Schedule

- 8:00 – 8:30  Registration
- 8:30 – 8:40  Welcome
- 8:40 – 9:35  Keynote Address: Josh Beck
- 9:35 – 9:45  Break
- 9:45 – 9:55  SCEDD & CEDS: Sharon Hueftle
- 9:55 – 10:50  SCEDD Analysis: Daniel Chaffin and Bree Dority
- 10:50 – 11:00  Break
- 11:00 – Noon  Roundtable Work Session: Lisa Tschauner
- Noon – 12:15  Closing
Competitive Advantage

• Regions differ in their outcomes
• Why do some regions **consistently outperform** rivals?
• What are the unique strengths that enable regions to consistently create value for stakeholders?
Resource based theory – Source of unique strengths

• Resources – (in)tangible assets
Assumptions of the Resource Based View

- Resources are heterogeneously distributed
- Resources are imperfectly mobile
Organize to Exploit Strategic Resources

Region $R_1$  
Organizes to exploit available resources that are valuable, rare and costly to imitate.

Region $R_2$  
Chases opportunities unlinked to strategic resources.

Competitive Advantage & Resources  •  Economic Development & Industry Clusters  •  Strategic Direction
SCEDD Area

• 10.5% of Nebraskans live in SCEDD
• Largest cities:
  • Grand Island (>50,000)
  • Kearney (>33,000)
  • Hastings (25,000)
  • Holdrege (5,500)
  • Aurora (4,500)
  • Minden (2,900)
  • Central City (2,900)
• Remaining towns have populations of < 2,400
Tri-City Area Resources

Key Assets – Natural Resources

- **Groundwater**: drinking water and irrigation
- **Surface Water**: habitat, recreation, and irrigation
- **Soil & Farmland**: ~5 million acres of land, 60% of acres classified as prime farmland or farmland of statewide importance
Tri-City Area Resources

Key Assets – Infrastructure

- **Transportation**: Extensive highway and rail infrastructure
- **Broadband**: 91% has ≥1 broadband provider, but varies across the counties (22% to 99%)
- **Higher Education System**: 11% of all students enrolled in Nebraska’s institutions are enrolled at UNK, CCC, and Hastings College

Nebraska’s Coordinating Commission for Postsecondary Education, available at: [https://ccpe.nebraska.gov/enrollment-dashboard](https://ccpe.nebraska.gov/enrollment-dashboard)
Capabilities

- Capabilities – ability to utilize resources in valuable ways
**Key Assets – Population & Human Capital**

- Population: >200,000 people and 71% live in the counties in which the Tri-Cities are located
- Key Trends:
  1. Positive Population Growth, but Rural Counties are Shrinking

**U.S. Census Bureau, American Community Survey**
Key Trends:


Age Distribution, 2016

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2016 Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years</td>
<td>NE: 6.0%</td>
</tr>
<tr>
<td>5 to 13 years</td>
<td>NE: 15.0%</td>
</tr>
<tr>
<td>14 to 17 years</td>
<td>NE: 14.0%</td>
</tr>
<tr>
<td>18 to 24 years</td>
<td>NE: 10.0%</td>
</tr>
<tr>
<td>25 to 44 years</td>
<td>NE: 20.0%</td>
</tr>
<tr>
<td>45 to 64 years</td>
<td>NE: 25.0%</td>
</tr>
<tr>
<td>65 years and over</td>
<td>NE: 15.0%</td>
</tr>
</tbody>
</table>

Age Group Growth, 2010-2016

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Growth Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years</td>
<td>NE: -3.0%</td>
</tr>
<tr>
<td>5 to 13 years</td>
<td>NE: 2.0%</td>
</tr>
<tr>
<td>14 to 17 years</td>
<td>NE: 7.0%</td>
</tr>
<tr>
<td>18 to 24 years</td>
<td>NE: 12.0%</td>
</tr>
<tr>
<td>25 to 44 years</td>
<td>NE: 17.0%</td>
</tr>
<tr>
<td>45 to 64 years</td>
<td>NE: 12.0%</td>
</tr>
<tr>
<td>65 years and over</td>
<td>NE: 17.0%</td>
</tr>
</tbody>
</table>

