Community Capitals
Measuring, Mapping, and Strategic Application of the CAAM Project 01

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Final Community Assets and Attributes Model (CAAM)

| Social Capital	Human Capital	Cultural Capital	Political Capital
• Aggregate of religious, civic, business, political, professional, labor, bowling, recreational, golf, and sports organizations divided by population per 1,000 • Number of non-profit organizations excluding those with an international approach divided by population per 1,000	• % live births with low birth weight • Child poverty rate • Income inequality ratio • Number of reported violent crime offenses per 100,000 population • Unemployment rate	• Proportion of population aged 16+ employed in management, business, science, and the arts • % aged 25+ with Bachelor's degree or higher	• 2012 general election turnout • 2014 general election turnout
Source: Rupasingha, Goetz, and Freshwater (2014)	Source: County Health Rankings (2017)	Source: US Census (2015 5-year averages)	Source: Dave Leip's Atlas of US Presidential Elections (2017)

Creating County Scores: Human Capital

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Whitman County	
Variables	Values
Income Inequality	7.2
Low Birth Weight	5
Child Poverty	14
Unemployment	4.7
Violent Crime	148

1. Standardize to Country →
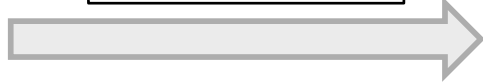
Whitman County	
Variables	Values
Income Inequality	3.69
Low Birth Weight	-1.27
Child Poverty	-0.95
Unemployment	-0.43
Violent Crime	-0.51

2. Multiply by Factor Score

Whitman County	
Variables	Values
Human Capital	-1.43

4. Standardize by Region/Division

Whitman County	
Variables	Values
Human Capital	-.86
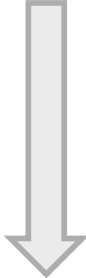
3. Add Scores ←

Whitman County		
Variables	Values	
Income Inequality	-2.85	(-.771)
Low Birth Weight	.80	(-.630)
Child Poverty	.73	(-.767)
Unemployment	.23	(-.523)
Violent Crime	.23	(-.456)
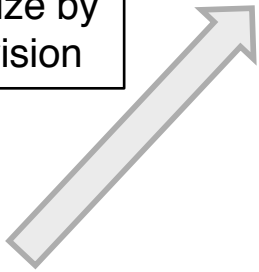
3

