

SCALE UP SACRAMENTO

Appendices

The City of Sacramento

April 20, 2020

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Appendix 1: Acknowledgments

Many thanks to the hundreds of individuals and organizations from across the region who participated in the creation of this Action Agenda through interviews and meetings, and who otherwise engaged in brainstorming, analysis, strategy discussion and identification of promising initiatives. A special thank you to our regional partners – Sacramento Area Council of Governments (SACOG), Valley Vision, Sacramento Metro Chamber of Commerce and Greater Sacramento Economic Council – who are simultaneously developing the Prosperity Strategy, an inclusive economic growth strategy for the Sacramento region. The Prosperity Strategy and this Action Agenda have been developed in partnership, and are closely aligned. Special thanks also to the team of local and national experts, led by RW Ventures, LLC, who staffed this extensive process. Their expertise in applying asset- and market-based business planning to the task of regional economic growth has provided this roadmap to transition the region into a vibrant, diverse and inclusive economy, creating opportunities for all people and places.

ScaleUP Sacramento drew from the insights and expertise of hundreds of interviewees from across the city, region and country. The team is grateful to all of these organizations and individuals – ScaleUP Sacramento could not have come to be without them.

Please see the full report - *ScaleUP Sacramento: An Inclusive Economic Action Agenda* – for a full list of acknowledgements.

Appendix 2: Spatial Efficiency – Infrastructure Projects

The following is an initial list of infrastructure projects that others in the region who have done much more in-depth analysis¹ – particularly SACOG – have identified as helping position Sacramento and the broader region for sustainable and inclusive economic growth. These projects are specifically designed to reduce vehicle miles traveled (by increasing access to transit and more frequent transit) and are likely to have direct economic benefits to existing disadvantaged communities. *(Note: these projects are arranged alphabetically and not in order of importance or preference).*

- **Aggie Square Electric Shuttle:** This project includes a new all-electric transit service between Aggie Square, Downtown Sacramento, West Sacramento (potentially), and the main UC Davis campus. The shuttle would be operated by Sacramento Regional Transit (SacRT) and Yolo County Transportation District (YCTD) and provide a key opportunity to better link the two campuses while reducing automobile travel for employees and students. It would provide new transit option for the heavily congested I-80 corridor and would be tied with a new managed lane (see above) to allow reliable transit speeds.
- **Dos Rios Light Rail Station.** SacRT is in the process of constructing a new light rail station on the Blue Line in an existing disadvantaged community that contains a large proportion of the region’s subsidized housing (Twin Rivers/River District). This new station is also near the Railyard and Downtown and will provide a transit option for underserved communities accessing these job centers.
- **Franklin Boulevard Complete Street Upgrade:** This project includes installing Complete Streets improvements between Sutterville and 38th Avenue in a predominately Hispanic community. It will create a sense of place for the community and foster new businesses opportunities. While these would likely be neighborhood-serving (i.e., not base or tradable jobs), it will still be a positive development for an underserved community.
- **Interstate 80 Corridor Expansion:** Caltrans is currently evaluating adding an additional lane in both directions for I-80 between West Sacramento and Solano County. This would be a “managed lane” that would have a combination of HOV-only access and congestion pricing. While this project would better manage congestion on the main connection route to the San Francisco Bay Area, it is likely decades from completion and currently underfunded.
- **New I Street Bridge:** The cities of Sacramento and West Sacramento are working to create a new bridge across the Sacramento River. While called the “I Street Bridge” project, it is an entirely new bridge that will connect Railyards Boulevard in Sacramento with C Street in West Sacramento. This new bridge will increase vehicle and transit connections between the two cities and the broader region. Once completed, the current I Street Bridge (owned by Union Pacific Railroads) will have its upper deck converted for only bicycle and pedestrian mobility.

¹ SACOG, Draft 2019 Regional Transportation Plan/Sustainable Communities Strategy, September, 2019.

- **Sacramento International Airport Electric Bus:** The region has a goal to expand light rail service from Downtown Sacramento to the Sacramento International Airport. With a price tag of over \$1 billion and a long timeframe for completion, SACOG and SacRT are evaluating a nearer-term option to expand electric bus transit to the airport along I-5. This service would connect to SacRT bus and light rail services in Downtown and provide a quick way to access the airport by transit. Currently, Yolobus is the only transit provider for the airport.
- **Stockton Boulevard Bus Rapid Transit:** This project would create high-priority bus routes along Stockton Boulevard to better connect disadvantaged neighborhoods along the corridor with Aggie Square and Downtown.
- **Valley Rail Project:** The Valley Rail Project has received \$900 million from State to build a new passenger rail service with stations to better connect Sacramento to the San Joaquin Valley and Bay Area. They have a current timeline to get the system operational by 2021. The project would have multiple benefits to Sacramento and the region, including:
 - Expanding commuter rail service to/from Sacramento to communities to the south and the greater Bay Area.
 - Creating an additional option for getting to the airport via transit, as the Natomas Station will have a shuttle to the Sacramento International Airport.
 - Reducing single-occupancy vehicle travel on the highways, especially between Sacramento and Elk Grove (the two largest cities in the region).
 - Increasing opportunities for transit-oriented development associated with four stations: City College, Midtown, Old North Sacramento, and Natomas.

Appendix 3: Spatial Efficiency – Development Opportunities

Initial Site Assessment

Within the Sacramento region, there are several existing and planned major employment and mixed-use centers. The following section provides a preliminary assessment of how well they meet specific inclusive growth goals and criteria for the region (for more detail, see [Spatial Efficiency section](#)), and initial speculation about what kinds of activities might be developed at the varied sites.

