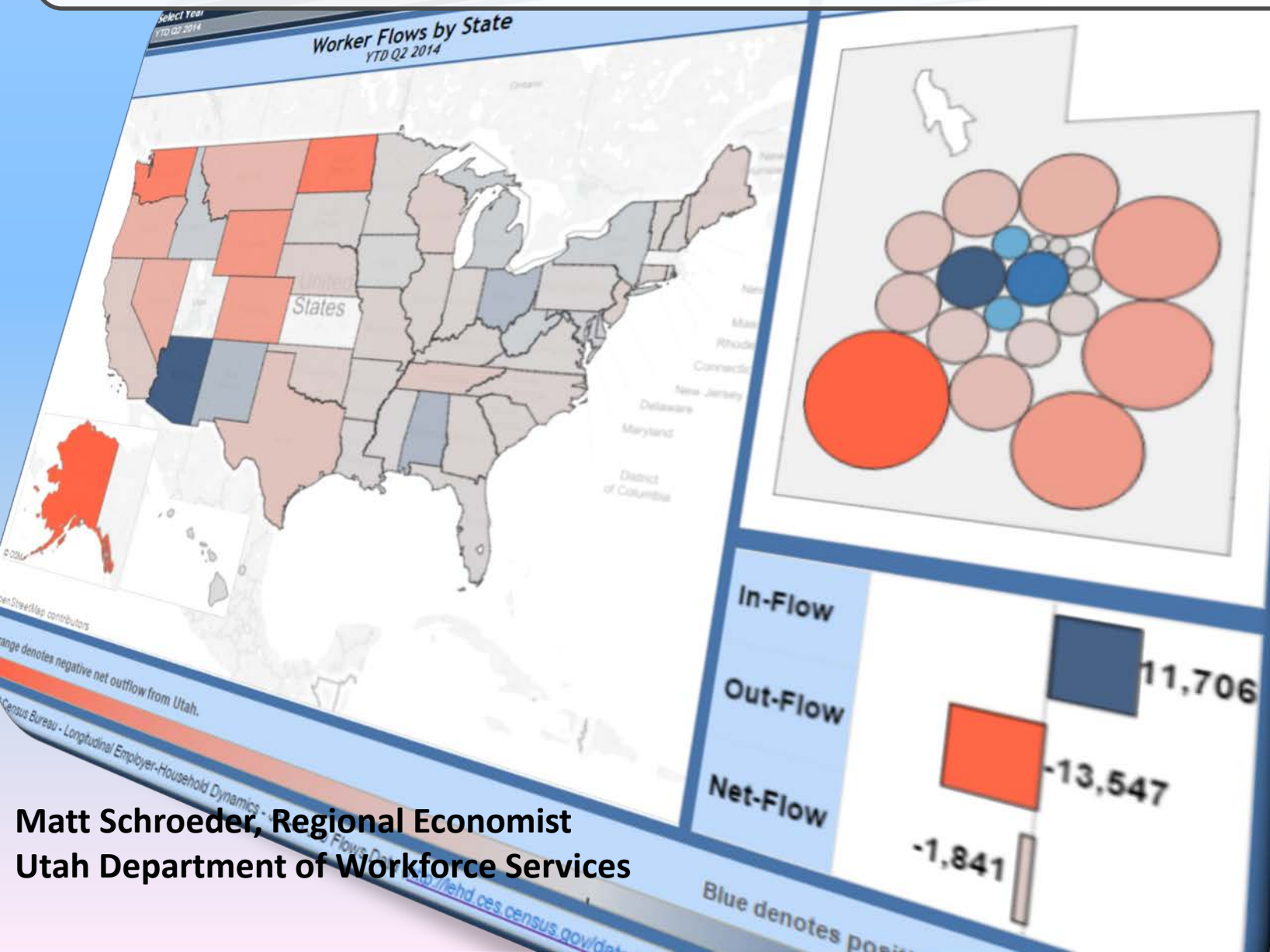


Visualizing Job-to-Job Flows



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Utah Department of Workforce Services



URL Address

[https://public.tableau.com/
views/J2J_Viz/UtahJobFlows](https://public.tableau.com/views/J2J_Viz/UtahJobFlows)