Community Capitals and Spiraling
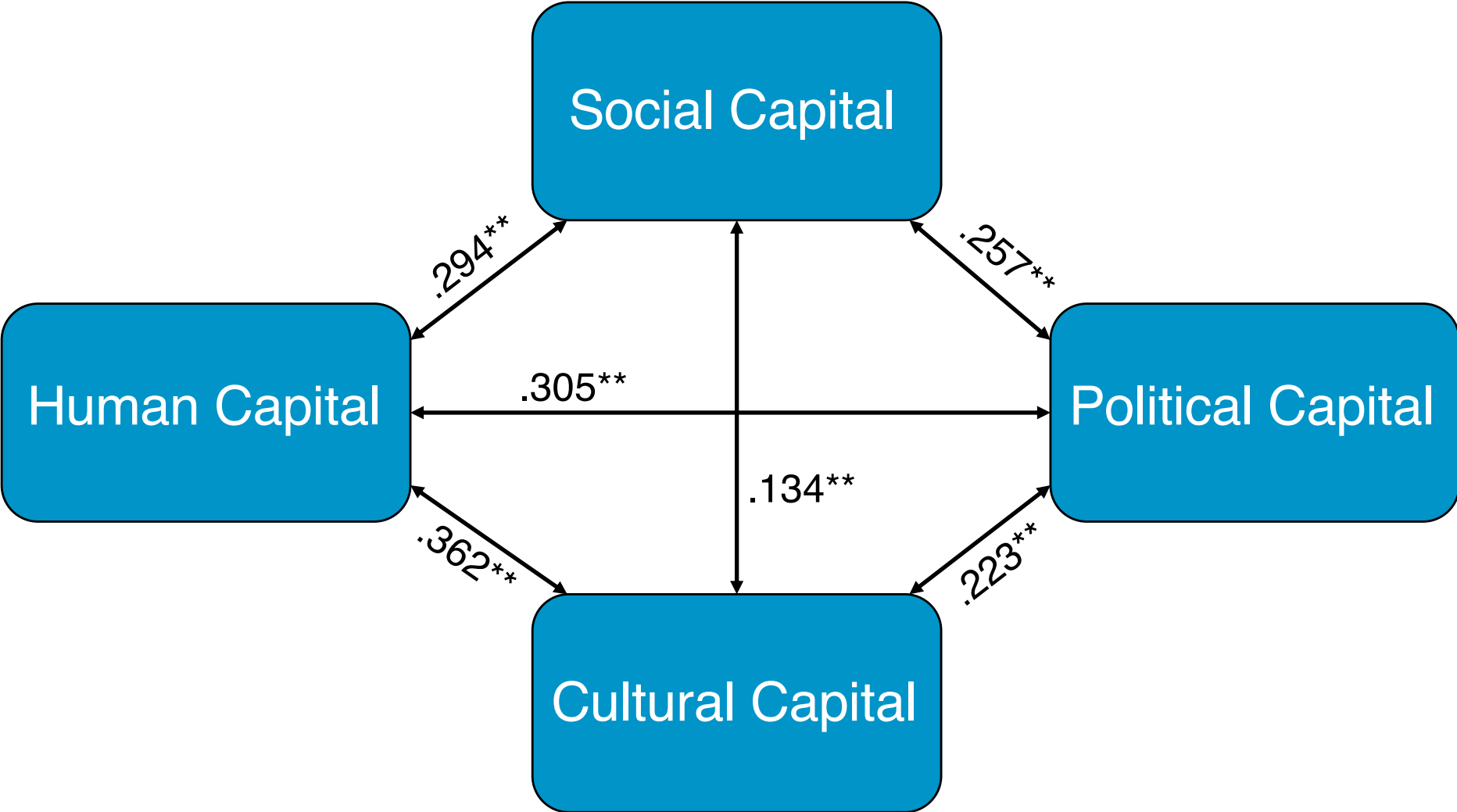
Mapping the Capitals

