

# Above and beyond MAP-21: More bang for our transportation buck

James Corless, Transportation for America  
Rob Zako, University of Oregon

New  
Thinking  
for a New  
Era

**A SYMPOSIUM ON TRANSPORTATION INVESTMENT DECISION-MAKING**

**SEPTEMBER 21-22, 2016, PORTLAND, OR**



Portland State  
UNIVERSITY

Urban  
Sustainability  
Accelerator

# Outline

1. MAP-21 (Rob)
2. Exercise (James)
3. “Fails” & A Better Approach (Rob)
4. Above & Beyond (James)
5. Q & A (all)

***Warning: Interactive Late-Afternoon Session***

# Part I: MAP-21

*You probably already know this stuff.*



Transportation  
for America



UNIVERSITY OF OREGON 9/22/16 3

# MAP-21: Declaration of Policy

“Performance management will *transform* the Federal-aid highway program and provide a means to the *most efficient investment* of Federal transportation funds by refocusing on national transportation goals, increasing the *accountability and transparency* of the Federal-aid highway program, and *improving project decision-making* through performance-based planning and programming.”

# MAP-21: National Goals

1. **Safety:** To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **Infrastructure condition:** To maintain the highway infrastructure asset system in a state of good repair.
3. **Congestion reduction:** To achieve a significant reduction in congestion on the National Highway System.
4. **System reliability:** To improve the efficiency of the surface transportation system.
5. **Freight movement and economic vitality:** To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **Environmental sustainability:** To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. **Reduced project delivery delays:** To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

# MAP-21: Performance Measures

## *Highways*

- ▣ **National Highway Performance Program (NHPP):** condition of pavement & bridges; performance of Interstate System & National Highway System
- ▣ **Highway Safety Improvement Program (HSIP):** serious injuries & fatalities
- ▣ **Congestion Mitigation & Air Quality Program (CMAQ):** traffic congestion & emissions
- ▣ **National Freight Movement:** freight movement on the Interstate System