U.S. Census Bureau, American Community Survey
Tri-City Area Resources

Labor Force Characteristics

Percentage of Workers Employed by Industry, 2017

- Manufacturing
- Health Care and Social Assistance
- Retail Trade
- Accommodation and Food Services
- Educational Services
- Public Administration
- Construction
- Wholesale Trade
- Transportation and Warehousing
- Administrative and Waste Services
- Agriculture, Forestry, Fishing & Hunting
- Finance and Insurance
- Other Services, Ex. Public Admin
- Professional and Technical Services
- Arts, Entertainment, and Recreation
- Information
- Management of Companies and Enterprises
- Real Estate and Rental and Leasing
- Utilities
- Mining, Quarrying, and Oil and Gas Extraction

Nebraska Department of Labor
Labor Force Characteristics

• Other important labor market trends:

1. Weak farm economy

2. Slower employment growth than Nebraska

<table>
<thead>
<tr>
<th>Top 3 Industries</th>
<th>Employment Growth, 10-17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NE</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>13%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>4%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>7%</td>
</tr>
<tr>
<td>Total, All Industries</td>
<td>9%</td>
</tr>
</tbody>
</table>
Labor Force Characteristics

- Other important labor market trends:

3. Slower real wage growth than Nebraska

<table>
<thead>
<tr>
<th>Year</th>
<th>SCEDD Real Average Weekly Wage ($)</th>
<th>NE Real Average Weekly Wage ($)</th>
<th>Wage Growth, 10-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$699 13% below</td>
<td>$700 14% below</td>
<td>NE 5% SCEDD 4%</td>
</tr>
<tr>
<td>2017</td>
<td>$850</td>
<td></td>
<td>Manufacturing (top employer in SCEDD) 3% 1%</td>
</tr>
</tbody>
</table>

Nebraska Department of Labor

Competitive Advantage & Resources • Economic Development & Industry Clusters • Strategic Direction
Issue #1: Workforce Shortage

Top Difficulty-to-Fill Occupations:

<table>
<thead>
<tr>
<th>Occupation</th>
<th>High Wage Occupation</th>
<th>% of Businesses Reporting Difficulty in Hiring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurses (SOC CODE 29-1141)</td>
<td>Yes</td>
<td>90.40%</td>
</tr>
<tr>
<td>Automotive Service Technicians and Mechanics (SOC CODE 49-3023)</td>
<td>Yes</td>
<td>89.50%</td>
</tr>
<tr>
<td>Heavy and Tractor-Trailer Truck Drivers (SOC CODE 53-3032)</td>
<td>Yes</td>
<td>80.60%</td>
</tr>
<tr>
<td>Machinists (SOC CODE 51-4041)</td>
<td>No</td>
<td>100.00%</td>
</tr>
<tr>
<td>Welders, Cutters, Solderers and Brazers (SOC CODE 51-4121)</td>
<td>No</td>
<td>85.60%</td>
</tr>
<tr>
<td>Multiple Machine Tool Setters, Operators and Tenders, Metal and Plastic</td>
<td>No</td>
<td>83.30%</td>
</tr>
<tr>
<td>(SOC 51-4081)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Controlled Machine Tool Operators, Metal and Plastic</td>
<td>No</td>
<td>75.50%</td>
</tr>
<tr>
<td>(SOC 51-4011)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance and Repair Workers, General (SOC CODE 49-9071)</td>
<td>No</td>
<td>71.70%</td>
</tr>
</tbody>
</table>

*Identified as a H3 (High Wage, High Skill, and High Demand) occupation by the Nebraska Department of Labor.

