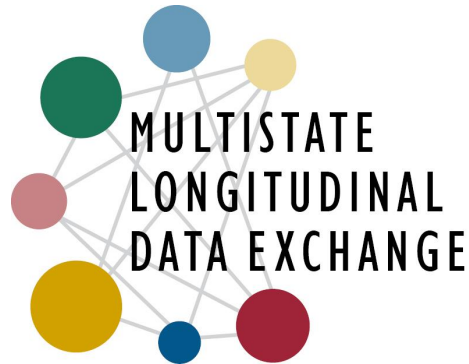# Linking Data Across States: The Multistate Longitudinal Data Exchange

IPEDS Coordinator Workshop and State Data Conference
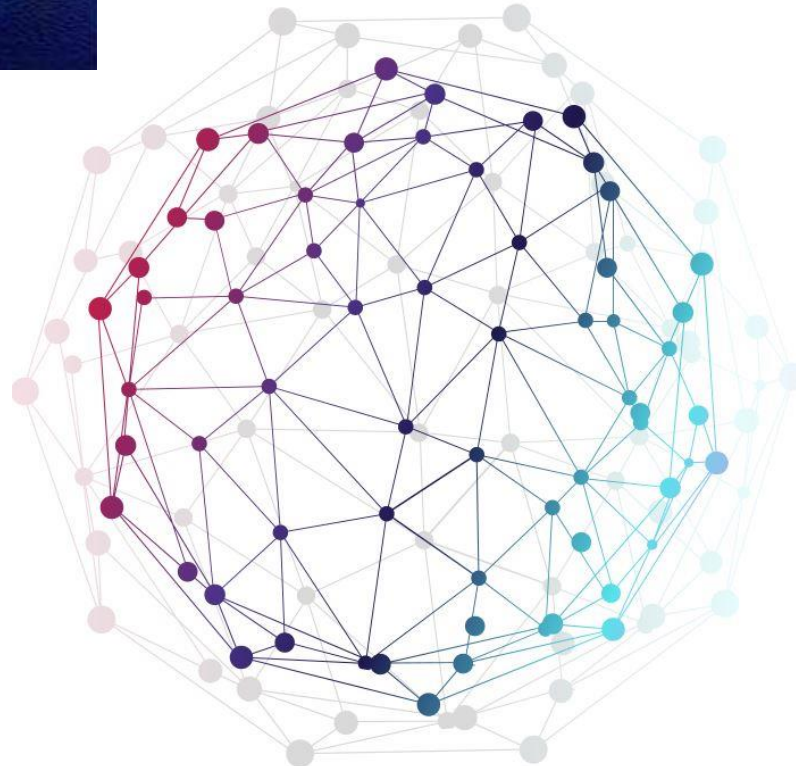
April 26, 2016 – Arlington, VA

Overview

- Background and need
- The data environment
- The MLDE
  - Results so far
  - Expansion plans
  - Envisioned uses
  - Limitations
- Questions and Discussion

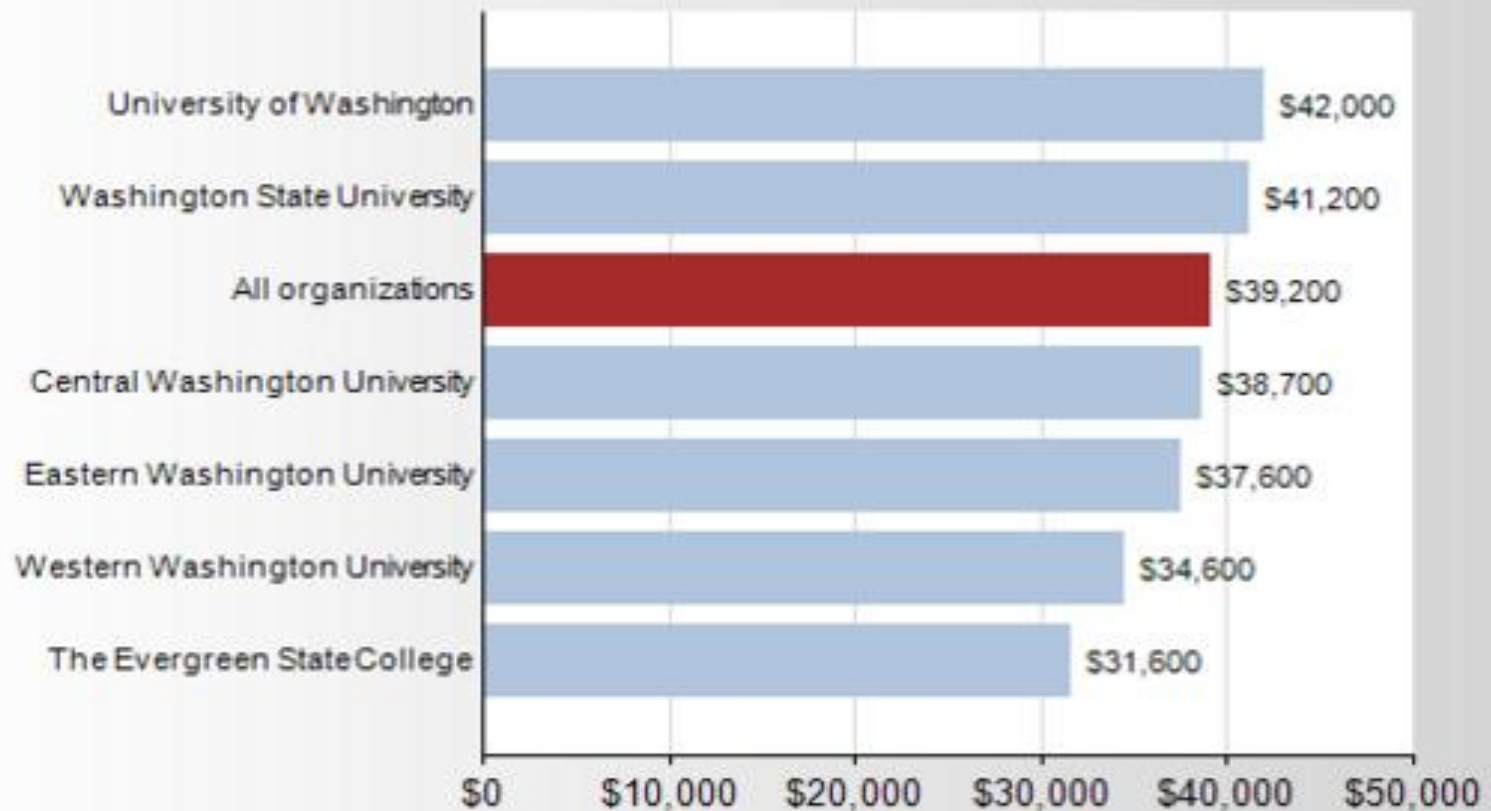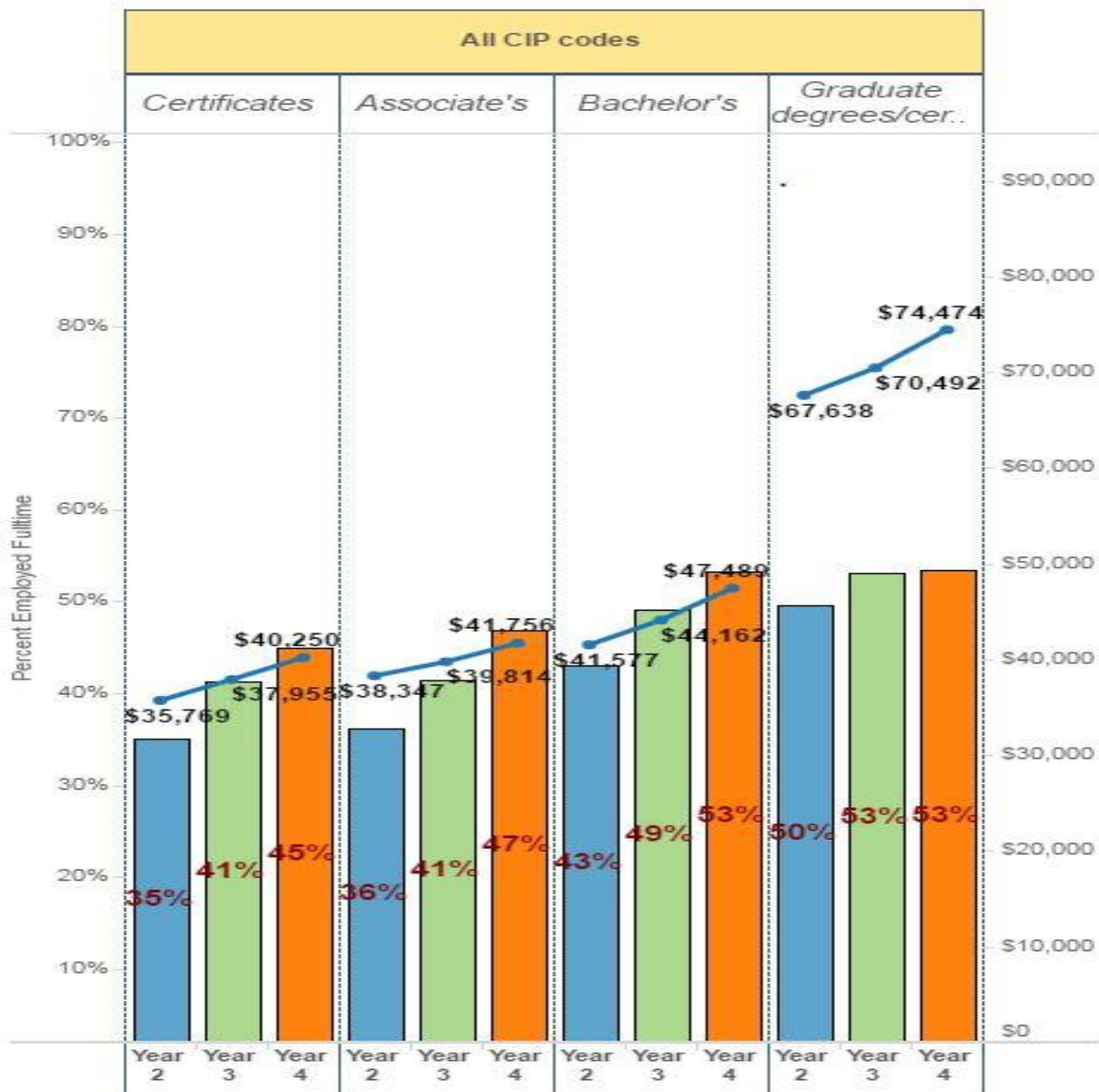# WHY ARE WE HERE?