Major Industrial Centers and Projects

The Sacramento region contains a diverse array of neighborhoods, commercial and mixed-use districts, office, and industrial locations. Supporting a metro region of over 2.2 million, Sacramento falls within the center of the *Northern California Megaregion*² and is heavily influenced by the Bay Area and greater Central Valley. Sacramento benefits from being centrally located within the megaregion and having convenient access to several Interstates, four major airports, and a deep-water harbor (Port of West Sacramento).

To begin the spatial efficiency analysis, MIG developed a composite map that aggregates an extensive amount of regional GIS data and spatial information. This data includes existing and planned transit networks, freeways, waterways, airports, zoning, institutions, major planned developments, and other information.³

Figure 1 below summarizes all the mapping information and creates an overall picture of where in the greater Sacramento region new industrial, employment, and mixed-use growth is planned to be located and how well these areas are accessed by existing and planned transit systems.

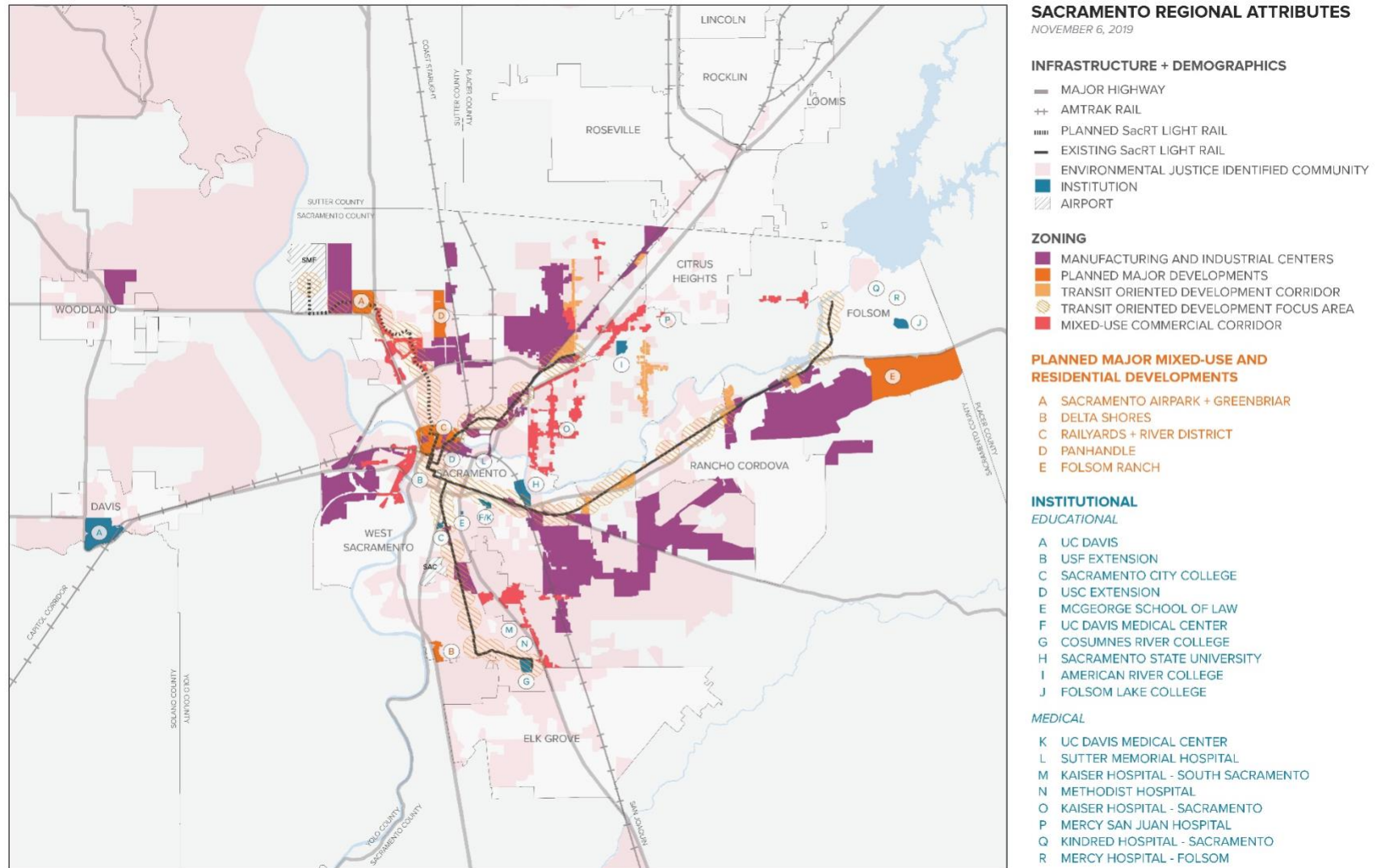
² Bay Area Council Economic Institute, 2019, available at: <http://www.bayareaeconomy.org/report/the-northern-california-megaregion/>

³ Spatial Data Sources:

- **Transportation** (highways, Amtrak, light rail, airports): SACOG Regional Data Clearinghouse ([link](#))
- **Environmental Justice Communities**: SACOG Regional Data Clearinghouse ([link](#))
- **Zoning** (manufacturing, employment and industrial centers): City of Sacramento Zoning Shapefile ([link](#)), City of West Sacramento Zoning Shapefile ([link](#)), Sacramento County Zoning Shapefile ([link](#))
- **Zoning** (transit-oriented developments): Sacramento County TOD Ordinance Shapefile ([link](#)); City of Sacramento TOD Ordinance Shapefile ([link](#))
- **Zoning** (mixed-use commercial corridors): County of Sacramento ([link](#)); City of Sacramento ([link](#)); City of West Sacramento ([link](#))
- **Planned Major Mixed-Use and Residential Developments**: City of Sacramento, Greenbriar ([link](#)); City of Sacramento, Delta Shores ([link](#)); City of Sacramento, River District ([link](#)); City of Sacramento, Railyards ([link](#)); City of Sacramento, Panhandle ([link](#)); City of Folsom, Folsom Crossing ([link](#)); Sacramento County ([link](#))
- **Institutional** (education and medical): Sacramento County ([link](#)); Yolo County ([link](#))

An additional piece of information was also overlaid – the location of “Environmental Justice Communities.” California was one of the first states in the nation to codify environmental justice in statute and require cities and counties to directly address and remediate environmental justice issues through General Plan land use and mobility policy.