Social Capital in the Pacific Northwest
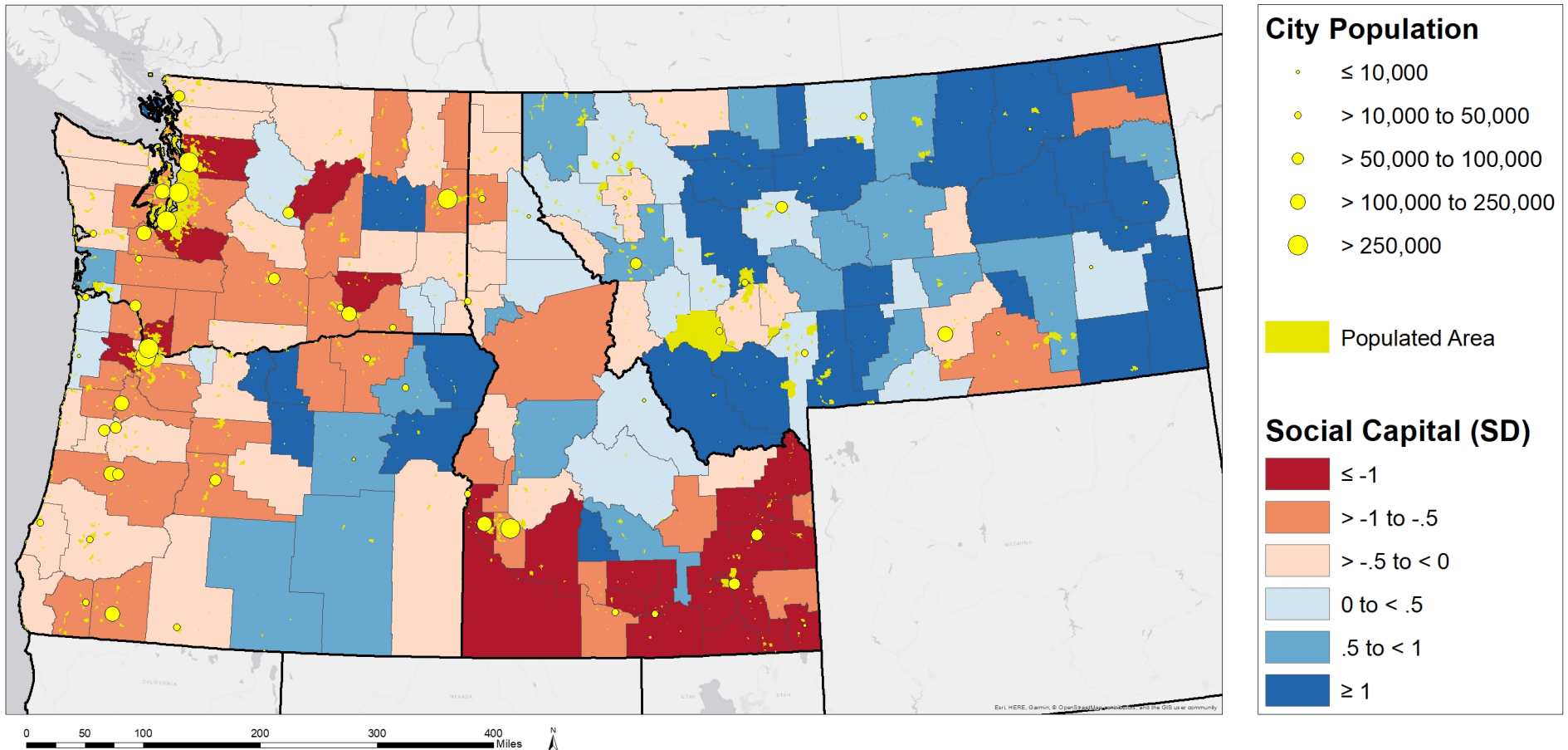
Mapping the Capitals