Why we're here

Why we're here

- **How can we better use data to improve the education and employment prospects of the students we serve?**

Data, data, everywhere

2009 Median wage for Bachelor's Degree Graduates in 2008 after graduation by institution

Institution	Median Wage
University of Washington	$42,000
Washington State University	$41,200
All organizations	$39,200
Central Washington University	$38,700
Eastern Washington University	$37,600
Western Washington University	$34,600
The Evergreen State College	$31,600

Source: WA ERDC

All CIP codes

	Certificates	Associate's	Bachelor's	Graduate degrees/cer..

Certificates: Year 2 — $35,769 (35%); Year 3 — $37,955 (41%); Year 4 — $40,250 (45%)

Associate's: Year 2 — $38,347 (36%); Year 3 — $39,814 (41%); Year 4 — $41,756 (47%)

Bachelor's: Year 2 — $41,577 (43%); Year 3 — $44,162 (49%); Year 4 — $47,480 (53%)

Graduate degrees/cer..: Year 2 — $67,638 (50%); Year 3 — $70,492 (53%); Year 4 — $74,474 (53%)

Source: MNSLEDS

Source: Graduate Employment Outcomes, Minnesota DEED, Labor Market Information

Kentucky High School Feedback Report on College Success
High School Graduating Class of 2013

Adair County School District

Quick Statistics

|	
Percent with first year of college cumulative GPA of 2.0 or higher	70.5%
Percent who earned a full year of college-level credits during their first year (30 hours or more)	20.5%
Percent of college attendees in 2013-14 who returned in 2014-15	82.8%
Average cumulative GPA for these college attendees	
a. High school	3.13
b. First year of college	2.46
Average Kentucky Educational Excellence Scholarship (KEES) award amount	$1,409

Source: KCEWS

Kentucky High School Feedback Report on College Success
High School Graduating Class of 2013
Adair County School District