Figure 1: Regional Spatial Attributes Composite Diagram



Focus Areas

While Figure 1 identifies all areas that either currently contain or are planned for industrial, employment, and/or mixed-use development, this analysis went a step further and identified specific locations that meet the following criteria needed to create major new economic centers:

- Planned for larger-scale urban growth.
- Located within an existing urbanized area that has access to transportation and communications infrastructure.
- Focused on major industrial, employment, office or mixed-use development that will have regional benefits.
- Located near existing or planned transit (predominately light rail).
- Near neighborhoods that would directly benefit from economic growth and neighborhood improvements (e.g., Environmental Justice Communities).

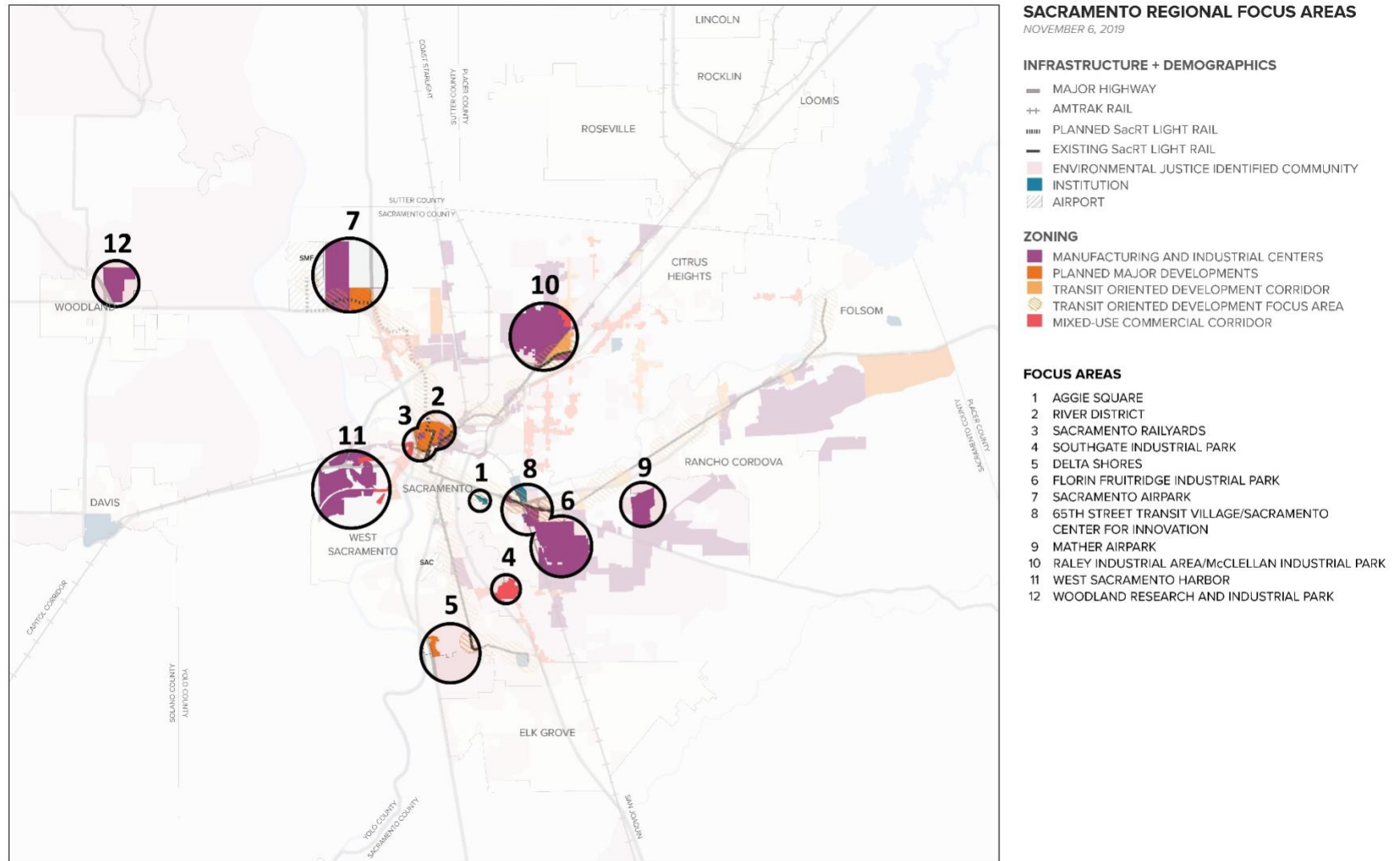
Based on these criteria, there are at least **12 unique areas in the Sacramento region** that meet all or most of the above spatial criteria necessary to promote large scale development (shown in **Figure 2**):

1. Aggie Square
2. River District
3. Sacramento Railyards
4. Southgate Industrial Park
5. Delta Shores
6. Florin Fruitridge Industrial Park
7. Metro Airpark/Northlake
8. 65th Street Transit Village/Sacramento Center for Innovation
9. Mather Airpark
10. Raley Industrial Area/McClellan Industrial Park
11. West Sacramento Harbor
12. Woodland Research and Industrial Park

The following pages provide summaries for each of the Focus Areas. Specifically, they identify their location, existing and planned land uses, and potential opportunities. Each summary also includes an initial qualitative assessment for how well the location addresses the key needs of future larger-scale development projects. These criteria are identified and explained in the table below.

