

# A Review of Health Integration into US Metropolitan Long- Range Transportation Plans

## CITIES FOR US

engaging communities and  
citizens for sustainable  
development

Patrick Singleton, MS  
Kelly J. Clifton, PhD



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Caixa Geral  
de Depósitos

# Transportation → Health



# Transportation → Health



## Traffic safety

Traffic collisions cause injuries and fatalities.



## Air quality

Motor vehicle emissions lead to respiratory illnesses.



## Physical activity

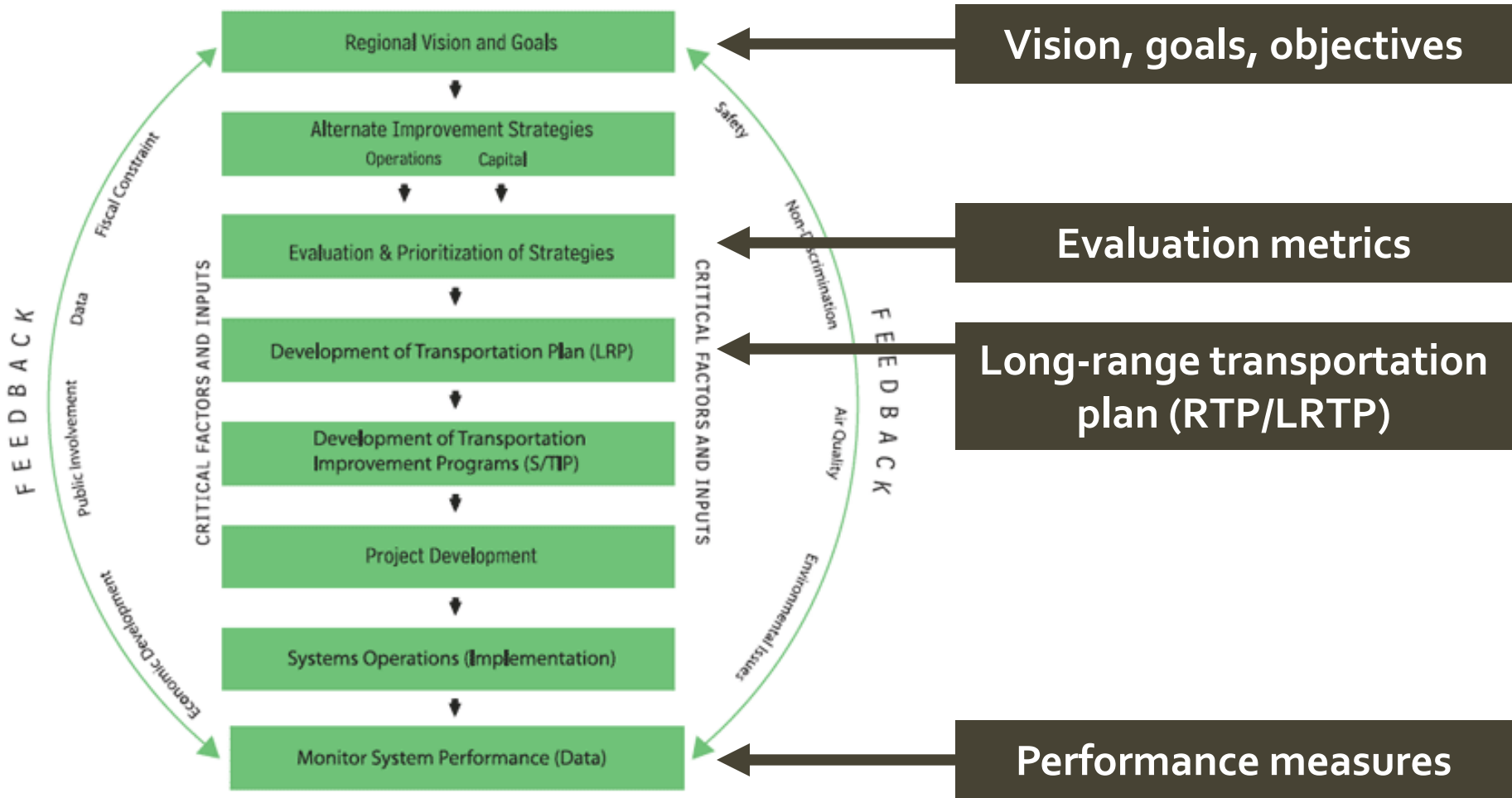
Walking/bicycling help to mitigate obesity.