Percent Returning for Second Year of College

Source: KCEWS
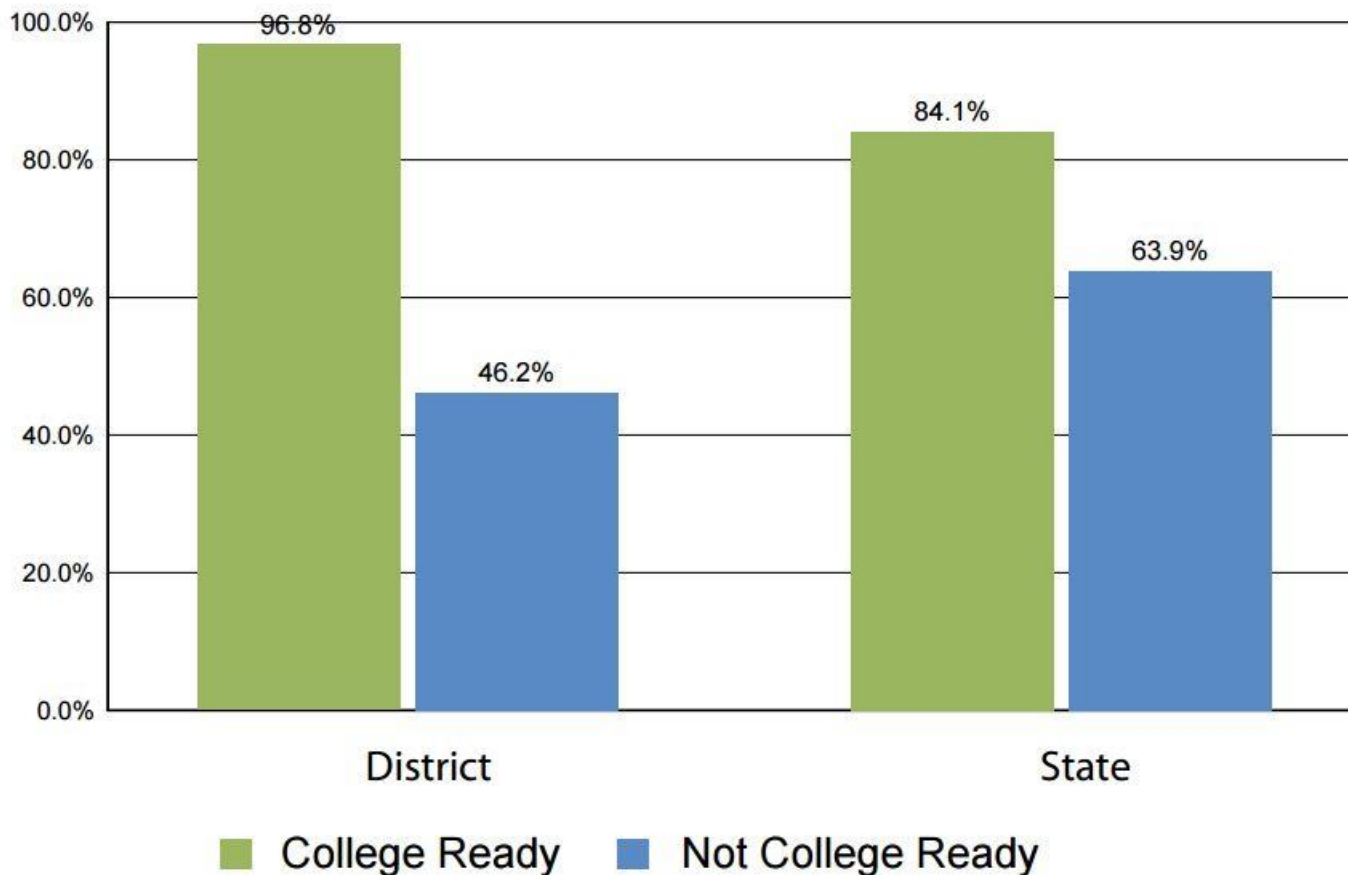
23 four-year schools with low costs that lead to high incomes

One of the biggest concerns about college that students and families have is the costs of attending—and the possible opportunities it could create for their careers. Check out 23 four-year institutions of higher education that have demonstrated both high earnings, as well as low costs for their lowest-income students.

Institution	Median Earnings of Students 10 Years After Entering the School	Average Net Price for Low-Income Students
Amherst College	$56,800	$3,739
Bowdoin College	$54,800	$6,731
Brown University	$59,700	$6,104
Columbia University in the City of New York	$72,900	$5,497
Dartmouth College	$67,100	$7,648
Duke University	$76,700	$6,280
Georgia Institute of Technology-Main Campus	$74,000	$7,875
Hamilton College	$57,300	$7,245
Harvard University	$87,200	$3,386
Haverford College	$55,600	$5,648
Massachusetts Institute of Technology	$91,600	$6,733
Massachusetts Maritime Academy	$79,500	$7,519

Data, data, everywhere

- For the most part, we don't need new collections of data

- Key issues:
  - Linkages/combinations of existing datasets
  - Appropriate access to existing data
  - Privacy and security

  - What do we do with all of this information?

Fundamental questions

How are the data we collect, clean, share, and analyze being used?

THE ANSWERS TO THIS QUESTION ARE CRUCIAL TO FIGURING OUT WHAT, IF ANY, CHANGES ARE NEEDED IN OUR DATA INFRASTRUCTURE
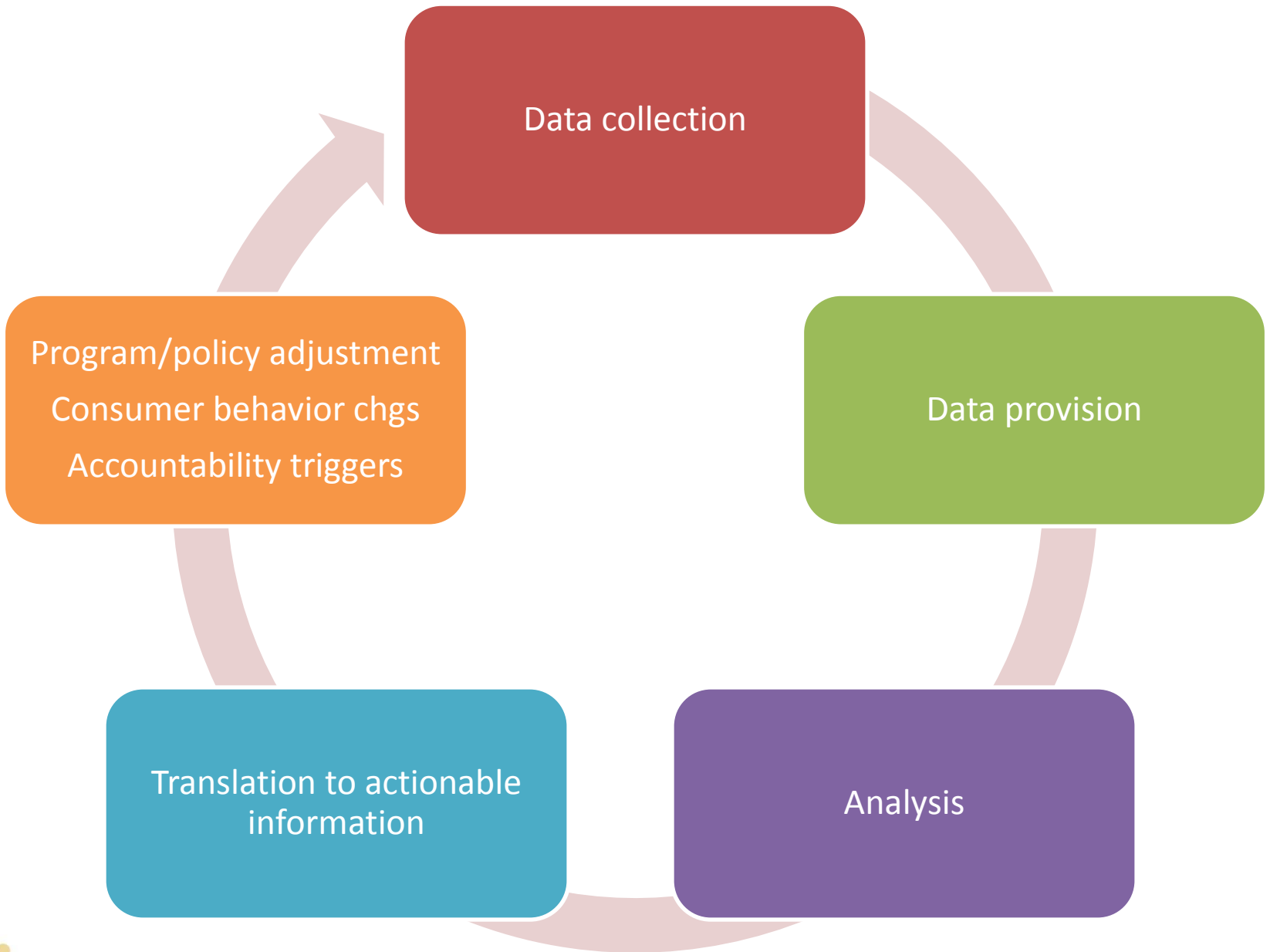
Fundamental questions

How are the data we collect, clean, share, and analyze being used?