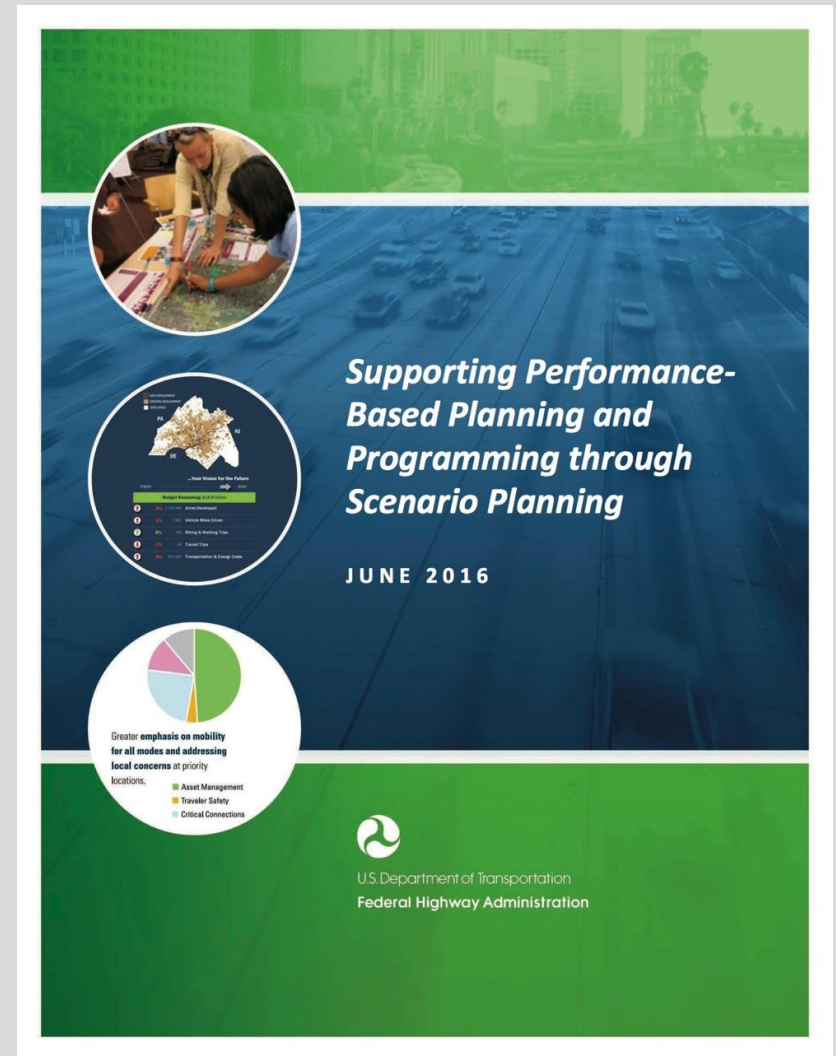
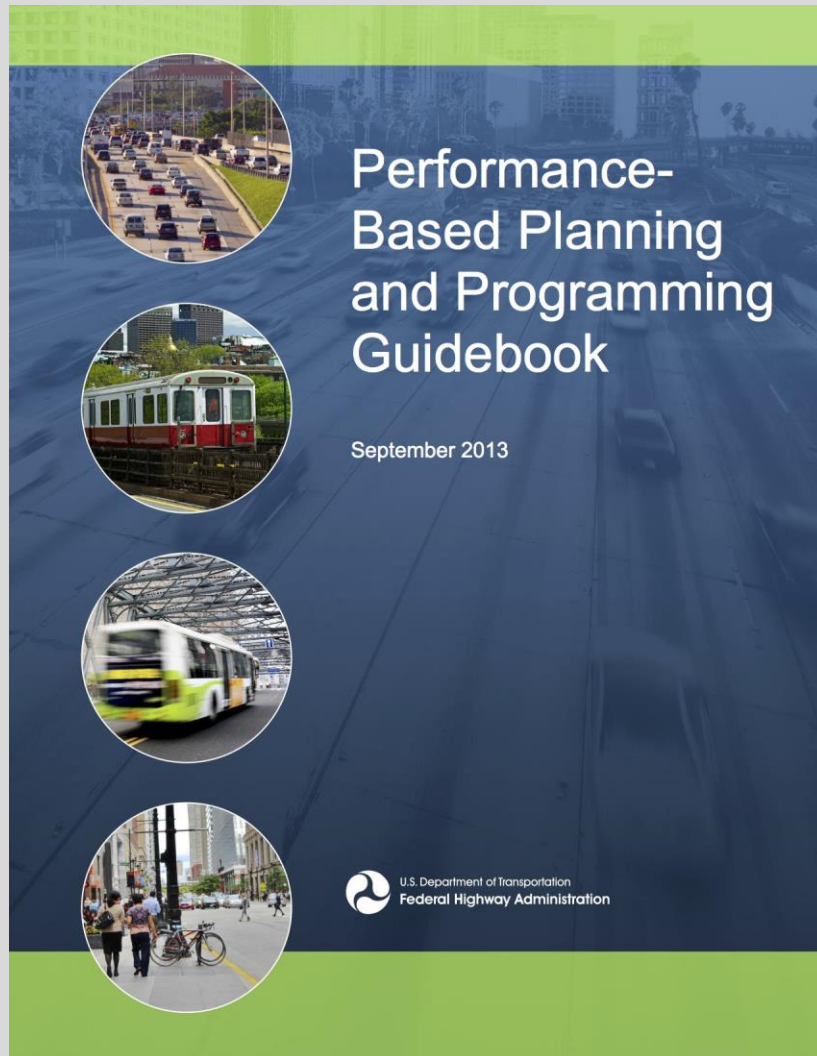
## *Public Transportation*

- ▣ **Transit Asset Management:** condition assessment
- ▣ **Public Transportation Safety Program:** safety risk management & safety assurance

# MAP-21: Responsibilities

- USDOT
  - Establish performance measures
- States
  - Set targets (within 1 year)
  - Report progress (within 4 years and then every 2 years)
- MPOs
  - Set targets (within 1 year)
  - Report progress (within 4 years and then every 2 years)