SCORE CARD CRITERIA	
Access to Major Roads	Does the area have direct access to Interstate freeways or other major roadways for employees and freights? ⊕ Yes ⊖ Limited ⊗ No
Access to Freight Rail	Does the area have direct access to freight rail lines and/or spur lines? ⊕ Yes ⊖ Limited ⊗ No
Access to Transit	Is the area directly served by Light Rail stations? ⊕ Yes ⊖ No, but there are light rail stations close by ⊗ No
Amount of Available Land	Does the area have a large amount of vacant and available land to locate major users? ⊕ Yes ⊖ Yes, but the size is limited ⊗ No
Proximity to Anchor Institutions	Is the area near education, healthcare, or other large institutions that can be used to incubate economic growth? ⊕ Yes ⊖ Near but not within ⊗ No
Proximity to Existing Industries	Is the area near existing industries and employers that can be used to incubate economic growth? ⊕ Yes ⊖ Near but not within ⊗ No
Proximity to Communities in Need	Is the area adjacent to existing communities that need economic development or job training assistance? ⊕ Yes ⊖ Limited ⊗ No

Figure 2: Industrial and Mixed-Use Focus Areas



1. AGGIE SQUARE

Jurisdiction (Location): UC Davis and City of Sacramento (Med Center, Elmhurst, and North Oak Park neighborhoods)

Current and Planned Uses: Aggie Square is a partnership between UC Davis, the City of Sacramento, and future private industry to create an educational/industry Innovation District on the UC Davis Sacramento Campus. It is envisioned to house business partners and community-based programs with UC Davis innovation and research to create a stronger and healthier shared community. Aggie Square will create a unique live/learn/work/play environment to foster collaboration and creativity, and include state-of-the-art research facilities, modern office and mixed-use space, world-class amenities, and new public spaces/connections to neighboring communities.⁴ The first phase of the project is currently under design based on the needs of a to-be-identified anchor institution.

FOCUS AREA SCORECARD						
Access to Major Roads	Access to Freight Rail	Access to Transit	Amount of Available Land	Proximity to Anchor Institutions	Proximity to Existing Industries	Proximity to Communities in Need
⊕	⊗	⊕	○	⊕	○	⊕



Opportunities

- Create a mixed-use bio/life science focused Innovation District that supports training and job growth opportunities for surrounding neighborhoods.

⁴ University of California, Davis, Aggie Square project website. Available at: <https://leadership.ucdavis.edu/aggie-square/about>

- Identify specific uses/users (career education/tech, health care, civic) that can be located on the Aggie Square site which will benefit research and innovation, and the surrounding communities.

2. RIVER DISTRICT

Jurisdiction (Location): City of Sacramento (Richards and Dos Rios Triangle neighborhoods)

Current and Planned Uses: The River District is a strategic opportunity area located just north of Downtown Sacramento and the Railyards, at the confluence of the American and Sacramento Rivers. The area has traditionally been a hub of industrial and offices uses. The City envisions the area transitioning into a vibrant, mixed-use community connected to the surrounding neighborhoods by a network of local streets, light rail transit, and bicycle and pedestrian pathways. It will be bordered by a ribbon of parks at the rivers' edge and have a wide range of employment, entertainment, and housing options for families and individuals. It will be home to existing light industrial uses and new development transitioning to a mix of development transitioning to residential and retail/commercial infill.⁵

FOCUS AREA SCORECARD						
Access to Major Roads	Access to Freight Rail	Access to Transit	Amount of Available Land	Proximity to Anchor Institutions	Proximity to Existing Industries	Proximity to Communities in Need
⊕	⊗	⊕	⊕	⊕	⊕	⊕



Opportunities

Focus larger development efforts around a Mission-Oriented Master Developer who can aggregate properties into larger projects.

- Consider having this area a focus for Diversity Ownership Scale-Ups given the current composition of many existing small businesses and a diverse community.

⁵ City of Sacramento, River District Specific Plan, February 15, 2011.

3. SACRAMENTO RAILYARDS

Jurisdiction (Location): City of Sacramento (Union Pacific Railyard and Central City neighborhoods)

Current and Planned Uses: The Railyards property is located just north of Downtown and south of the River District. Once serving as the western terminus of the 1860s Transcontinental Railroad, today the Railyards houses a major transportation hub and will soon be home to a dynamic mixed-use, transit-oriented development. The City envisions transitioning the 244-acre historic Union Pacific site into a dynamic, urban environment featuring a state-of-the-art mass transit hub that will serve residents, workers, and visitors. In October 2016, the City Council approved planning entitlement for the Sacramento Railyards that included: 6,000 - 10,000 housing units; 515,000 square feet of retail; 2.7–3.8 million square feet of office; 770,000 square feet of flexible mixed-use; 1.2 million square feet of medical campus; a 20,000+ seat Major League Soccer stadium; 1,100 hotel rooms; and a variety of historic, cultural and open space uses.⁶