Human Capital in the Pacific Northwest

City Population

- ≤ 10,000
- > 10,000 to 50,000
- > 50,000 to 100,000
- > 100,000 to 250,000
- > 250,000

Populated Area

Human Capital (SD)

- ≤ -1
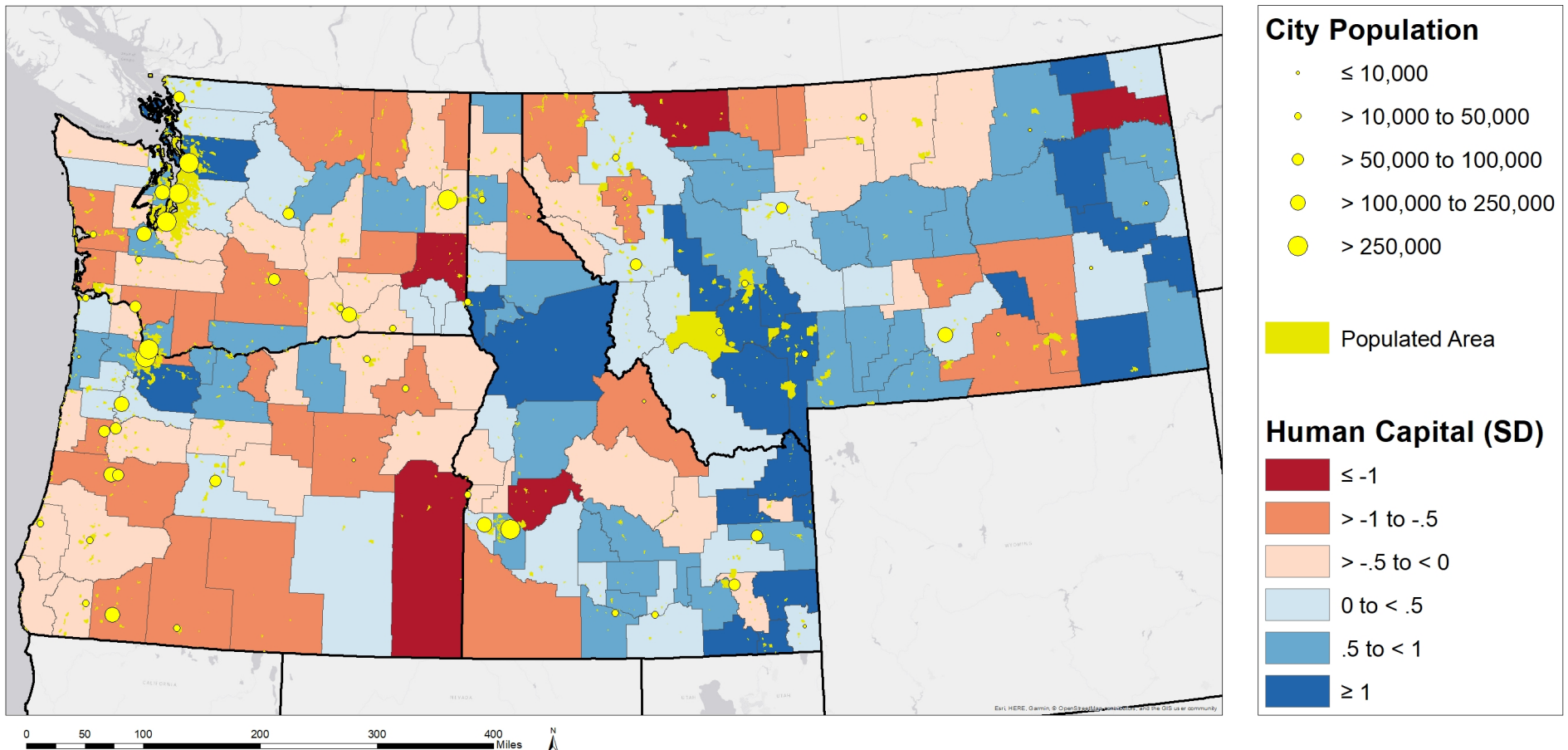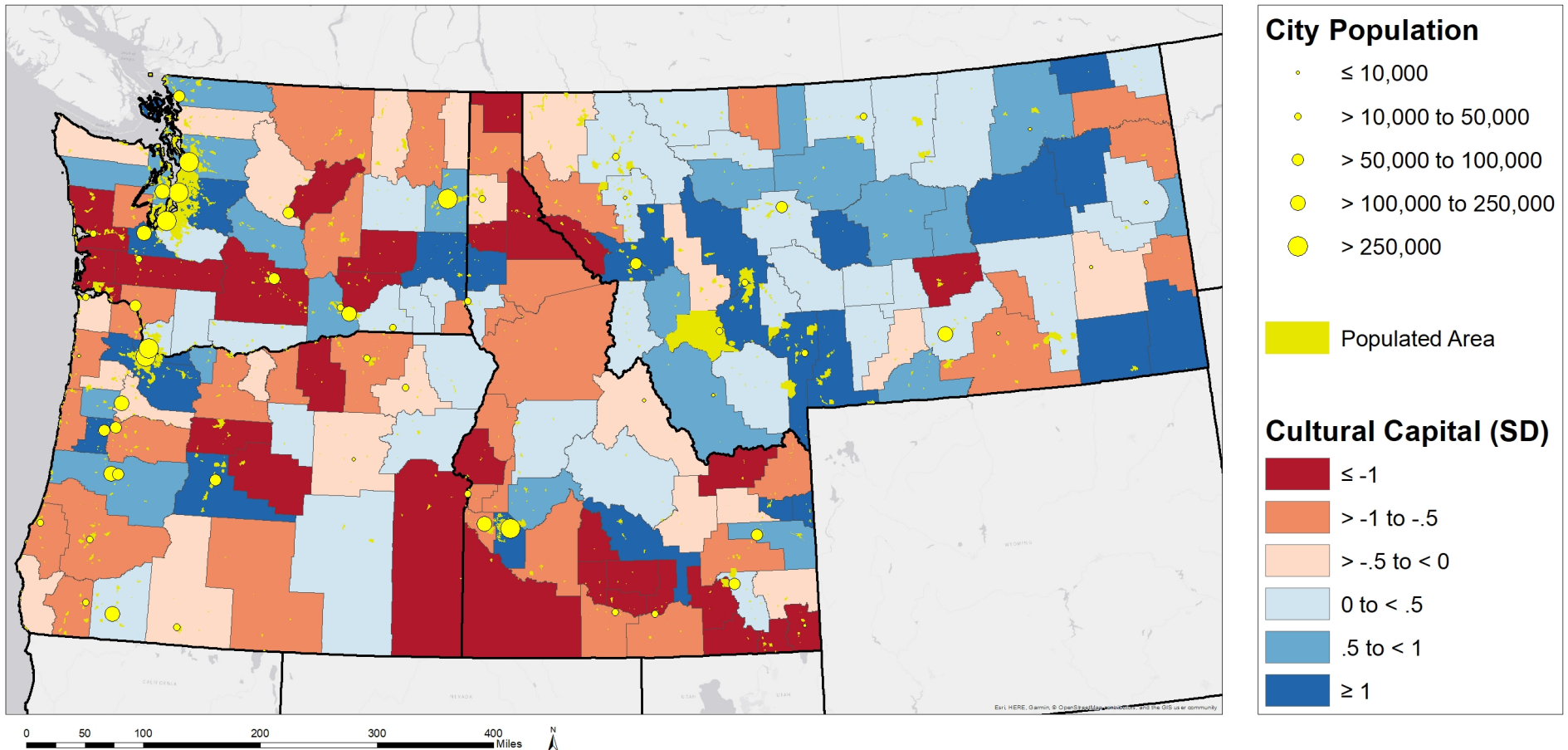- > -1 to -.5
- > -.5 to < 0
- 0 to < .5
- .5 to < 1
- ≥ 1