# Guidance





# History of Guidance

- 2003: FHWA & FTA. “Summary of Roundtable on System Performance Measurement in Statewide and Metropolitan Transportation Planning.”
- 2008: GAO. *Surface Transportation: Restructured Federal Approach Needed for More Focused, Performance-Based, and Sustainable Programs*. GAO-08-400.
- 2009: AASHTO. *A Primer on Performance-Based Highway Program Management: Examples from Select States*. RP-PBHB-1.
- 2010: Cambridge Systematics. *Transportation Performance Management: Insight from Practitioners*. NCHRP Report 660.  
GAO. *Statewide Transportation Planning: Opportunities Exist to Transition to Performance-Based Planning and Federal Oversight*. GAO-11-77.
- 2011: EPA. *Guide to Sustainable Transportation Performance Measures*. EPA 231-K-10-004.
- 2012: FHWA. *Operations Performance Measures: The Foundation for Performance-Based Management of Transportation Operations Programs*. FHWA-HOP-12-018.  
GAO. *Surface Transportation: Financing Program Could Benefit from Increased Performance Focus and Better Communication*. GAO-12-641.
- 2013: **FHWA. *Performance-Based Planning and Programming Guidebook*. FHWA-HEP-13-041.**
- 2014: FHWA. *Model Long-Range Transportation Plans: A Guide for Incorporating Performance-Based Planning*. FHWA-HEP-14-046.  
FHWA. *A Performance-Based Approach to Addressing Greenhouse Gas Emissions through Transportation Planning*. FHWA-HEP-14-020.
- 2016: FHWA. *Guidebook for Developing Pedestrian and Bicycle Performance Measures*. FHWA-HEP-16-037.  
**FHWA. *Supporting Performance-Based Planning and Programming through Scenario Planning*. FHWA-HEP-16-068.**