FOCUS AREA SCORECARD						
Access to Major Roads	Access to Freight Rail	Access to Transit	Amount of Available Land	Proximity to Anchor Institutions	Proximity to Existing Industries	Proximity to Communities in Need
⊕	○	⊕	⊕	⊕	⊕	⊕



⁶ City of Sacramento, The Railyards Project Overview, 2019, available at: <https://www.cityofsacramento.org/Community-Development/Planning/Major-Projects/Railyards-Project>

Opportunities

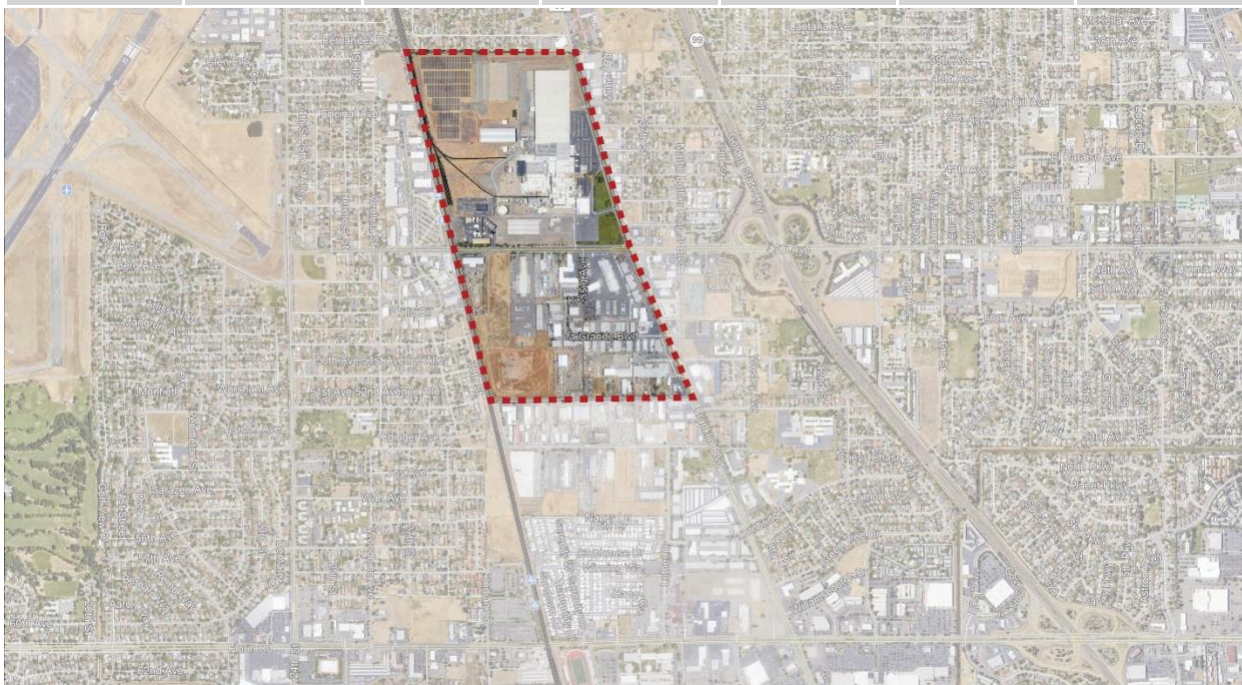
- Work with the existing master developer to identify locations and users who would benefit from proximity to the planned Kaiser Permanente Medical Center, including life science clusters.

4. SOUTHGATE INDUSTRIAL PARK

Jurisdiction (Location): Sacramento County (Southgate Industrial Park neighborhood)

Current and Planned Uses: The Southgate Industrial Park is located in Sacramento County and has traditionally been home to major manufacturing uses, including the former Campbell's Soup facility. The area remains a strategically located industrial center with access to heavy rail and the 99 Freeway. More recently, the area has transitioned into a range of industrial uses and distribution centers. Due to its location and amount of available land, the area has the potential for increasing employment opportunities near disadvantaged neighborhoods in South Sacramento. The area is also near the Sacramento Executive Airport, which provides additional connectivity benefits.

FOCUS AREA SCORECARD						
Access to Major Roads	Access to Freight Rail	Access to Transit	Amount of Available Land	Proximity to Anchor Institutions	Proximity to Existing Industries	Proximity to Communities in Need
⊕	⊕	⊕	⊕	○	⊕	⊕



Opportunities

- Create a center for a Food Processing Innovation Park that can build from the existing infrastructure and factory layouts.
- Work with adjacent communities to provide skills training and jobs.

5. DELTA SHORES

Jurisdiction (Location): City of Sacramento (Meadowview neighborhood)

Current and Planned Uses: In 1960, the City annexed Delta Shores (1,204 acres), a large undeveloped area at the city's southern edge. The Delta Shores subarea is bounded by the Meadowview subarea on the north, the city limits and Sacramento Regional Sanitation on the south, and the Union Pacific railroad tracks on the east. This area is planned to develop as several new neighborhoods, major shopping centers, and employment uses with connections to transit. Of all seven subareas in the South Area, this area has the greatest potential for new development, and, once developed, will complete city expansion to its southern border.⁷