## Accessibility

Transport affords access to education, employment, food, health care, social services, and recreation.

# Long-range planning



<http://www.planning.dot.gov/documents/briefingbook/bbook.htm>

# “Ideal” planning process

**A plan’s guidance statements would reflect all critical collective regional goals and objectives (including health);**

**Each of those goals would be assessed by specific performance measures, with support from data and analytical tools like travel models.**

- **What is the state of the practice?**
- **How is health framed in guidance statements?**
- **How is health represented in performance measures?**
- **How are guidance statements connected to performance measures?**
  - **How are physical activity statements & measures related to modeling capabilities for walking and bicycling?**

- **Selected 25 large urban regions**
  - Population > 1 million
  - Diversity in geography
  - Diversity in walk/bicycle modeling
- **Gathered long-range transportation plans**
  - Plan years 2010–2015
  - Horizon years 2035–2045

# 25 large MPO regions





## Content analysis

- **Health-related transportation impacts**
  - Traffic safety, air quality, physical activity, accessibility
- **Guidance statements**
  - Vision, goals, objectives, policies, etc.
- **Performance measures**
  - Measures, indicators, targets, etc.



# Health concerns in LRTPs

MPO Region	Atlanta, GA	Baltimore, MD	Boston, MA	Chicago, IL	Cleveland, OH	Denver, CO	Detroit, MI	Houston, TX	Kansas City, MO	Las Vegas, NV	Los Angeles, CA	Memphis, TN	Miami, FL	Milwaukee, WI	Nashville, TN	New York, NY	Orlando, FL	Phoenix, AZ	Pittsburgh, PA	Portland, OR <sup>a</sup>	San Antonio, TX	San Francisco, CA	Seattle, WA	St. Louis, MO	Washington, DC
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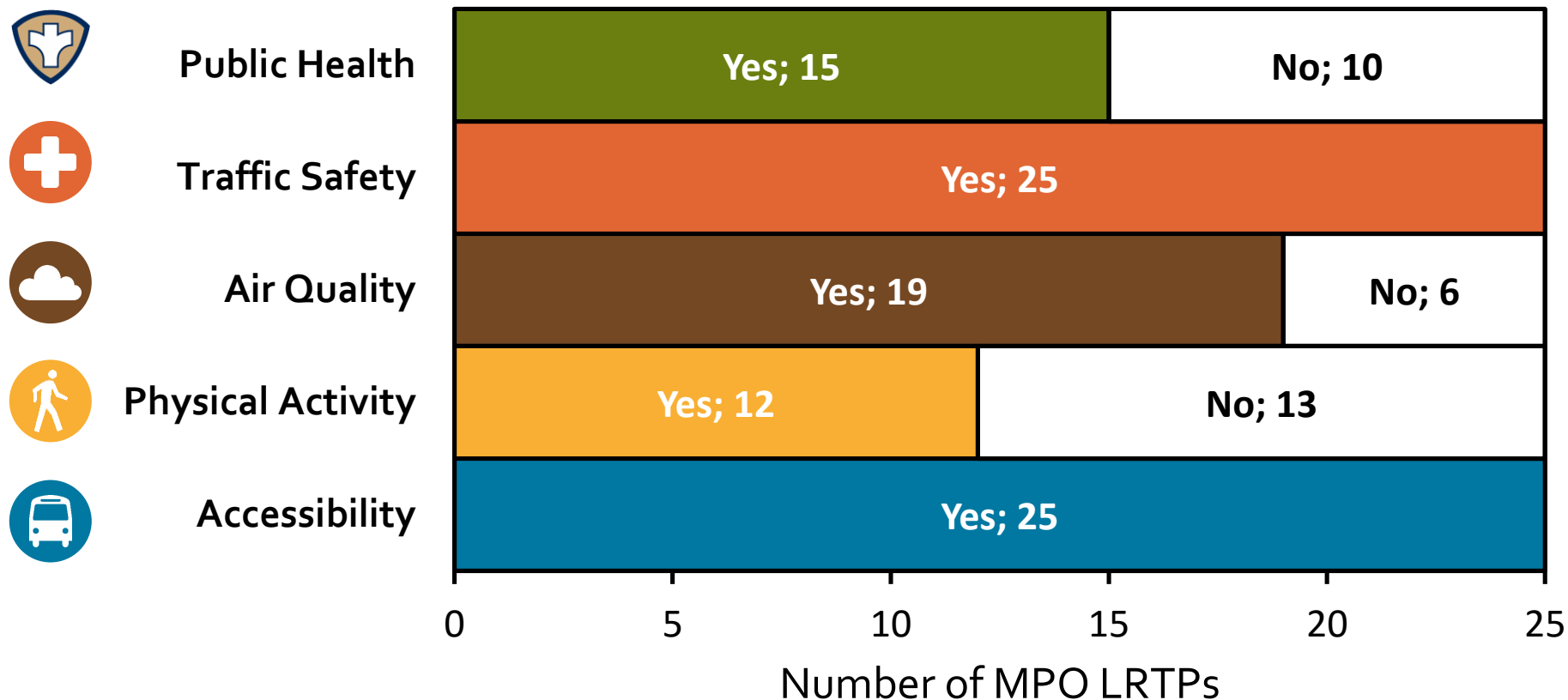
## Guidance Statements