# Part II: Exercise

*Roll up your sleeves.*



Transportation  
for America



UNIVERSITY OF OREGON 9/22/16 10

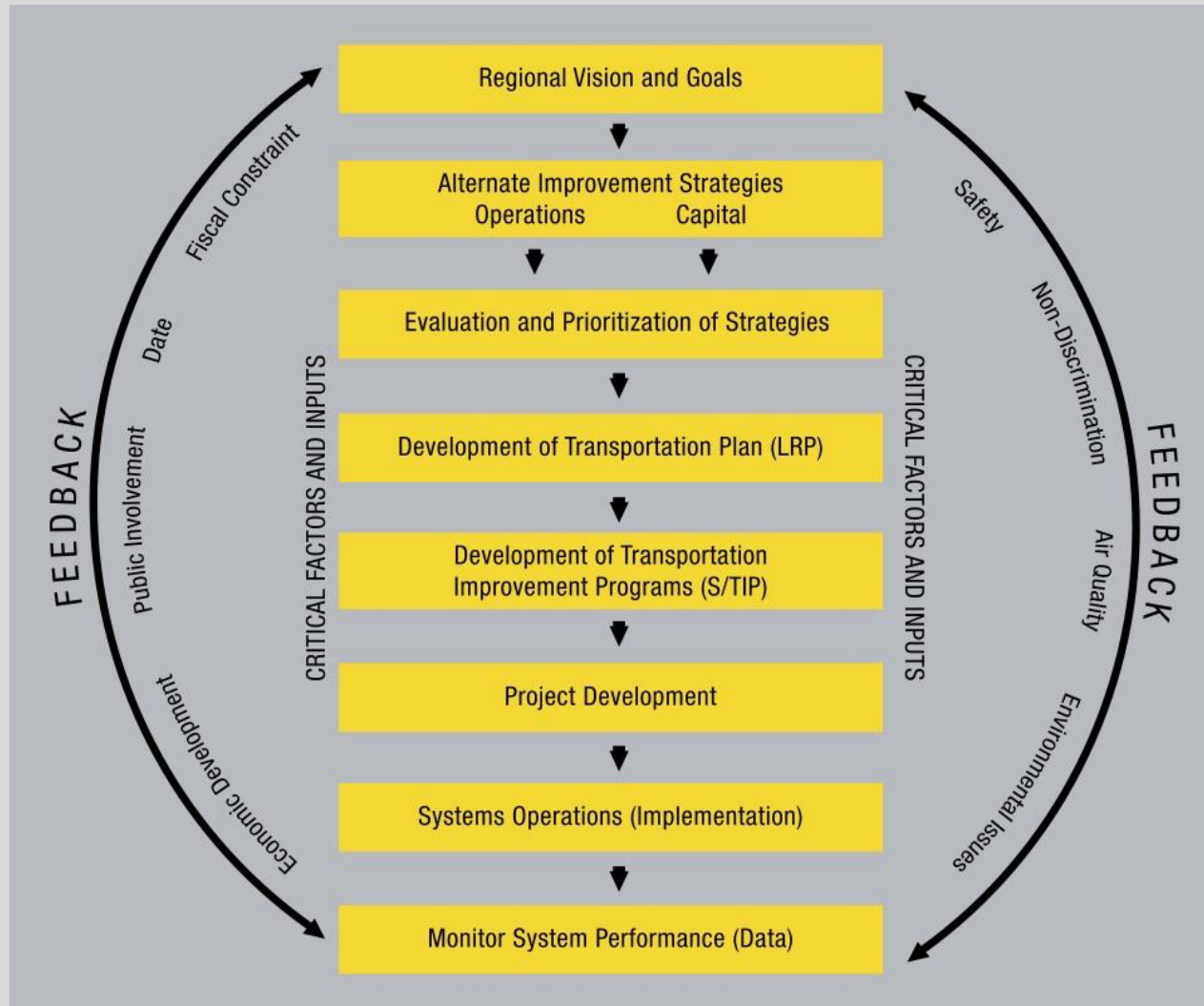
# Part III: “Fails” & A Better Approach

*Why performance measures alone  
won't set you free.*

# Performance Measurement



# Decision-Making



# Performance Measure “Fails”





# “Fail”: Puget Sound Regional Council 9/22/16

**Measure:** annual per capita vehicle miles traveled

- 2020: 18% below 2020 BAU projection
- 2035: 30% below 2020 BAU projection
- 2050: 50% below 2020 BAU projection

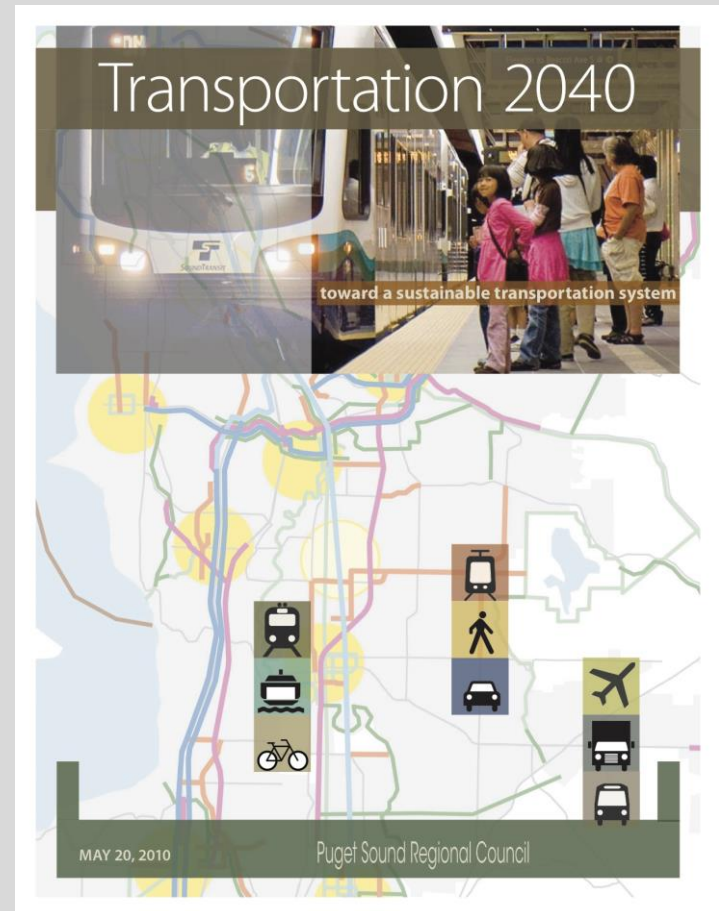
**Court Opinion:** “RCW 47.01.440 establishes statewide benchmarks to reduce annual per capita VMT. ... However, RCW 47.01.440 does not impose the statewide benchmark upon PSRC’s four-county region.”



v.