- Consumer information
- Accountability regimes
- Policy and program improvement

Data collection

Data provision

Analysis

Translation to actionable information

Program/policy adjustment
Consumer behavior chgs
Accountability triggers

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One problem

- State data systems: Bound by state borders
- Students, workers, and firms: Not so much

Consumer information, data for policy improvement, and accountability measures can be based on incomplete data

One potential solution

MULTISTATE
LONGITUDINAL
DATA EXCHANGE

MLDE

WICHE
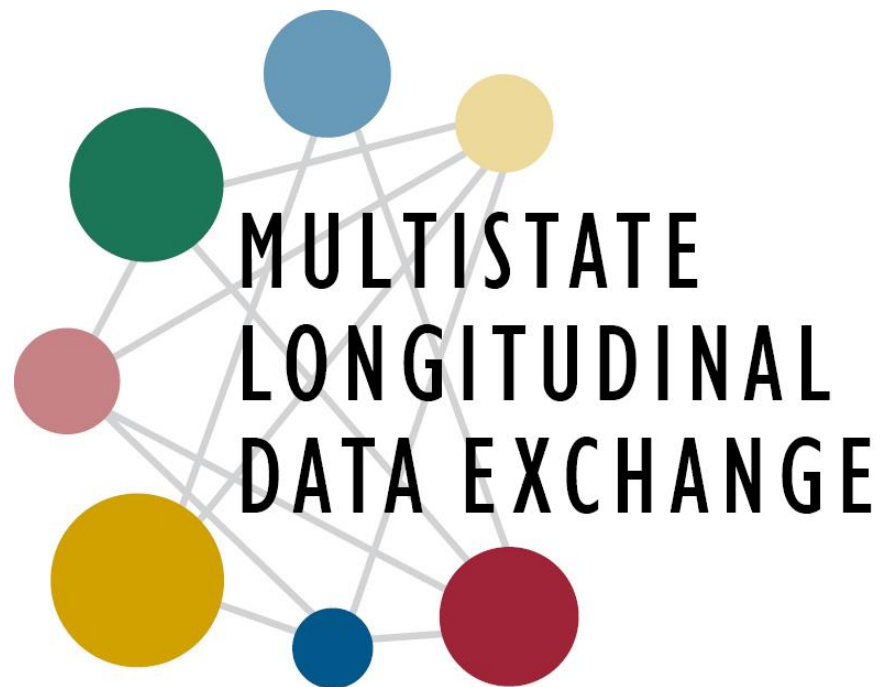
Simply put…

- A data resource that links existing state education and employment data systems

  - Provides individual-level, identifiable data to participating states on students they have served

  - Requires states provide the same to other participants

- Expanding to 10-15 states in 2016

How did we get here?

- Four-state pilot: 2010-2014
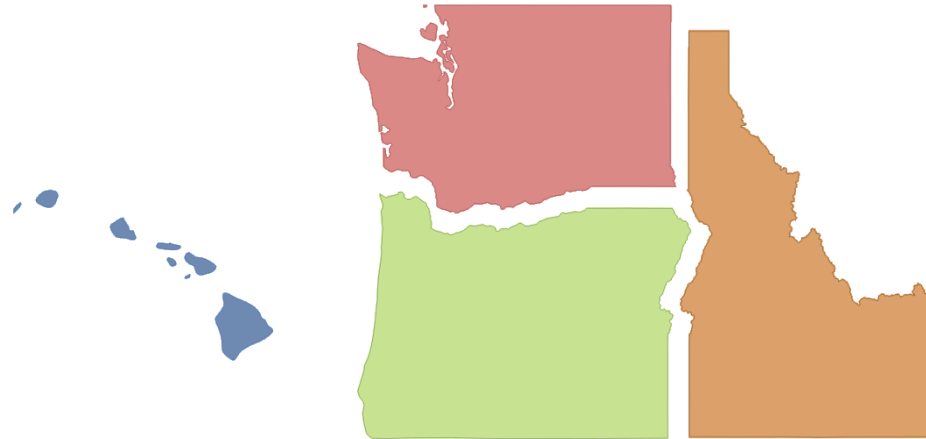
Key principles

- A *data exchange*, not a *data collection*

  - Data must be provided back to participating states at the individual level

Key principles

- MLDE produces *research datasets* and is not intended for transactional uses

  – Research and evaluation should target transition points in the education and employment pipeline.

Legal mechanisms

- Two key relationships:

  - State education agencies designate WICHE (and each other) as "Authorized Representative" under FERPA

  - Employment agencies designate WICHE as agent/contractor

Pilot results

- High school graduates, 2005
- First time postsecondary enrollees, 2005-06

- 192,000+ individuals

The "meta"-question

- Do the data tell us anything meaningfully different from existing data sources?