<i>General health</i>	✓	✓	✓	✓	✓			✓	✓		✓	✓			✓	✓			✓	✓					15	60%	
<i>Safety</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25	100%
<i>Air</i>		✓	✓		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓	19	76%	
<i>Activity</i>	✓	✓	✓			✓	✓	✓		✓			✓						✓		✓	✓	✓		12	48%	
<i>Access</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25	100%	

## Performance Statements

<i>General health</i>	✓		-		-	-		✓	-	✓			-	-	-			-			✓	✓		-	5	31%	
<i>Safety</i>	✓	✓	-		-	-	✓	✓	✓	-	✓	✓	✓	-	-	-	✓	✓	-	✓	✓		✓	-	14	88%	
<i>Air</i>	✓	✓	-		-	-	✓	✓	✓	-	✓	✓	-	-	-	✓			-	✓	✓	✓	✓	-	12	75%	
<i>Activity</i>	✓		-		-	-		✓	✓	-	✓			-	-	-			-	✓		✓	✓	✓	-	8	50%
<i>Access</i>	✓	✓	-	✓	-	-	✓	✓		-	✓	✓	✓	-	-	-	✓	✓	-	✓	✓		✓	-	14	88%	

## Guidance Statements



## Guidance Statements



**Public Health**

"[S]afe, comfortable and convenient options that support...physical activity, and minimize transportation-related pollution" (Portland).



**Traffic Safety**

"Provide a safe and secure transportation system for all users" (St. Louis).



**Air Quality**

"Support...[a] combination of technological improvements and transportation strategies to reduce air pollution" (Washington).



**Physical Activity**

"[C]onnect the places where people live, learn, work, shop and play with safe and convenient options for walking and bicycling" (Kansas City).