**Plan:** regional vision, strategies, actions, funding, monitoring



# “Fail”: Oregon

9/22/16

**Measure:** annual greenhouse gas emissions from all sectors

■ 2005: 20% below 1988 levels

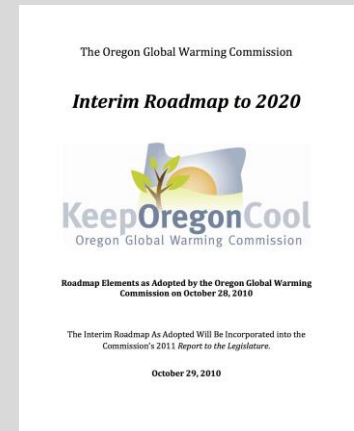
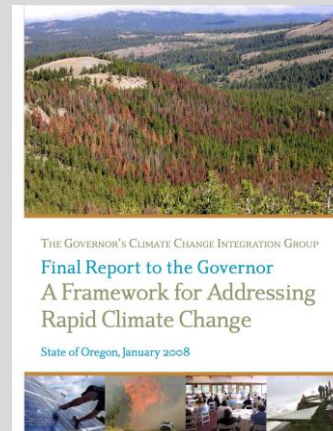
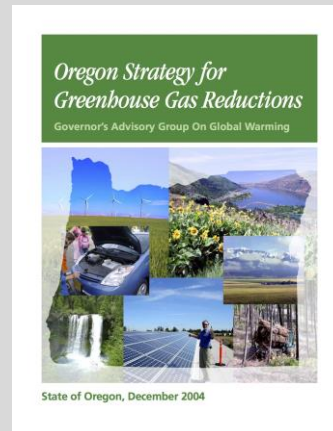
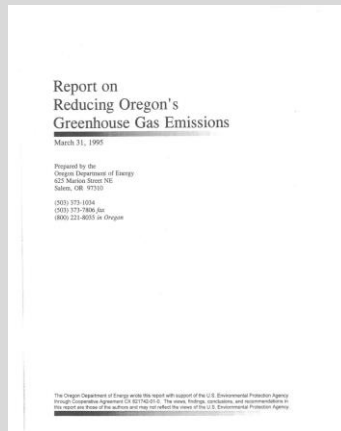
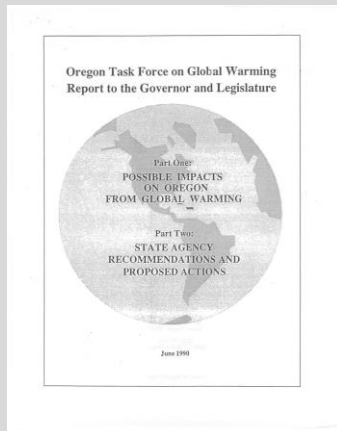
1990 **Oregon Task Force on Global Warming, Report to the Governor and Legislature**

1995 **Oregon Dept. of Energy, Report on Reducing Oregon's Greenhouse Gas Emissions**

2004 **Governor's Advisory Group on Global Warming, Oregon Strategy for Greenhouse Gas Reductions**

2008 **Climate Change Integration Group, Final Report to the Governor: A Framework for Addressing Rapid Climate Change**