  - Can MLDE find those who are "missing" from state data systems?
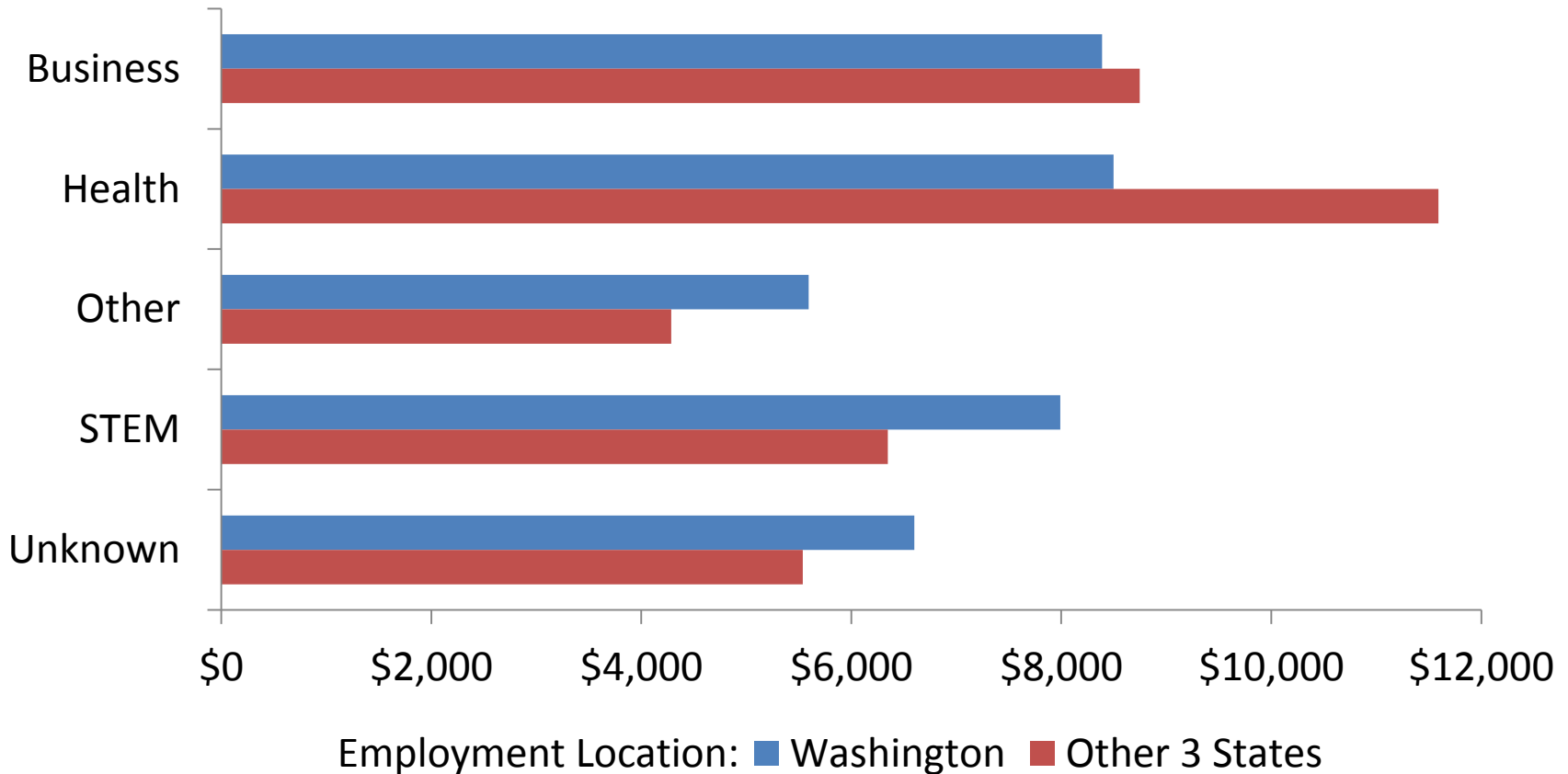 - Are their outcomes meaningfully different?

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Uncertainty About Employment Outcomes Reduced by 22% in Idaho

Found in Idaho data: 56%

22% of "missing" completers found in the other three states' data

Not found" reduced from 44% to 35%

Wash. 7%

Ore. 3%

Hawaii <1%
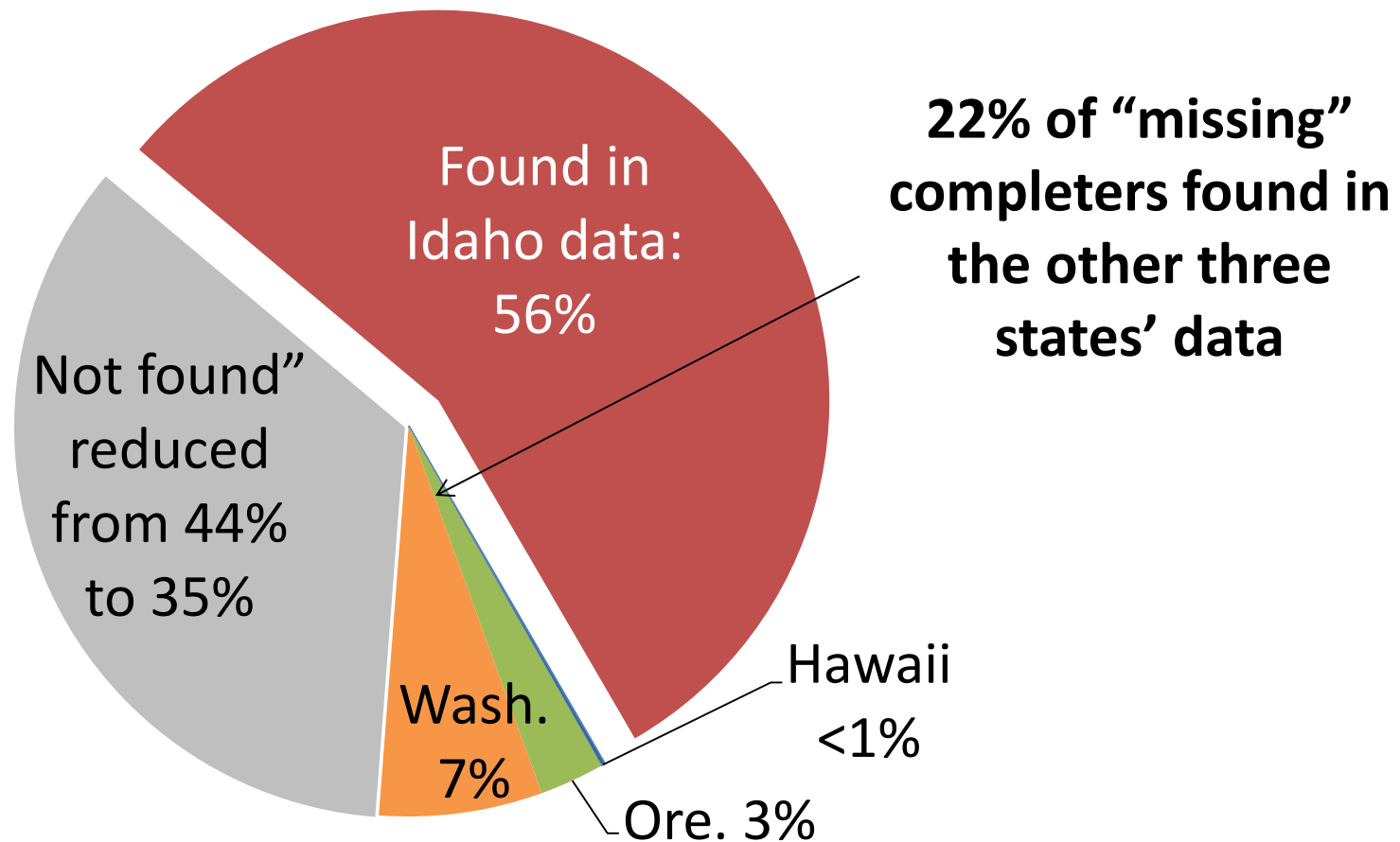
Notes: 3,158 students who received associate's or higher award from an institution in Idaho by Dec. 2010 and had a valid SSN

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Median Wages of Washington Bachelor's Degree Earners by CIP Field and Employment Location

Employment Location: ■ Washington ■ Other 3 States

Note: These data only apply to students captured in the original cohort definitions and who completed an associate's degree or higher by Dec. 2010 and who were not simultaneously enrolled. Employment was measured 10-12 months after receipt of award.