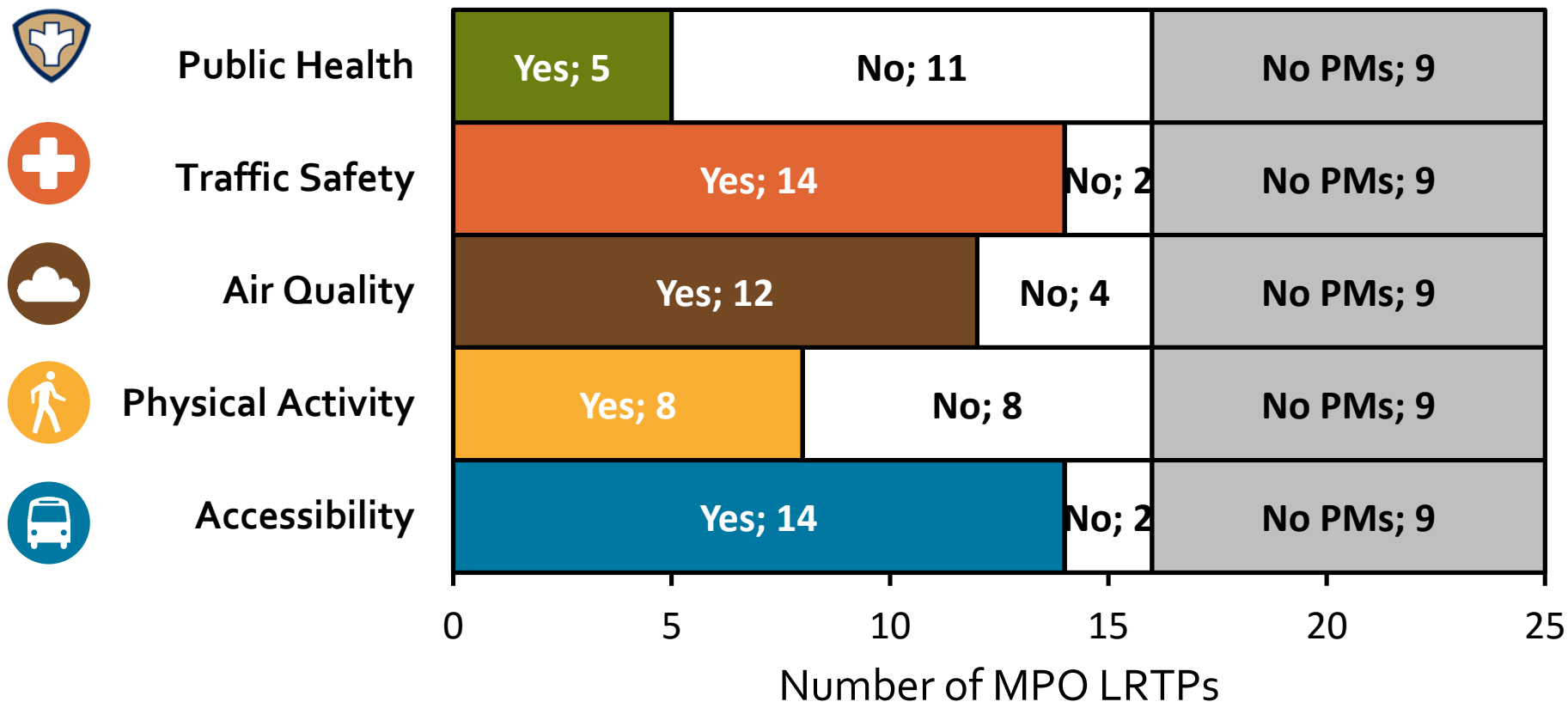
**Accessibility**

"Improve access to and within key activity population and employment centers" (Memphis).

0 5 10 15 20 25

Number of MPO LRTPs

## Performance Measures



## Performance Measures



**Public Health**

Obesity rate (Atlanta). Average body mass index (Seattle).

Yes; 5

No; 11

No PMS; 9



**Traffic Safety**

Annual traffic injury and fatality totals and rates (Kansas City).

Yes; 14

No; 2

No PMS; 9



**Air Quality**

Tons of VOC, NO<sub>x</sub>, CO<sub>2</sub>, and PM<sub>2.5</sub> emissions (Baltimore).

Yes; 12

No; 4

No PMS; 9



**Physical Activity**

Daily minutes of walking/bicycling for transportation (San Francisco).