Opportunities

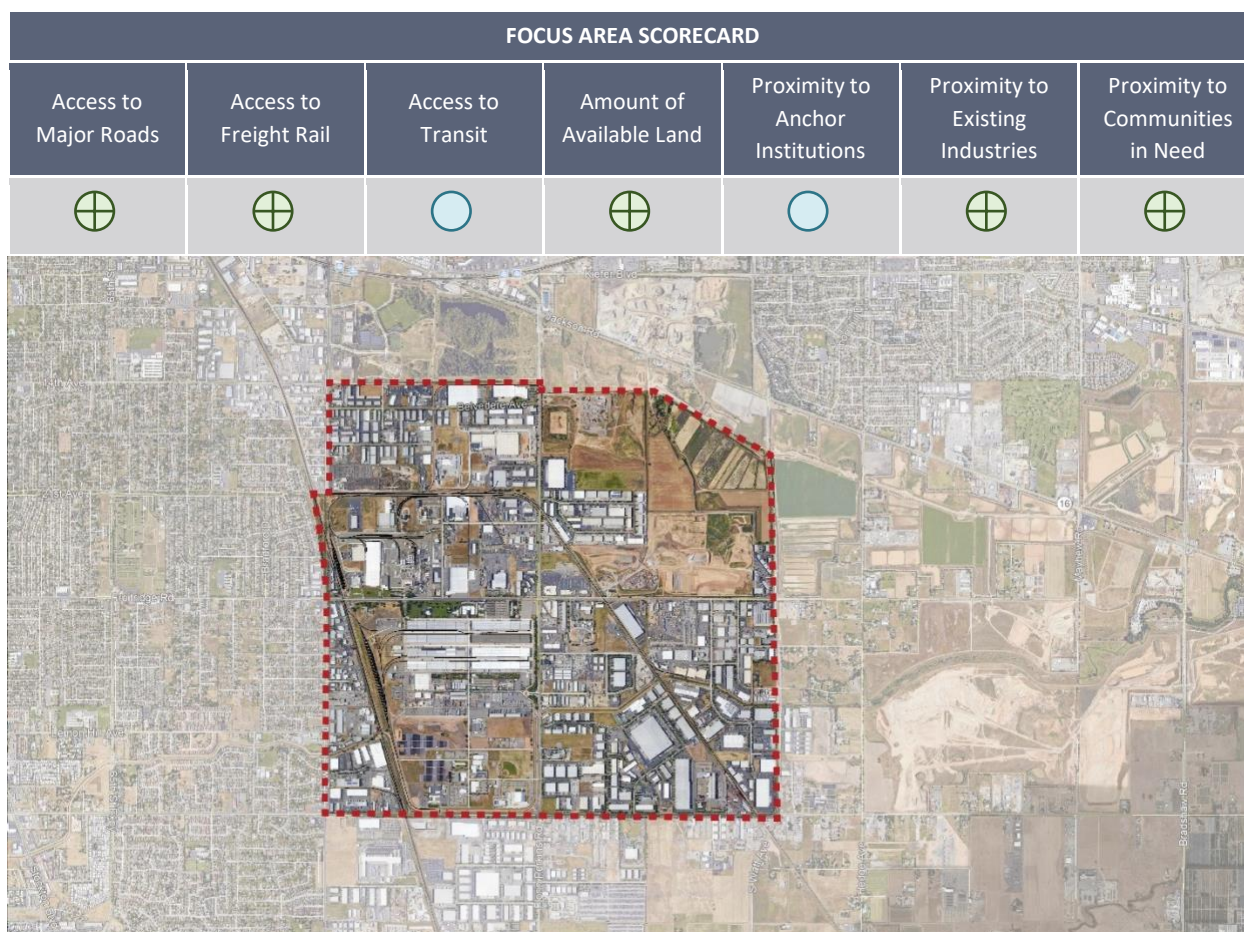
- Focus opportunities for diversity ownership “scale-ups” tied to the development of future uses on this master planned site.

⁷ City of Sacramento, South-Area Community Plan, March 3, 2015

6. FLORIN FRUITRIDGE INDUSTRIAL PARK

Jurisdiction (Location): City of Sacramento (Belvedere, New Brighton, Power Ridge, Depot Park, Elder Creek, Morrison Creek, and Florin Fruitridge Industrial Park neighborhoods)

Current and Planned Uses: The Florin Fruitridge Industrial Park has traditionally been Sacramento’s major manufacturing center. It currently contains many distribution centers, food industry warehousing, a major Siemens train car manufacturing center, and a large former Army depot. The City envisions this area continuing to be the manufacturing heart of Sacramento. It benefits from having direct access to heavy rail and an array of spur lines already connected to sites/buildings. The area also has large format building that can be repurposed and vacant areas that can be built to suit.



Opportunities

- Consider expanding food processing operations in this area, especially companies that require large facilities and/or freight rail.
- Focus diversity ownership “scale-ups” in this area to better support existing small businesses and surrounding communities.

7. METRO AIRPARK/NORTHLAKE

Jurisdiction (Location): City of Sacramento and Sacramento County (Airport and Greenbriar Neighborhoods)

Current and Planned Uses: Metro Airpark is located in Sacramento County and is envisioned to become a logistics and distribution hub with direct access to Interstate 5 and Highway 99, as well as air freight service from Sacramento International Airport. This area represents one of the largest opportunity areas in relation to the amount of available land already zoned for industrial uses. Current, the area only contains one Amazon distribution center. The downside to this area, however, is that it does not have access to an existing neighborhood or transit (although there is a planned light rail expansion to this area and the airport). The Northlake area is located in the City of Sacramento and is planned as a new mixed-use neighborhood adjacent to Metro Airpark.



Opportunities

- Consider additional major job generating anchor users that will benefit from being near the Sacramento International Airport.