2010: **Global Warming Commission, Interim Roadmap to 2020**





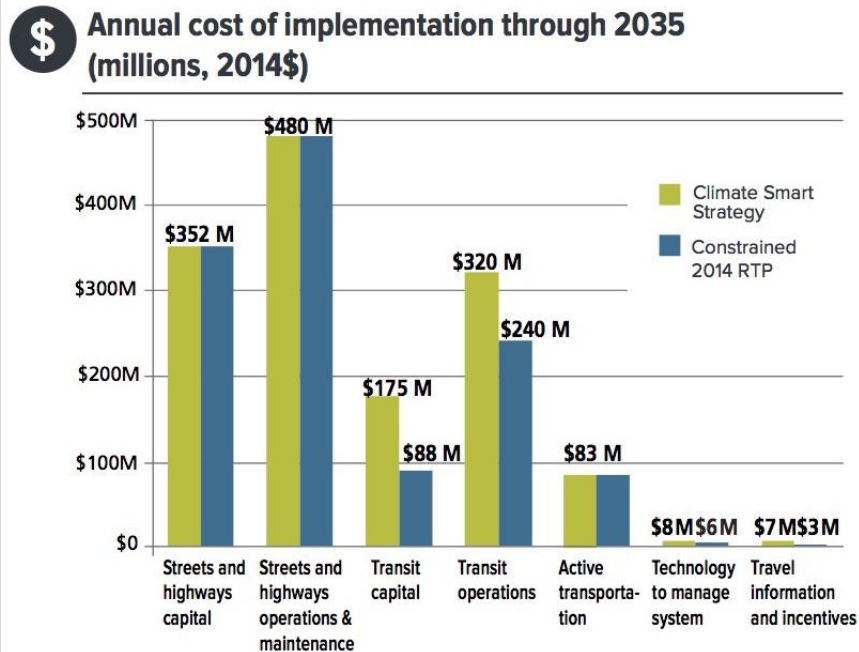
# “Fail”: Portland Metro

9/22/16

**Measure:** annual per capita greenhouse gas emissions from light vehicles

- 2010: 4.05 MTCO<sub>2</sub>e
- 2035: 1.20 MTCO<sub>2</sub>e

**Missing?** (Transit) funding!



**Plan:** policies & actions



# “Fail”: Washington State

9/22/16

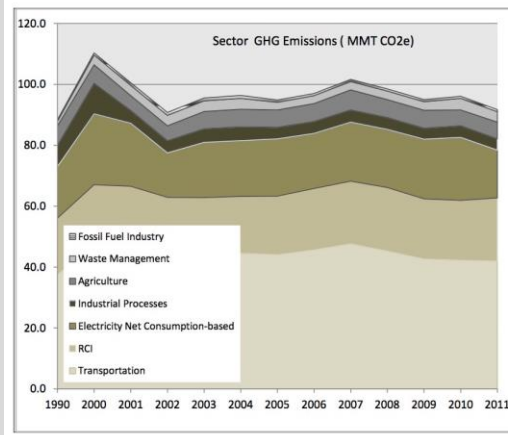
**Measure:** annual greenhouse gas emissions from all sectors

- 2020: 1990 levels
- 2035: 25% below 1990 levels
- 2050: 50% below 1990 levels

**Results:** Reductions due to:

- Closing aluminum plants
- More precipitation (hence hydropower)
- Less driving during Great Recession

Figure 1: Total annual GHG emissions (MMt CO<sub>2</sub>e) by sector from 1990 – 2011