Yes; 8

No; 17

No PMS; 9



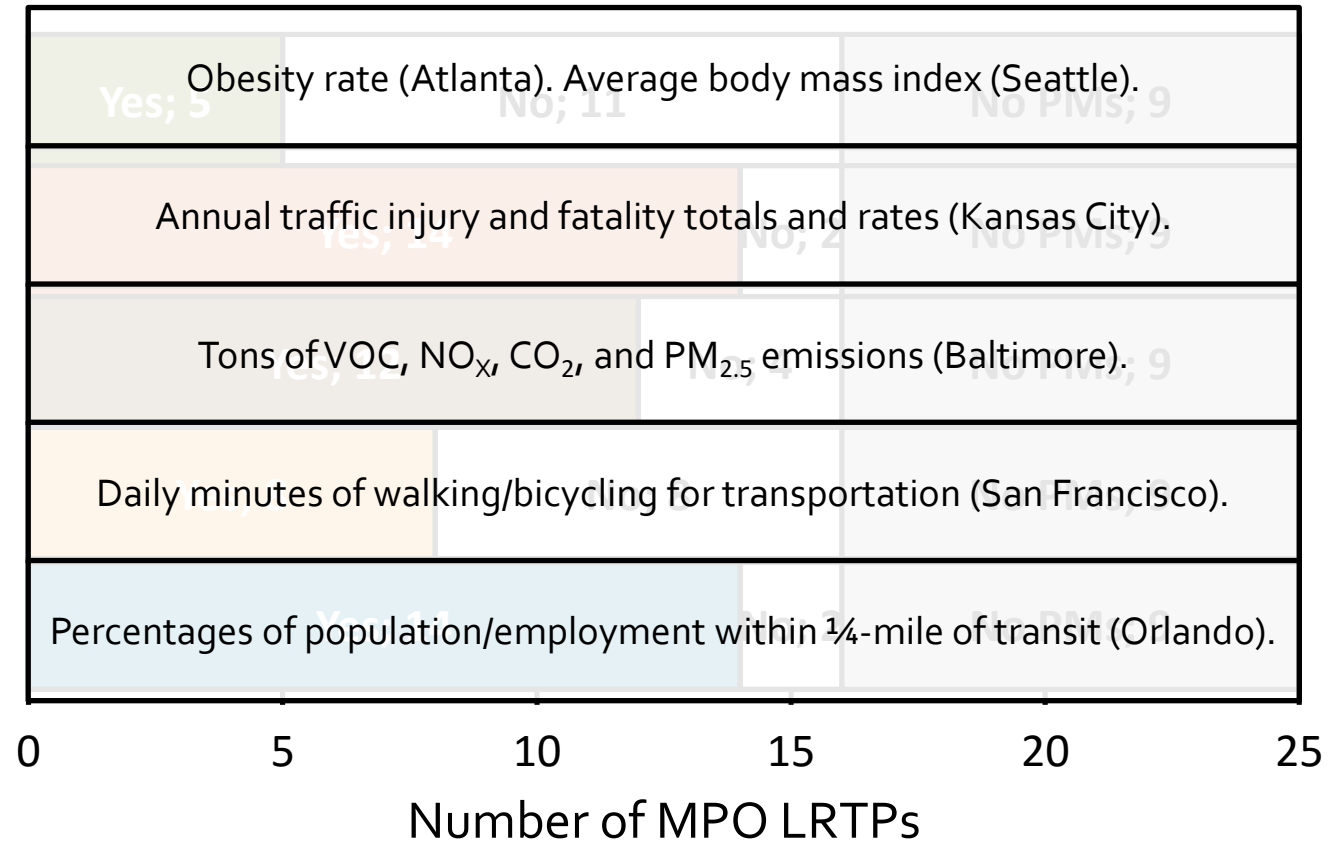
**Accessibility**

Percentages of population/employment within 1/4-mile of transit (Orlando).

Yes; 14

No; 11

No PMS; 9



# Summary of findings

- **Incomplete views of transportation → health**
- **Most plans guided by safety and accessibility**
- **Air quality concerns may be under-represented**
- **Regional plan policy foci guided by national policy**
- **Performance measures ~ related to policy guidance**
- **Walk/bicycle modeling not strongly linked to health goals or measures within plans**

# Potential strategies

- **Adopt health-related guidance statements**
- **Adopt health-related performance measures**
- **Advance travel modeling and health impact assessment methods**
- **Improve public participation and environmental justice efforts**
- **Create partnerships with health agencies**



# Questions?



**Patrick Singleton**     [patrick.singleton@pdx.edu](mailto:patrick.singleton@pdx.edu)

**Kelly Clifton**                     [kclifton@pdx.edu](mailto:kclifton@pdx.edu)