Tri-City Area Resources

National Worker Trends

• Migration for jobs is down partly because of a reduction of the upside (Molloy et al., 2014)

National Worker Trends

- Nonmetro population declines
  - Demographic factors
  - Economic factors

Natural change shows gradual decline; net migration more prone to short-term fluctuations

Source: USDA, Economic Research Service using data from the U.S. Census Bureau.
Two Paths for Managing the Workforce Bottleneck

- Resist the trend
  - Invest in housing
  - Improve recruiting and retention
  - Invest in amenities

- Embrace the trend
  - Invest in automation
  - Scale and retool existing workforce
Resisting the Trend Through Investment

• Creative class, outdoor amenities, entrepreneurial context
  • Creative class in rural areas include individuals with jobs that include thinking creatively in their tasks – Developing, designing, creating, ideas, systems products or artistic contributions
  • These occupations include high-end sales positions, scientists, engineers, college professors, artists and designers.

• Outdoor amenities
  • Landscape, recreational appeal

• Entrepreneurial context
  • Self-employment, startups

Resisting the Trend Through Housing

Housing Problems

- Housing unit lacks complete kitchen facilities
- Housing unit lacks complete plumbing facilities
- Household is overcrowded
  - Overcrowding – More than 1 person per room
- Household is cost burdened.
  - Monthly housing costs (including utilities) exceeding 30% of monthly income

Each year, the U.S. Department of Housing and Urban Development (HUD) receives custom tabulations of American Community Survey (ACS) data from the U.S. Census Bureau. These data, known as the “CHAS” data (Comprehensive Housing Affordability Strategy), demonstrate the extent of housing problems and housing needs, particularly for low income households. [https://www.huduser.gov/portal/datasets/cp.html#2006-2015_data](https://www.huduser.gov/portal/datasets/cp.html#2006-2015_data)
Issue #2: Housing

Concerns over automation and full employment have a long history:
- Textile workers and steam engines (Luddites in the early 1800s)
- March of the machine makes idle hands (NYT 1928)
- Automation is replacing men as the major domestic challenge (John F. Kennedy 1960s)

Past technology has always created more jobs than those destroyed:
- Automating tasks (to be done more quickly or cheaply) increases demand for human workers to do the other tasks around it that have not be automated – David Autor MIT Economist

Stages of Regional Economic Development

http://reactiongifs.com/?p=18478
Stages of Regional Economic Development

Factor-Driven Stage
- Advantage based exclusively on labor and natural resources
- Relatively lower wages

Investment-Driven Stage
- Efficiency in producing standard products & services
- Manufacturing & outsourced service exports
- Higher wages but susceptible to cycles/shocks

Innovation-Driven Stage
- Produce innovative products and services at the technological frontier
- Deep clusters for productivity, interaction and innovation

Competitive Advantage & Resources • Economic Development & Industry Clusters • Strategic Direction

Building on Strengths

- Shifting from stage 2-3
- Identifying/reinforcing cluster industries
- Enhancing institutions to support/connect and fund these industries

Because that’s where the money is.
Industry Cluster and Emerging & Declining Industries

Mature Industries

Star Industries

Weakening Industries

Emerging Industries

- Health Care
- Transportation & Warehousing
- Accomodations & Food Services
- Finance & Ins.
- Utilities

- Manufacturing
- Wholesale Trade
- Education Services
- Construction

Percentage Change in LQ

Census Bureau, Quarterly Workforce Indicators
### Key Subsectors

<table>
<thead>
<tr>
<th>Key Subsectors</th>
<th>% of Industry’s Final Demand Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agriculture</strong></td>
<td></td>
</tr>
<tr>
<td>Grain farming</td>
<td>51.4%</td>
</tr>
<tr>
<td>Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming</td>
<td>27.8%</td>
</tr>
<tr>
<td>Oilseed farming</td>
<td>18.5%</td>
</tr>
<tr>
<td><strong>Top 3 Agriculture Subsectors</strong></td>
<td>97.7%</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td></td>
</tr>
<tr>
<td>Animal, except poultry, slaughtering</td>
<td>31.2%</td>
</tr>
<tr>
<td>Farm machinery and equipment manufacturing</td>
<td>11.8%</td>
</tr>
<tr>
<td>Soybean and other oilseed processing</td>
<td>6.8%</td>
</tr>
<tr>
<td>Motor vehicle gasoline engine and engine parts manufacturing</td>
<td>6.5%</td>
</tr>
<tr>
<td>Other basic organic chemical manufacturing (e.g., ethanol)</td>
<td>6.2%</td>
</tr>
<tr>
<td><strong>Top 5 Manufacturing Subsectors</strong></td>
<td>62.5%</td>
</tr>
</tbody>
</table>