8. 65TH STREET TRANSIT VILLAGE/SACRAMENTO CENTER FOR INNOVATION

Jurisdiction (Location): City of Sacramento (Tahoe Park East, College Town, Power Inn, and Ramona Village neighborhoods)

Current and Planned Uses: The South 65th Street Transit Village is envisioned as a mixed use district which provides direct bicycle and pedestrian connections to the 65th Street Transit Center, CSUS, and the 65th Street/University Transit Village area (located north of Hwy 50), by way of improvements to Redding Avenue and 65th Street. The Transit Village is envisioned to transition from an auto-oriented commercial and industrial district to a more mixed-use Transit-Oriented neighborhood. The City has identified this area for potential financial and regulatory incentives to encourage development of transit supportive and sustainable development consistent with the Transit Village Plan.⁸ In addition, this area also includes the Sacramento Center for Innovation (within the Power Inn Business Alliance), a partnership between the City and CSUS to create a research park. Overall, this area currently is home to 62% of the existing manufacturing jobs in Sacramento.⁹



⁸ City of Sacramento, Fruitridge Broadway Community Plan, 2015

⁹ Data prepared by the Burris Service Group and Power Inn Alliance. The Impact of Economic Activities in the Power Inn Alliance area, January 2016.

Opportunities

- Continue to focus on creating a new, integrated, transit-oriented neighborhood that includes a range of housing, commercial, office, and employment uses near CSUS.
- Identify ways to integrate CSUS and other academic institutions into the new neighborhood, to better link adjacent neighborhoods with diversity ownership “scale-ups” located near transit.

9. MATHER AIRPARK

Jurisdiction (Location): Sacramento County (Mather Airport, Mather Heights, Frye Creek, and Walsh Station neighborhoods)

Current and Planned Uses: Mather Airpark is former military airbase facility that transferred from the federal government to Sacramento County for redevelopment purposes. Sacramento County continues to coordinate the integration of Mather Airfield into the surrounding community and the Sacramento Region. The facility is envisioned to remain a major center for job creation with an airport, aviation industrial uses and additional components to include: a business park, major employment center, commerce center, regional park ecological resources and public amenities opportunities.¹⁰

FOCUS AREA SCORECARD						
Access to Major Roads	Access to Freight Rail	Access to Transit	Amount of Available Land	Proximity to Anchor Institutions	Proximity to Existing Industries	Proximity to Communities in Need
						



Opportunities

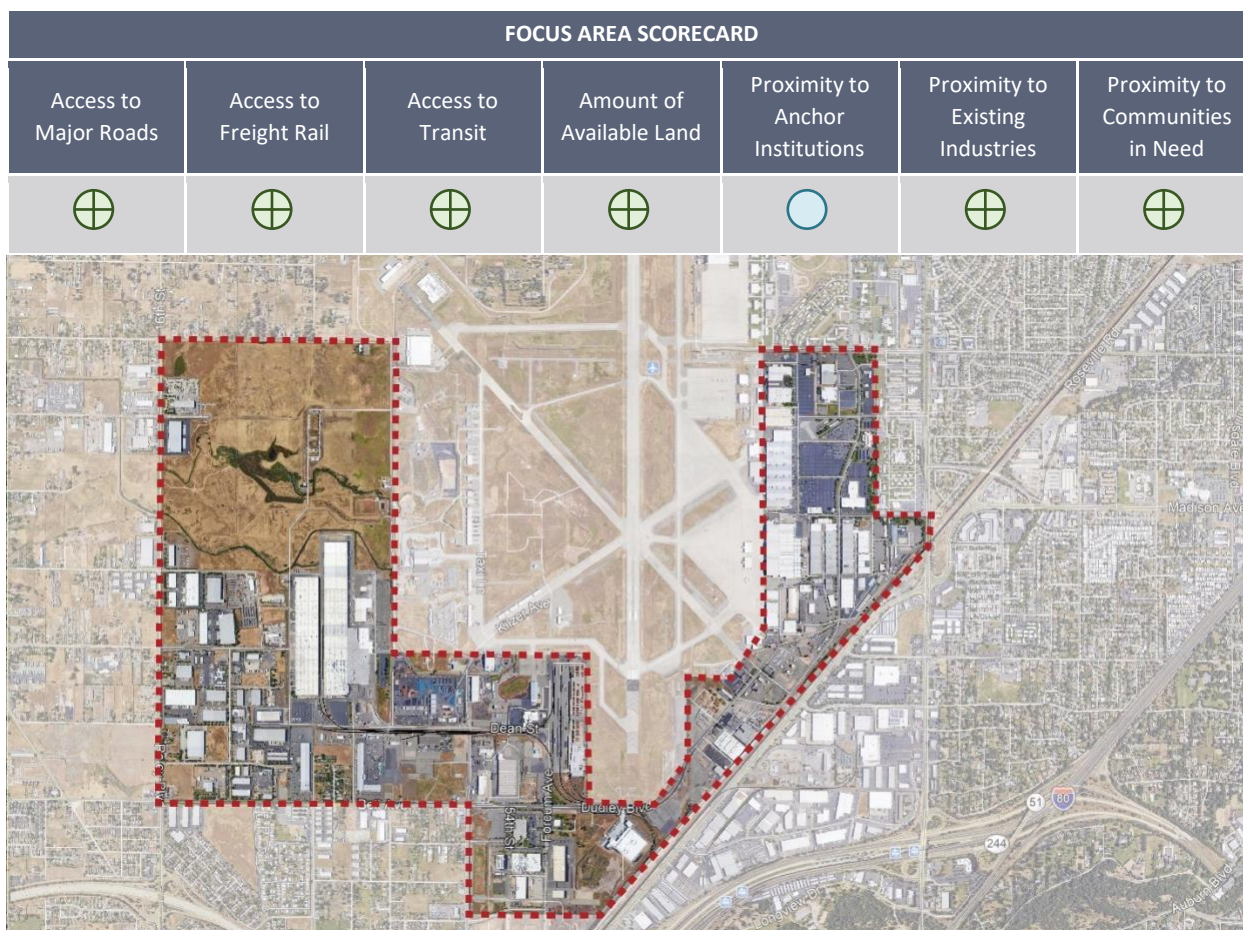
- Expand the business park and major employment uses industries related to aviation, defense, and high technology.
- Create additional ways to blend this area into the surrounding community, with initiatives to support diversity ownership “scale-ups.”