Source: Washington ESSHB 2815 §3, Dept. of Ecology

**Plan:** green economy, all sectors, land use, cap & trade, offsets



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

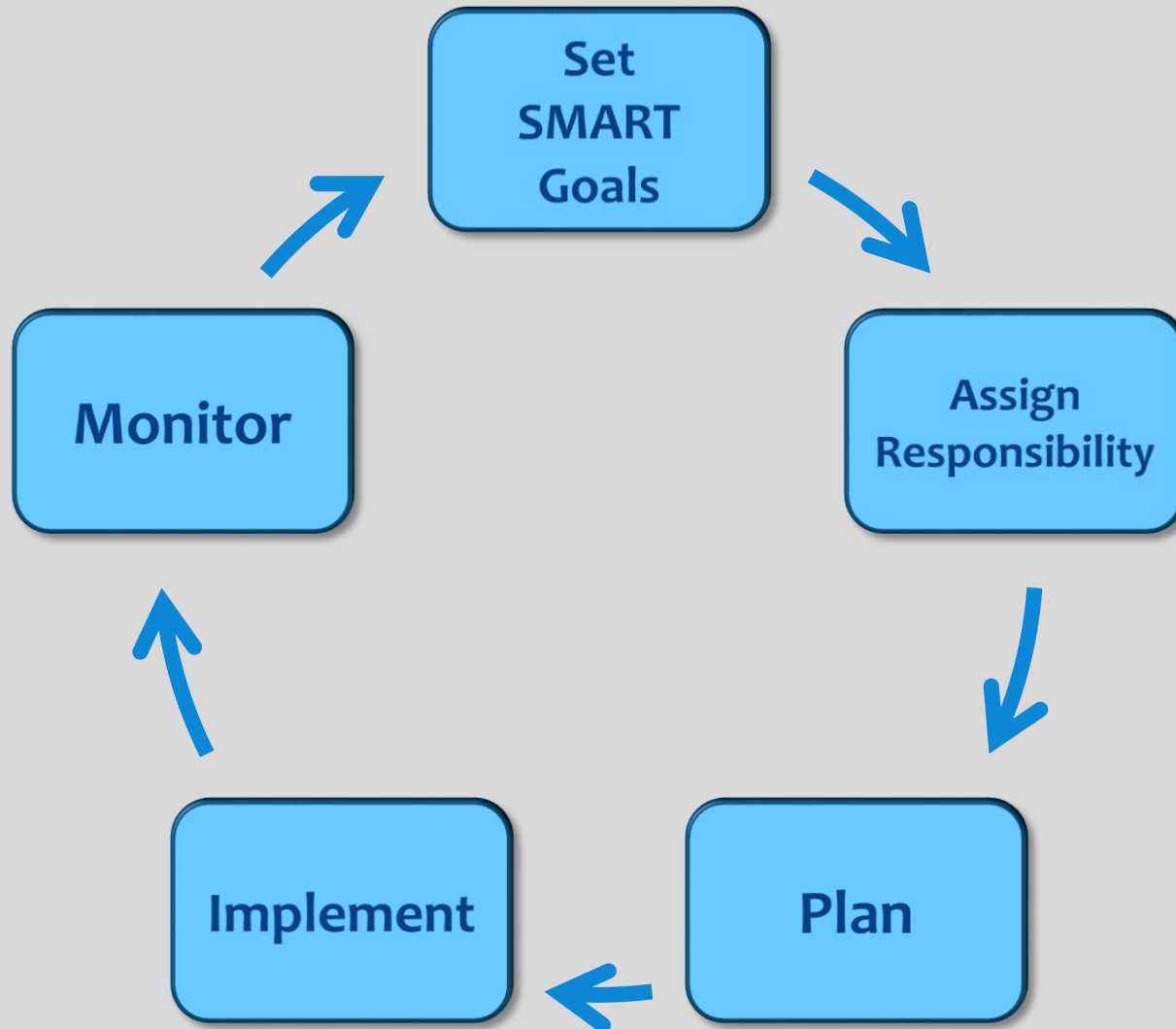
**CTED** | Community, Trade and  
Economic Development

## Growing Washington's Economy in a Carbon-Constrained World

*A Comprehensive Plan to Address the Challenges  
and Opportunities of Climate Change*

December 2008  
Publication no. 08-01-025

# A Better Approach



# A Better Approach

- ▣ **Set SMART Goals**—Specific, Measurable, Actionable, Realistic & Time-bound—and tie to feasible actions.
- ▣ **Assign Responsibility** for achieving each goal to a specific agency, and engage in setting goals matching its capabilities.
- ▣ **Plan** feasible actions that are expected to achieve the goals.
- ▣ **Implement**, and ensure the responsible agency has sufficient authority and resources to be successful.
- ▣ **Monitor** progress regularly, and revisit future goals and efforts in light of past results.

# Part IV: Above & Beyond

*Better practices beyond MAP-21.*



Transportation  
for America



UNIVERSITY OF OREGON 9/22/16 21

# Part V: Q & A

**James Corless**

Director  
Transportation for America

202-955-5543

[james.corless@t4america.org](mailto:james.corless@t4america.org)

<http://t4america.org/>

**Rob Zako, Ph.D.**

Research Associate  
University of Oregon

541-346-8617

[rzako@uoregon.edu](mailto:rzako@uoregon.edu)

<http://nitc.trec.pdx.edu/research/researcher/Zako/>