Mapping the Capitals

Cultural Capital in the Pacific Northwest

Mapping the Capitals

Political Capital in the Pacific Northwest
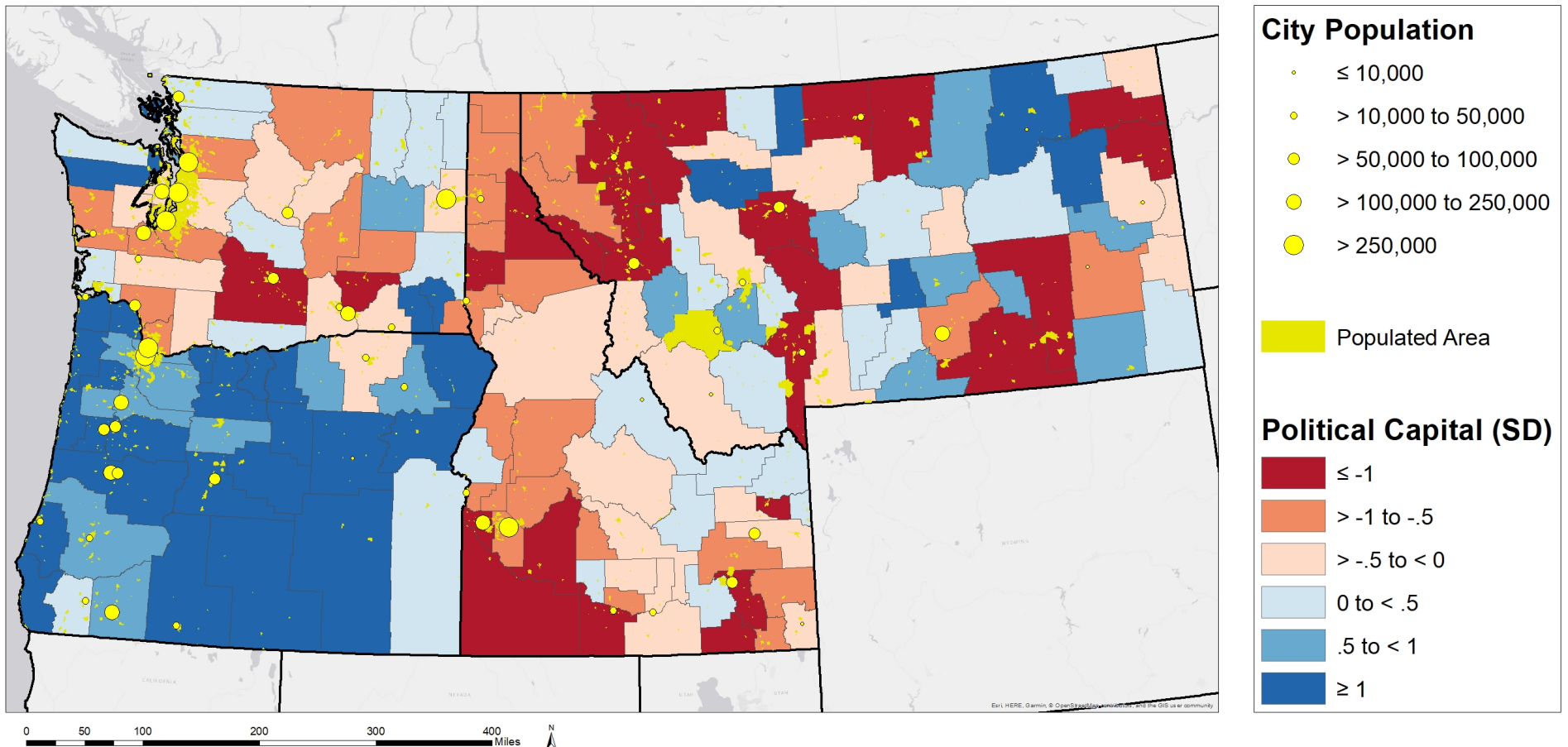
Strategic Decision Application