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MLDE 2.0: EXPANSION, USE, AND SUSTAINABILITY

Additional key principle

- *State ownership and control of data, as well as security and privacy protections, trump efficiency, cost, and ease of use*

  - Easiest process: Create a giant database with all education and employment records with queries that automatically pull data

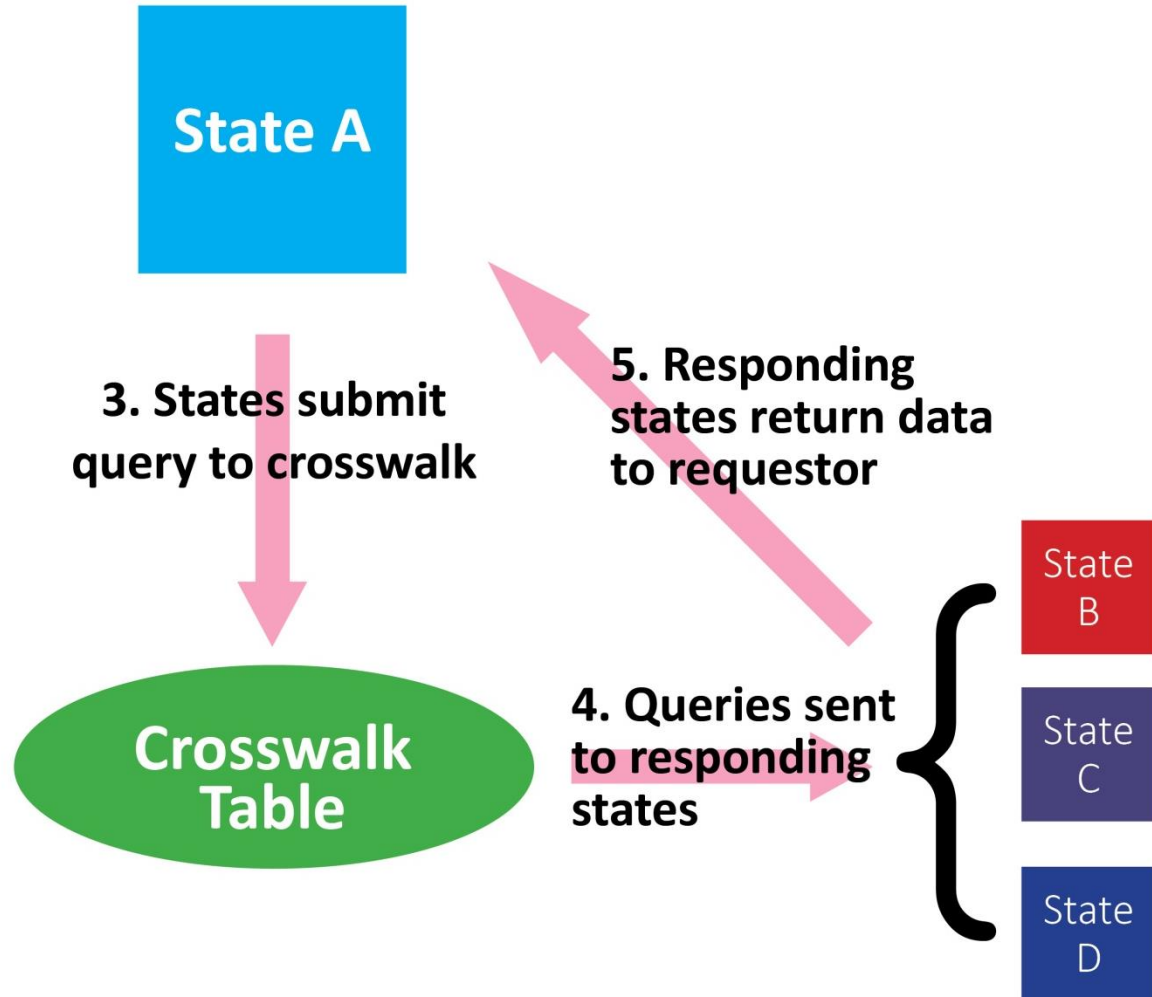 - Actual process: Federated model with state control over exchanged data
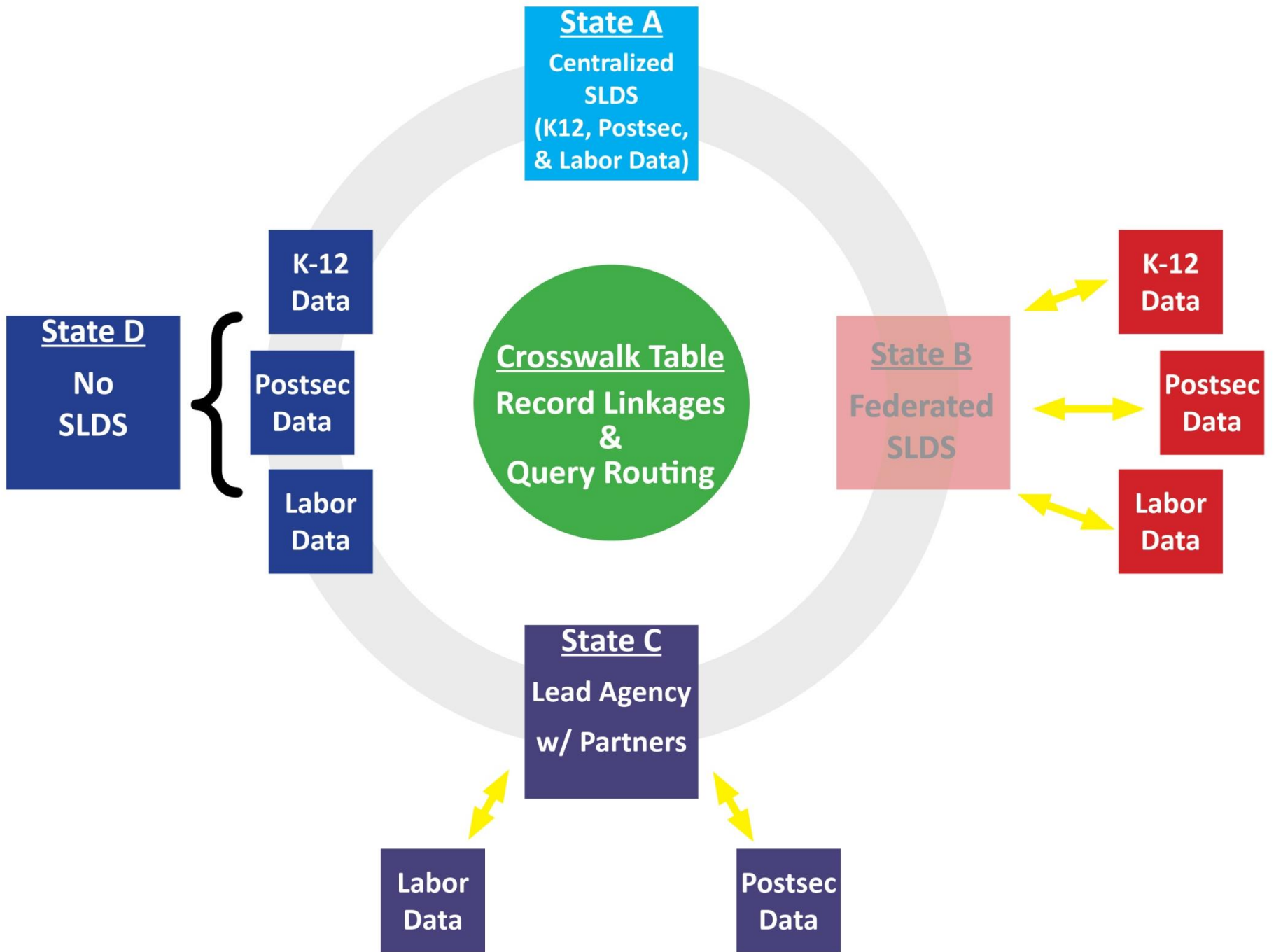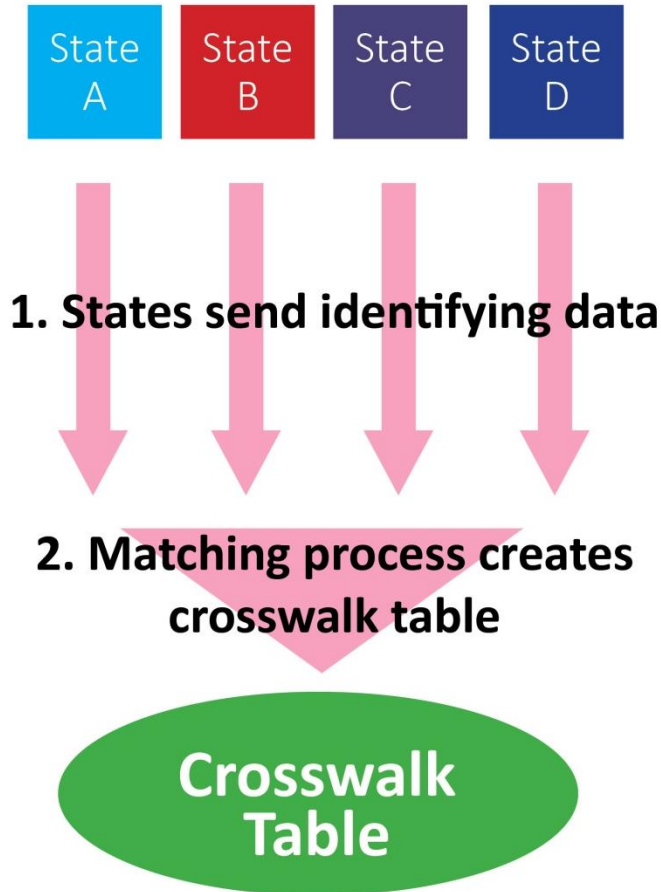
What states get back

