- Test Region – One (1) major & multiple smaller regions
- Time:
 - Time to Plan – 6 months
 - Time to Execute – 6-7 months
 - Total Time = 12-13 months
- Number of Technology Options: 4-5
- Number of Evaluation Surveys: 3

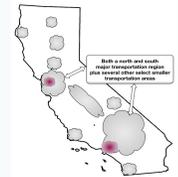
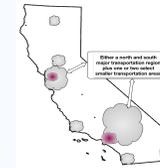


What are characteristics of a Large Demonstration

- Participants – 5,000 to 6,000
- Test Region – Two (2) major & multiple smaller regions
- Time:
 - Time to Plan – 9-10 months
 - Time to Execute – 12 months
 - Total Time = 21-22 months
- Number of Technology Options: 6
- Number of Evaluation Surveys: 4-5



Comparison of the Demonstration options

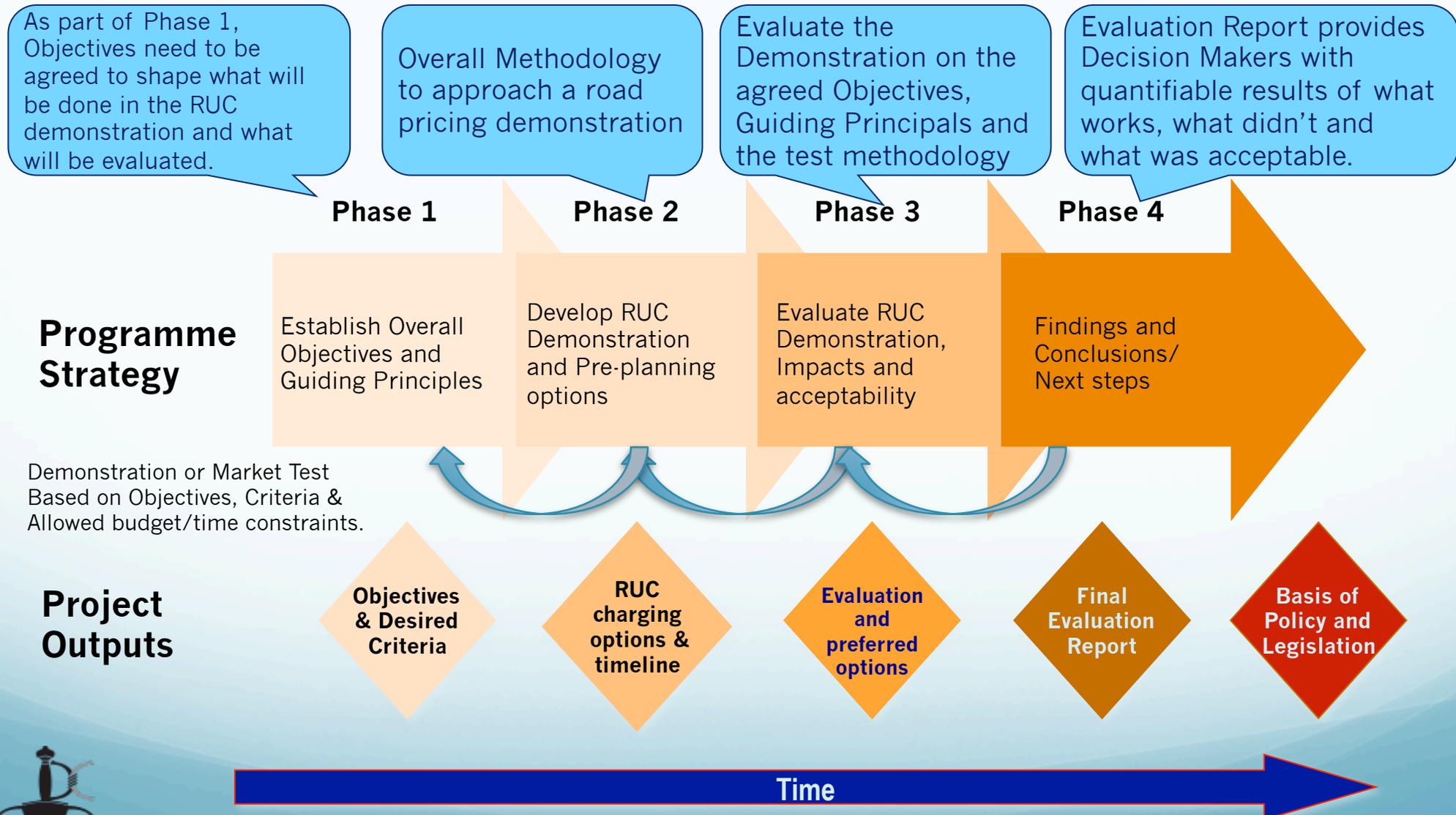


	1	2	3
Key Considerations	Small	Medium	Large
Number of Participants	400	1,600	6,000
Approximate Time to Design, Deploy, and Test (months)	3	6	9
Approximate Demonstration Duration (months)	3	6	12
Approximate Total Duration (months)	6	12	21
Geographic Distribution	One Planning Region	Multiple Smaller Regions and/or One Major Metropolitan Area	Statewide and minimum of two (2) Major Metropolitan Areas in north and South of State
Number of Available Reporting Options:	4	5	6
Basic Distance Reporting Device (DRD)	●	●	●
Advanced DRD	●	●	●
Switchable/Smartphone DRD	●	●	●
Manual Odometer Charge	●	●	●
Smartphone Odometer Read		●	●
In-Vehicle Telematics			●
Number of Evaluation Surveys	3	3	4



Conclusion

Goal - to agree on a set of Objectives that will enable the development of charging options to be evaluated as part of a Demonstration/Market Test





Thank You!

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