Minnesota IMPLAN Group data for 13-county SCEDD
Tri-City Area Development

Regional Economy

- Competitive Advantage & Resources
- Economic Development & Industry Clusters
- Strategic Direction

Minnesota IMPLAN Group data for 13-county SCEDD
Strong Exporters

Percent of Final Demand Exported

- Manufacturing: 90%
- Agriculture: 60%
- Mining: 50%
- Utilities: 40%
- Transportation & Warehousing: 10%
- Wholesale Trade: 5%

Minnesota IMPLAN Group data for 13-county SCEDD
Tri-City Area Development

Industry Cluster and Emerging & Declining Industries

Census Bureau, Quarterly Workforce Indicators

Competitive Advantage & Resources • Economic Development & Industry Clusters • Strategic Direction
## Regional Competitiveness

<table>
<thead>
<tr>
<th>Industry</th>
<th>Change in Employment since 2007</th>
<th>National Growth Effect</th>
<th>Industry Mix Effect</th>
<th>Regional Competitive Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>-556</td>
<td>1,163</td>
<td>-2,670</td>
<td>951</td>
</tr>
<tr>
<td>Agriculture</td>
<td>775</td>
<td>103</td>
<td>50</td>
<td>622</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>100</td>
<td>391</td>
<td>-407</td>
<td>116</td>
</tr>
<tr>
<td>Educational Services</td>
<td>844</td>
<td>650</td>
<td>-182</td>
<td>376</td>
</tr>
<tr>
<td>Construction</td>
<td>-272</td>
<td>386</td>
<td>-874</td>
<td>216</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>-567</td>
<td>923</td>
<td>-254</td>
<td>-1,235</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>1,115</td>
<td>1,037</td>
<td>2,535</td>
<td>-2,457</td>
</tr>
</tbody>
</table>

Census Bureau, Quarterly Workforce Indicators
Variability in Core Industries

- Output price volatility is of concern to agriculture firms (FAO et al., 2011).
  - Climate, pests, inelastic supply and demand for ag products
  - Farm income is more volatile than off-farm income
- Manufacturing profits are volatile particularly as it relates to durable goods.
  - Replacement rates
  - Supply chain transparency

Cyclical Industry Advantage

- Building the Toyota Production System required stable production
  - Just in time inventory
  - Continual feedback
  - In process quality control
- Toyota partially accomplished this with pricing/demand management
- In agriculture – storage, irrigation, insurance, futures, diversification, access to credit
Cyclical Industries and Investment

- Industry and business cycles often weaken strategic investment (Tan, Hao & Mathews 2010)
  - Uncertainty leads to less responsiveness of R&D to the environment (Bloom 2007)
  - Firms tend to be more risk averse during contraction, more local search, less funding (Silvestri, Riccaboni & Malva 2018)
- Advantages can be generated through counter cyclical investment
  - Financially resilient/diversified firms produce more novel patents (Silvestri, Riccaboni & Malva 2018)
  - Innovation particularly when generated in downturns creates market value and impact (Silvestri, Riccaboni & Malva 2018)

Opportunities & Strategic Direction

• Priority Area #1: Industry Growth & Innovation
  • Goal #1: To grow, sustain, and integrate efforts related to diversifying the regional economy, particularly in the agriculture-manufacturing-wholesale trade industry cluster

• Priority Area #2: Workforce Development
  • Goal #2: To attract, develop, and retain a skilled, competitive, and entrepreneurial workforce that meets the needs of the regional business community, particularly in the agriculture, manufacturing, and health care industries

• Priority Area #3: Housing
  • Goal #3: To increase diverse and affordable housing options
Questions?