- Individual-level, "re-identifiable" data

- "Decoder ring" to link back to their own SLDS or other data systems
  - Restrictions on additional redisclosure
  - Opens up a much wider range of variables, disaggregates, etc.

Deidentified dataset

- "Common" dataset limited to those elements agreed to in the exchange

- States direct research agenda

- WICHE carries out research

Uses: Standard

- Postsecondary access, progression, success
  - Effect of preparation
  - Effect of state/district/institutional policies and programs
  - Time to degree by different cohort definitions
  - Remediation/developmental rates (!)
  - Broad range of disaggregates

- Return on investment
  - Median wages by program
  - Longitudinal studies of wages
 - Employment stability and wage growth

Non-standard Uses

- Measuring "career readiness"
  - Wages as pct. of industry avg.?
  - 4 quarters of stable employment?
  - 4 quarters of employment with same firm?

- Mobility-specific questions
  - Who goes where and why?
  - How do state policies to produce, retain, and attract talent work?
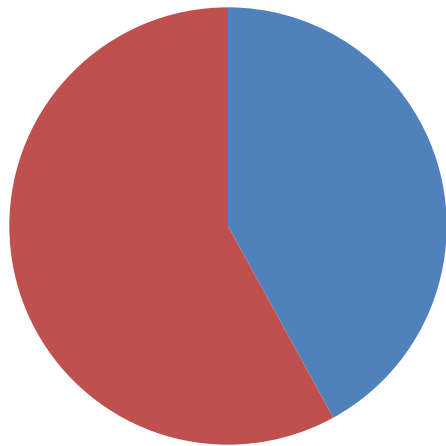 - What is the balance of trade among states by field?

Hypothetical research—Balance of Trade

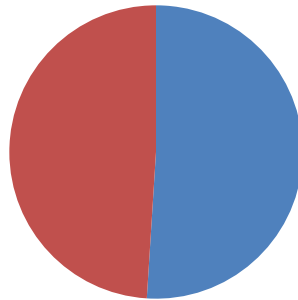What is the education and training of in-migrants to your state compared to out-migrants?

In-migration

Out-migration

- Major 1
- Major 2
- Major 3
- Major 4

MLDE

WICHE
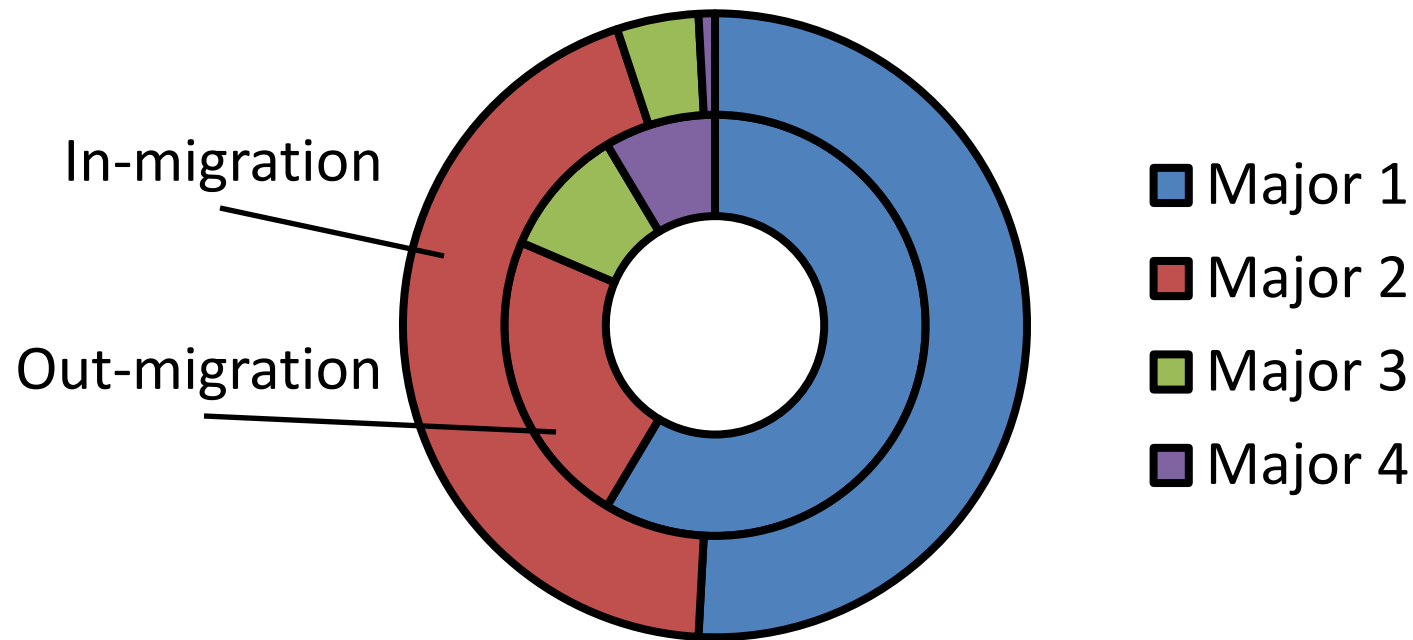
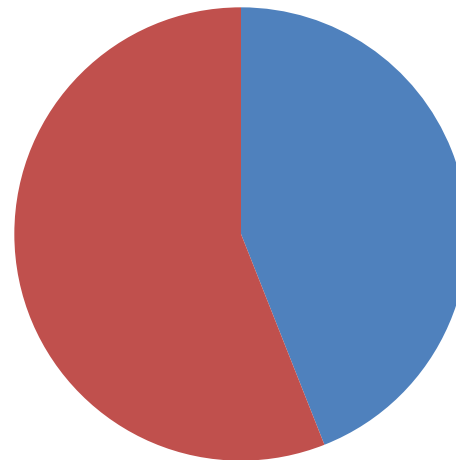# Hypothetical research—Balance of Trade