- ## Before:
  - If county score is below the regional or divisional average, that county is out of the running.
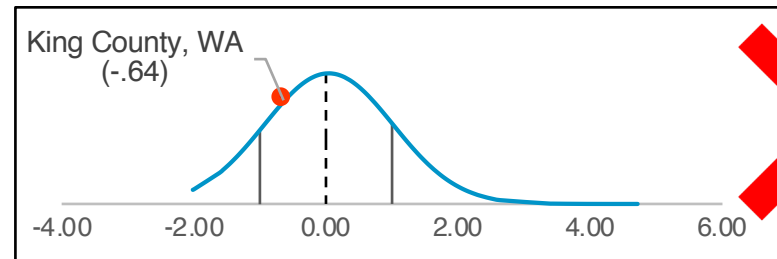
- ## Now:
  - County scores are displayed as z-scores, allowing for more nuance.
  - What can we determine about community to enhance potential for project success?

Strategic Application

CAAM
- Initial CAAM/Capital Scores to identify potential communities
- Based on CAAM what can we determine about community?

Supplement
- Supplement CAAM with other data

Strategize
- Based on CAAM and supplementary data:
- What strategies can be utilized to enhance likelihood of project success?
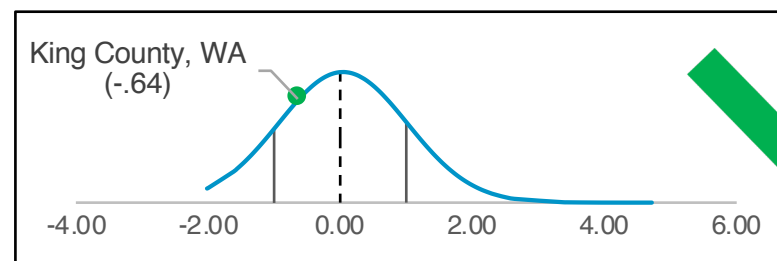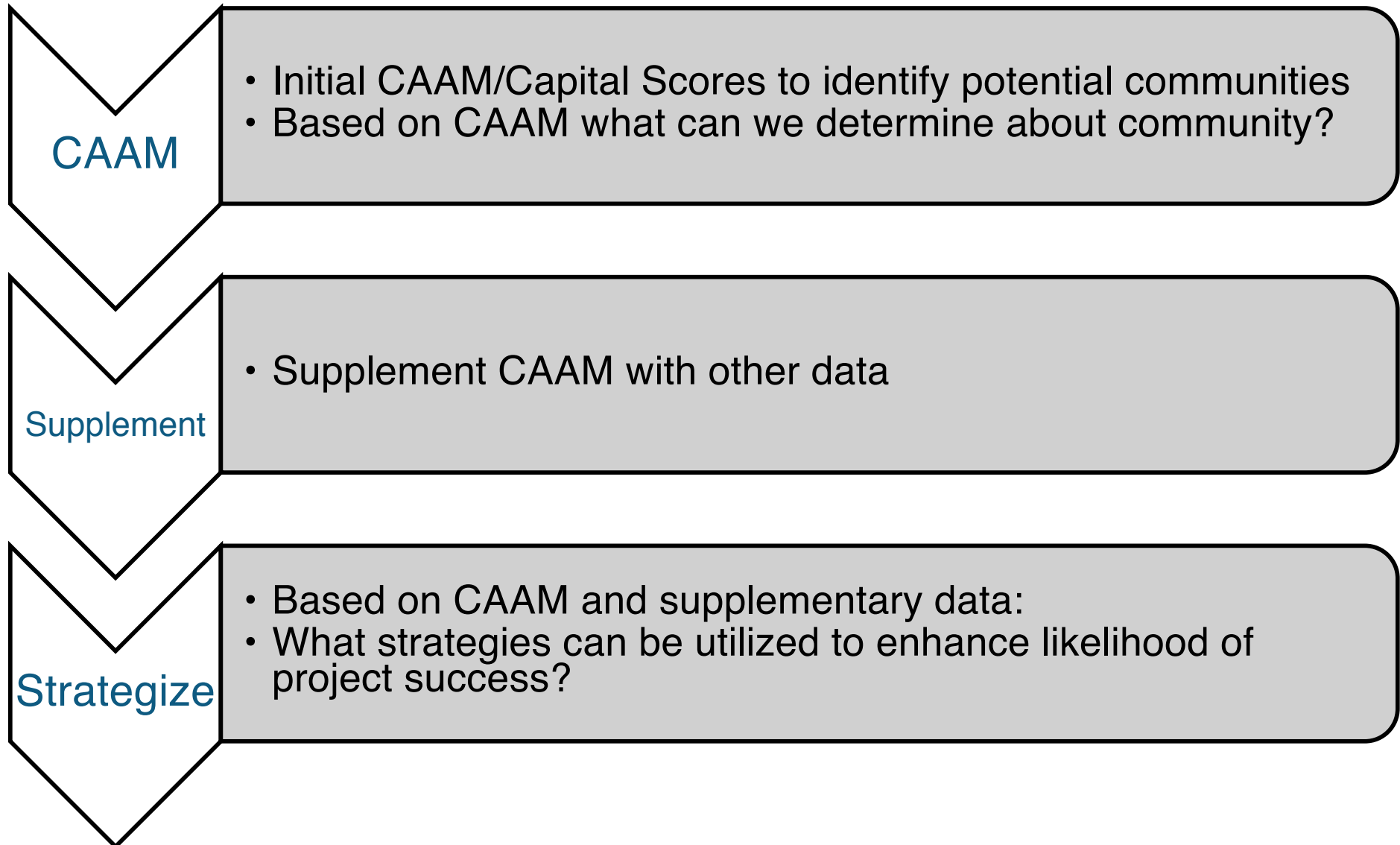
Strategic Application: Case Studies

Tacoma, WA	Lakeview, OR
2014: Northwest Innovation Works plans to construct a gas-to-methanol plant	Timber collapse led to formation of Lakeview Stewardship Group to manage forest health, including finding markets for forest residuals
Early political support from local public officials and the governor	2011: Iberdrola Renewables attempted to build biomass facility using forest residuals but failed to require Power Purchasing Agreement with local utility
Strong public opposition and distrust	2015: Red Rock Biofuels moved in to pick up where Iberdrola Renewables left off
2015 – 2016: public comment meetings reflected the public's concerns over the proposed plant's demands on water, electricity, and natural gas, as well as concerns over safety and pollution.	Red Rock has easily acquired approval and permits, but has not yet built the plant
County Board of Health asks the City of Tacoma to require a human health assessment and a SEPA review	Community stakeholders and leadership have been actively involved in the process with Red Rock and support remains high
Outcome: by mid-2016, Northwest Innovation Works terminated their lease and abandoned the project	**Outcome:** Red Rock continues to acquire the necessary permits and is constructing the plant with high community support

