Borders Don’t Stop People, Why Should They Stop Data?
A Little Framing

Converging Pressures
• Severe fiscal constraints
• Rapid demographic changes
• Economic competitiveness

Expected PSE responses
• Improved productivity
• Underrepresented populations
• Linkages to workforce

Implications for Data
• Limits of the pipeline analogy
• Loosely coupled data relationships in education and workforce
• More precision and flexibility
Environmental Incentives/Pressures for Better Student Unit Record Systems

- State Fiscal Stabilization Fund (SFSF)
- Desire for Better P-20 Alignment
- More Emphasis on Productivity
- Race to the Top
- Desire for More Targeted Investment Strategies
- SLDS/WDQI Grants
- National and State Attainment Goals
- Complete College America/Complete to Compete
- Greater Institutional Accountability
- WICHE
Some Snapshot Indicators of Human Capital Development

<table>
<thead>
<tr>
<th>Institutional Graduation Rates (IPEDS)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>FTFT students beginning at 4-year institutions in 2002</td>
<td>55.9%</td>
</tr>
<tr>
<td>FTFT students beginning at 2-year institutions in 2005</td>
<td>30.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Graduation Rates (BPS)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>All 2003 entering students who earned a BA in 6 years</td>
<td>30.7%</td>
</tr>
<tr>
<td>All 2003 entering students who earned an AA or credential in 6 years</td>
<td>18.7%</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Adult Education (NHES)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>25-64 year olds who enrolled in formal programs leading to a degree/credential at colleges over a 12 month period in 2004-05</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

Notes: Institutional graduation rates are calculated only for full-time students who graduated from the same institution where they began their postsecondary work. “FTFT” means full-time, first-time. Student graduation rates are calculated for a nationally representative sample of students and track them without regard to where they enroll.

Sources: NCES, Enrollment in Postsecondary Institutions, Fall 2008; Graduation Rates, 2002 and 2005 Cohorts; and Financial Statistics, Fiscal Year 2008: First Look, Apr. 2010, Table 5; NCES, Persistence and Attainment of 2003-04 Beginning Postsecondary Students: After 6 Years, Dec. 2010, Table 1; National Household Education Survey.
More Comprehensive Information Through Longitudinal Data (Part I)
Longitudinal Data’s Principal Contributions to Research on Education and the Workforce

- **Indicators of Progress and Outcomes**
  - Postsecondary performance for remediated students, dually enrolled students, etc.
  - Milestone achievement
  - Completion of degree/certificate
  - Workforce outcomes
  - Linkage between supply of educated individuals and workforce needs

- **Disaggregation**

- **Non-Sequential Contact with Formal Education**
  - Delayed entry
  - Concurrent workforce participation
  - Returning workforce participants
Four “Master” Questions

1. How are former high school students performing in post-secondary education?
   - Within a certain time period?
   - By school/institution attended?
   - By key demographics (race/ethnicity, gender)?
   - By type of curriculum?
   - By level of readiness?
   - By “departure condition” (diploma, GED, no award)?
   - By different postsecondary enrollment conditions (financial aid awardee, full-time/part-time)?
   - By different postsecondary completion outcomes?

2. How are former high school students performing in the workforce?
   - Within a certain time period?
   - By key demographics (race/ethnicity, gender)?
   - By characteristics of school attended?
   - By type of high school curriculum?
   - By industry of employment?
   - By region within state?
   - By “departure condition” (diploma, GED, no award)?
### Four “Master” Questions

<table>
<thead>
<tr>
<th>3. How are former post-secondary students performing in the workforce?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Within a certain time period?</td>
</tr>
<tr>
<td>• By key demographics (race/ethnicity, gender)?</td>
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<tr>
<td>• By characteristics of institution attended?</td>
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<tr>
<td>• By field of postsecondary study (CIP code)?</td>
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<tr>
<td>• By industry of employment?</td>
</tr>
<tr>
<td>• By region within state?</td>
</tr>
<tr>
<td>• By different departure conditions (graduated/not graduated, number of postsecondary credits earned)?</td>
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</table>

<table>
<thead>
<tr>
<th>4. How are current and former workforce participants accessing formal education systems?</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>• By region within state?</td>
</tr>
<tr>
<td>• By educational attainment level?</td>
</tr>
</tbody>
</table>
Selected Examples of Research Using Longitudinally Linked Data

- **NCHEMS four-state study findings**
  - Graduation rates improved by measurable amounts by accounting for student movement among four states

- **WICHE/CUE analysis of Nevada student progress**
  - Pinpointing where leakage is concentrated for underrepresented student populations

- **Washington SBCTC’s Tipping Point study**
  - One year of postsecondary coursework is the “tipping point” for meaningful wage gains

- **ADARE study of Maryland teacher education**
  - Teacher placement and retention for recent program graduates in Maryland and adjacent states.
Net Migration by State, 22-64 Year Olds With and Associate’s Degree or Higher, 2007

Source: NCHEMS, higheredinfo.org
Sharpening a Common Policymaker Lens

Why should we make investments in education when we can swipe the already well-educated citizens of another state?