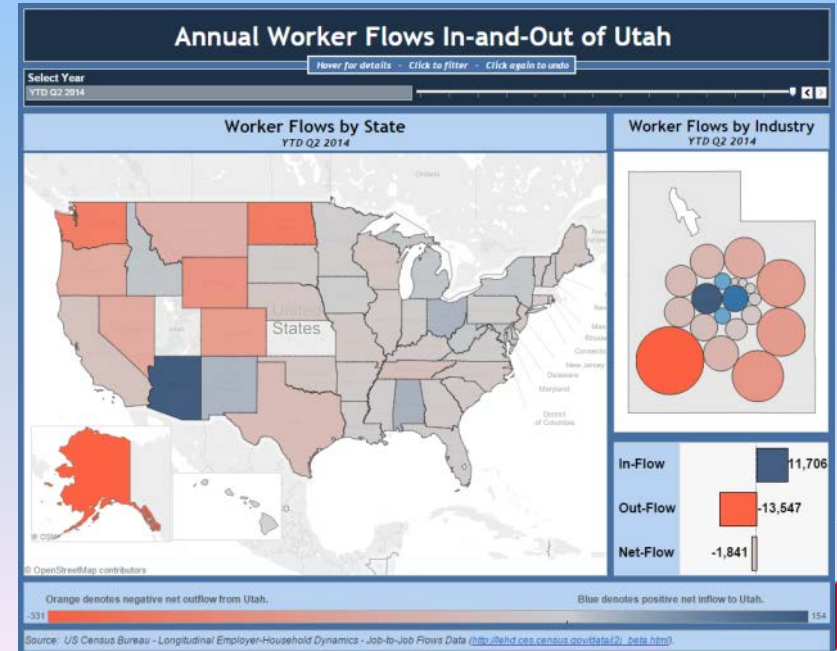
Why make a visualization?

How can we make data more accessible and useful to Utah's businesses, policy makers, and the general public?

Can we turn this.....

```
periodicity,seasonadj,geo_level,geography,ind_level,industry,ownercode,sex,agegrp,race,ethnicity,edu
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```

...into this?



Demonstration Scenario

Economic Development Professional in Utah:

A large IT firm is considering locating in Utah
...but they are concerned about the low unemployment rate.

You have had a sense that Utah could support more growth in IT
...because you often hear of IT professionals leaving for jobs in other states.

Now data on state to state worker flows by industry have been developed by BLS
...and the Utah DWS has created an interactive visualization to help access it.

Can you use these data and the job-to-job flows viz to support your feeling?

How can these data and the interactive visualization help you?



..... Page Loading

How it was done: The Basics

Software:

- Microsoft Excel - to prep the data
- Tableau Desktop - to build the visualizations

Data Source:

- Census LEHD Job-to-Job Flows website
 - http://lehd.ces.census.gov/data/j2j_beta.html



How it was done: Data download

Your State Here

Open CSV file j2j_xx_d_f_gs_ns_oslp_u.csv
with the following characteristics:

- **version:** R2015Q2
- **state:** *your state here*
- **type:** j2jod (origin/destination)
- **demographic characteristics:** none
- **firm age/size:** none
- **geography:** states
- **industry:** tabulated by NAICS sectors
- **ownership:** state, local, and private



How it was done: Data prep

Use Excel to reorganize data for use in Tableau

- Copy data from browser – paste into Excel
- Use “Text to Columns” (comma delimited) to split data
- Filter on geography fields to remove internal flows
- Stack all origin and destination states in the same column and created a new field to mark each record as either in-flow or out-flow
 - This allows the mapping in Tableau to work
- Create metadata tables to link states and industry descriptions to codes



How it was done: Building the Viz

Using Tableau Desktop

- Link to the Excel source file and join primary table with metadata tables
- Calculate aggregate measures using Tableau's calculated field function:
 - **In-Flow** = Sum of direct job flows (EE) in a given time period from an origin outside of Utah (any industry) flowing in to a given industry in Utah (does not included industry-to-industry flows within Utah).
 - **Out-Flow** = Sum of direct job flows (EE) in a given time period in a given industry in Utah flowing to a destination outside of Utah (any industry) (does not included industry-to-industry flows within Utah).
 - **Net-Flow** = In-Flow less Out-Flow
- Used the various visualization tools in Tableau to create maps and charts with interactive filters and data pop-up menus.



Benefits of Tableau (...or other data viz software)

Relatively Easy

- You don't need to be a programmer or database guru

Simple Sharing

- Visualizations can be easily published to the web and embedded in your websites for easy user access

Updatable

- Once a viz is created the source data can be updated quickly and without service disruption



Drawbacks

The more of this you do...

...the more users will want.





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