Strategic Application Tacoma

- Step 1: Use the CAAM

Tacoma Community Capitals		
Community Capital	Pierce County Score (Z)	PNW Average
Social	-1.01 (-1.02)	.20
Human	.88 (-.04)	.92
Cultural	.66 (.16)	.41
Political	1.10 (-.96)	2.07

  - CAAM suggests:
    - *Higher than average cultural capital, human capital near regional average:* suggesting adequate workforce for project, creativity and adaptability to adopt innovation
    - *AND:*
    - *Lower social capital*: potentially low levels of sustained community collaboration, low community trust, limited community mobilization
    - *Low Political Capital:* potentially limited access to political power, limited engagement politically, limited trust of political actors

Strategic Application Tacoma

- Step 2: Use supplementary data

Social Capital:
- Low, but what else can we determine?

Tacoma Diversity	
Diversity Measure	Pierce County Score
Diversity Index	.43
Segregation	43

- Moderately diverse, but segregated:
  - Distrustful of outsiders, other community members, lack of strong internal bonds, posing a <u>strong challenge</u> for project implementation. Requires multiple engagement strategies.

Strategic Application Lakeview

- Step 1: Use the CAAM

Lakeview Community Capitals		
Community Capital	Lake County Score (Z)	PNW Average
Social	1.01 (.69)	.20
Human	-.25 (-.94)	.92
Cultural	-.67 (-.69)	.41
Political	4.41 (2.31)	2.07

- CAAM suggests:
  - *Higher than average social and political capital:* suggesting high internal trust, strong community networks, high levels of political engagement, and potentially more trust of political actors
  - *And:*
  - *Lower human capital*: potential issues with lack of local workforce and, subsequently, the ability to maintain the plant long-term
  - *Low cultural:* potentially limited access to individuals with high levels of innovative and creative abilities needed for a project of this scale

Strategic Application Lakeview

- Step 2: Use supplementary data

High Social Capital:
- Above average, but what else can we determine?

Lakeview Diversity	
Diversity Measure	Lake County Score
Diversity Index	.18
Segregation	--

- Low Diversity
  - Homogenous, may be distrustful of outsiders, strong internal bonds

Strategic Application

Recommendations	
Tacoma, WA	**Lakeview, OR**
1. Need to Build Trust: • Connect with trusted community individuals • Create diverse networks: several actual "communities" • Be highly transparent throughout project • Be highly communicative throughout project	1. Connect with insiders (high trust/highly bonded) • Highly bonded suggests may be distrustful of outsiders—connect to trusted insiders to build support/utilize networks
2. May need extra engagement strategies • Extra effort needed to sustain community collaboration and engagement • May have to overcome distrust of political actors in community	2. May need extra expertise • May need outside expertise for building/initial implementation • May need to rely on workforce outside of county once operational or have training program
3. Framing the project: Still need to investigate community support for specific project before proceeding • Elections data suggest that the county is more Democratic and might be more supportive of alternative jet fuel projects	3. Framing the project: Still need to investigate community support for specific project before proceeding • Elections data suggest the county is more Republican so framing as economic development will be more successful.
Final Conclusions: May be difficult to implement project, expect extra time/effort to implement and keep community engaged.	*Final Conclusions:* May need extra time/money for outside expertise/training, if not supported by community expect several roadblocks, connect with trusted community actors to aid process.

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How We're Using the CAAM Now

- Application of Model in Inland Northwest
  - Validation of final model with political capital

- Collaboration with BANR research group to validate the model through interviews with stakeholders discussing biofuels in the region
  - Validation of political capital with another region
  - Validation of strategic application

- Collaboration with INFEWS research group to test the model on food, energy, water systems in the Columbia River Basin
  - Use our data to identify community vulnerability and ability to adopt innovation
  - Provide us a calculation on how CAAM measures impact timeframe to innovation adoption