How is it that we are not able to keep the educated talent we create? Why should we continue to invest heavily in educating students who just leave?
WICHE’s Pilot Data Exchange

- Underway as of Summer 2010
- Four initial participating states:
  - Washington
  - Oregon
  - Hawaii
  - Idaho
- Principle goal: to inform public policy by exchanging data spanning secondary education, postsecondary education, and workforce data in multiple states in order to enable more comprehensive analyses of the development and flow of human capital.
Moving Toward a Better Sense of Human Capital Development Tied to Mobility

1. What proportion of students beginning college in Oregon earn a bachelor’s degree in six years?

2. What proportion of students completing high school in Hawaii enroll in college in that state within a year?
3. What proportion of high school graduates in Washington complete college within 10 years and are earning $35,000 or more per year?

4. What proportion of students who were enrolled in college in Idaho in a given year are enrolled in Washington, Oregon, or Hawaii the next year?
5. What proportion of students who complete high school in Washington also complete at least an associate’s degree and are employed in the aeronautics industry in the state or in Idaho, Oregon, or Hawaii?
Seven Basic, Not-Necessarily-Sequential Steps, With Multiple Variations

1. Link public education records.
2. Enhance education records with NSC data to capture activity in out-of-state and nonpublic institutions.
3. Link to workforce records.
4. Merge records across states.
5. Anonymize the data.
6. Analyze and report.
7. Return an enhanced data file to originating states.
HI - K-12 PSE → Merged
ID - K-12 PSE → Merged
OR - K-12 PSE → Merged
WA - K-12 PSE → Merged

NSC

NSC Main Collection

“Core” Exchange Dataset

Report

Feds (WRIS, WRIS2, or Census LED)

Census LED access via Regional Centers

Exhibit 2
### Pivot Tabling Our Way to a Fuller Understanding

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Initial College Entry</th>
<th>College Completion by 2008</th>
<th>Workforce Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon</td>
<td>Oregon</td>
<td>Oregon</td>
<td>Oregon</td>
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<tr>
<td></td>
<td></td>
<td>Other States</td>
<td>Other States</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not completed</td>
<td>Other States</td>
</tr>
<tr>
<td>Washington</td>
<td>Oregon</td>
<td>Oregon</td>
<td>Oregon</td>
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<tr>
<td></td>
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<td>Other States</td>
<td>Other States</td>
</tr>
<tr>
<td></td>
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<td>Not completed</td>
<td>Other States</td>
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<tr>
<td>Idaho</td>
<td>Oregon</td>
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<td>Other States</td>
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<td></td>
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<td>Not completed</td>
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<tr>
<td>Hawaii</td>
<td>Oregon</td>
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<tr>
<td></td>
<td></td>
<td>Not completed</td>
<td>Other States</td>
</tr>
<tr>
<td>Leakage/Not found</td>
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</tr>
</tbody>
</table>
Common Issues in SLDS Development
(and, by extension, WICHE’s multistate exchange project)

- Governance
- Confidentiality (FERPA)
- Common data element definitions
- Effective use
- Transactional vs. research purposes
- Balancing “good enough” and “perfect” information
- Accountability vs. formative evaluation
- Short-term vs. long-term analytical frames and the availability of data going back in time
- Limitations of workforce information

And, adding multiple states to the mix:
- Unequal sophistication among state data systems
- Participation is altogether voluntary, so governance looms even larger
Lessons So Far

- Real value comes from incorporating workforce information.
  - But linking it in is hard due to SSNs and privacy rules
  - Concern over too much focus on initial employment
- Genuine appetite for linked data among participating states
  - But some fear...
  - And at what level of “identifiability?”
- Need to balance the expectations of partnering state agencies relative to what data for what purposes
  - Acknowledging the different pressures on each agency
  - What is most appropriate at each “level” of the education system?
- A big contribution can be made just by helping reduce the gaps in what is knowable, i.e., how big is the loss of individual data across sectors really?
Questions?

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