Health

Stem

Business

Other

2,000 grads
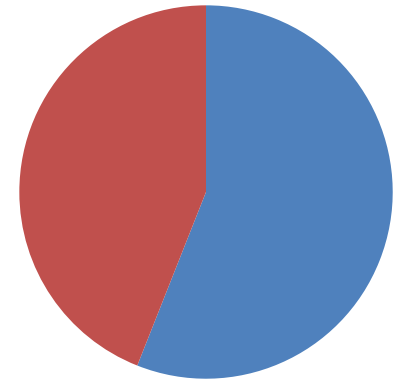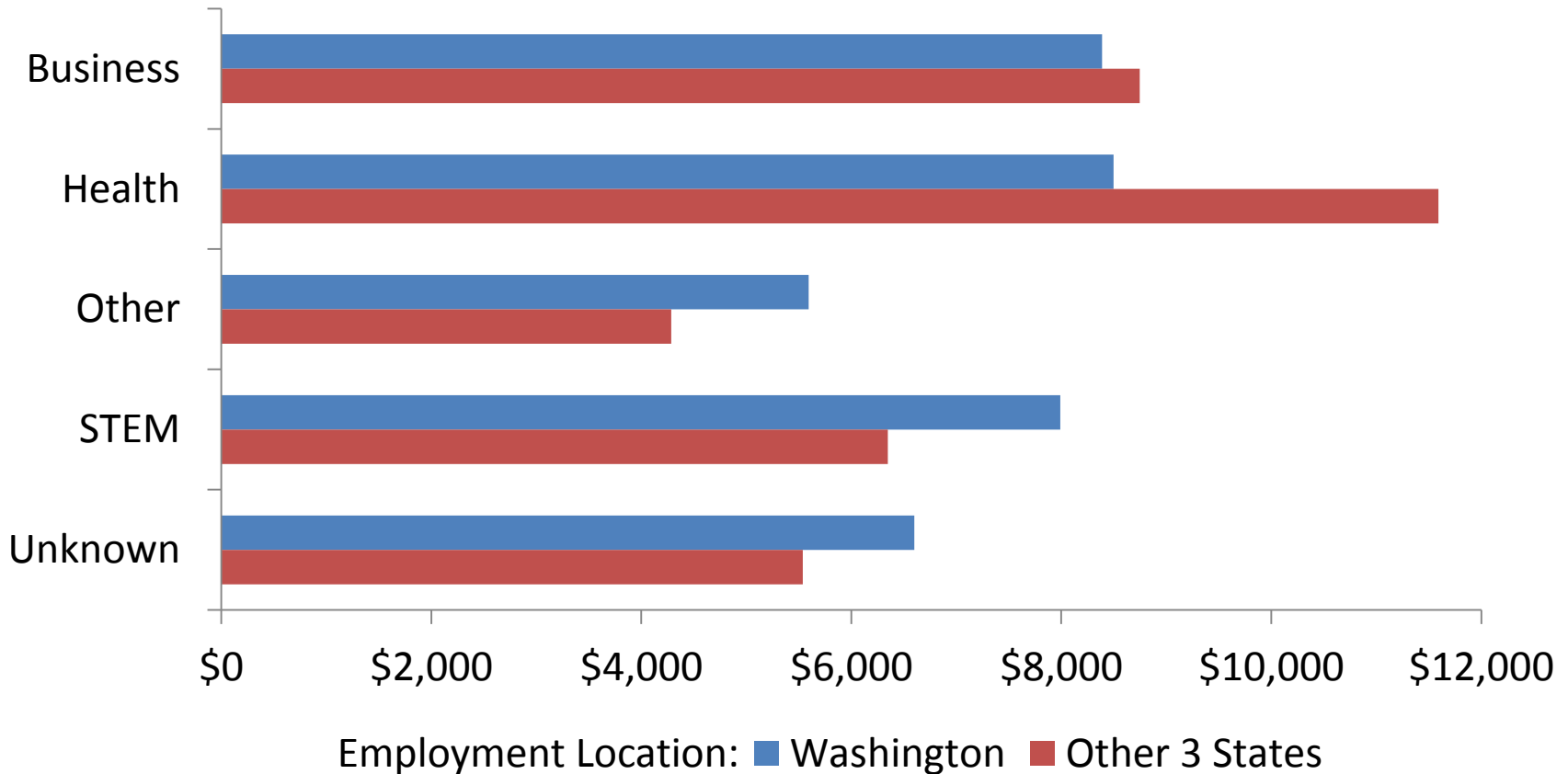
1,000 grads

2,200 grads

1,600 grads

■ In-migrants

■ Out-migrants

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Other questions & research avenues

- Economic outcomes for stop-outs
- Incorporating workforce demand
- Student debt vs. earnings
- Workforce training programs
- Linkages/confirmations with workforce demand data

SUSTAINABILITY

Three pillars

Governance

Use

Funding

Costs

- State staff burden for participation

- Gates funding through 2018

- Estimate: $500,000-$600,000/year

Limitations and challenges

- Value dependent on who else participates
- SLDS sustainability
- UI data limitations
- Trust and relationships
- Shifting public and political environment
- Data cleanliness
- Policy responses

QUESTIONS AND DISCUSSION

Contact Information

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