¹⁰ County of Sacramento, General Plan, Economic Development Element, September 26, 2017

10. RALEY INDUSTRIAL AREA/MCCLELLAN INDUSTRIAL PARK

Jurisdiction (Location): City of Sacramento and Sacramento County (Raley Industrial Park, East Del Paso Heights, McClellan Industrial Park, and Planehaven neighborhoods)

Current and Planned Uses: McClellan Park is former military airbase facility that transferred from the federal government to Sacramento County for redevelopment purposes. Sacramento County will integrate McClellan Park into the North Highlands neighborhood through new street connections and infill development. . The facility is envisioned to remain a viable air facility with aviation industrial uses and serve as a business park and major employment center. The County will continue to support and facilitate McClellan Park's conversion into an industrial park with a core of aviation industrial and related uses that supports the needs of the community and serves as a major job center for the County¹¹.



Opportunities

- Locate larger warehousing, manufacturing, and distribution centers that would benefit from being close to Interstate 80 on large (and relatively cheaper) land. This provides an opportunity to locate spaces in high-growth, emerging industries that require large land

¹¹ County of Sacramento, General Plan, Economic Development Element, September 26, 2017

parcels (e.g., future mobility manufacturing facility, biopharmaceutical wet lab space, high-tech manufacturing).

- Expand aviation-oriented companies that would benefit from being close to Cal Fire or a long-length runway.

11. WEST SACRAMENTO HARBOR

Jurisdiction (Location): City of West Sacramento (Harbor and Southport neighborhoods)

Current and Planned Uses: The inland Port of West Sacramento is situated at the heart of the Sacramento metropolitan area and centered in one of the richest agricultural regions in the world. The Port opened in 1963, primarily to serve the Northern California rice industry, and can handle an array of cargo commodities through its facilities¹². One the southern side of the deep-water canal, the City of West Sacramento has planned the South Port neighborhood to include land for major manufacturing, employment, and distribution center projects.

FOCUS AREA SCORECARD						
Access to Major Roads	Access to Freight Rail	Access to Transit	Amount of Available Land	Proximity to Anchor Institutions	Proximity to Existing Industries	Proximity to Communities in Need
⊕	⊕	○	⊕	⊗	⊕	⊕



Opportunities

- Locate light industrial and manufacturing uses that would benefit from easy access to Interstate 80 and 50, heavy rail, and water freight.
- Build upon research and innovation industries already located in this area, including Bayer Crop Science, California Fuel Cell Partnership, and agricultural product warehousing and shipping.

¹² City of West Sacramento, Port of West Sacramento Overview, 2019, available at: <https://www.cityofwestsacramento.org/business/economic-development-housing/port-of-west-sacramento>

12. WOODLAND RESEARCH AND INDUSTRIAL PARK

Jurisdiction (Location): City of Woodland (North Woodland Industrial Area)

Current and Planned Uses: The Woodland Research and Industrial Park is envisioned by the City as a key employment center in Yolo County and the region. It includes currently includes a range of manufacturing and logistics uses. It is envisioned to be expanded through a future master-planned business park and innovation center, potentially including hospital, public facilities and institutions, and government clusters¹³.

FOCUS AREA SCORECARD						
Access to Major Roads	Access to Freight Rail	Access to Transit	Amount of Available Land	Proximity to Anchor Institutions	Proximity to Existing Industries	Proximity to Communities in Need
⊕	⊕	⊗	⊕	⊗	⊕	⊕



Opportunities

- Locate heavy and light industrial and manufacturing uses that would benefit from easy access to Interstate 5, Highway 113, heavy rail, and the Sacramento International Airport.

¹³ City of Woodland 2035 General Plan, May 2017.

Appendix 4: Life Sciences Cluster Definition

The broader sector of ‘Health and Life Sciences’ includes hospitals, ambulatory healthcare services, nursing and residential care facilities, social assistance and life sciences.¹⁴ This analysis focuses on the Life Sciences portion of ‘Health and Life Sciences’ because the latter is too broad to lead to specific cluster initiatives that will grow the regional economy – and, Life Sciences is the only tradeable category. The Health industry is viewed, for the purposes of this analysis, as a supporting industry to Life Sciences.

Our definition of the Life Sciences cluster is derived from NAICS codes lists from Valley Vision,¹⁵ GSEC,¹⁶ Cortright and Mayer (biotechnology focused),¹⁷ and the U.S. Cluster Mapping Benchmark definition of two sectors (biopharmaceuticals, medical devices).¹⁸ While it includes medical devices in the analysis of tradable NAICS codes, note that the market analysis focuses on the greatest opportunities for growth in the Life Sciences sector (biopharmaceuticals).

Sub-sector	NAICS	Description
Product Manufacturing	325411	Medicinal and Botanical Manufacturing
Product Manufacturing	325412	Pharmaceutical Preparation Manufacturing
Product Manufacturing	325413	In-Vitro Diagnostic Substance Manufacturing
Product Manufacturing	325414	Biological Product (except Diagnostic) Manufacturing
Instrument/supply Manufacturing	333314	Optical Instrument and Lens Manufacturing
Instrument/supply Manufacturing	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
Instrument/supply Manufacturing	334516	Analytical Laboratory Instrument Manufacturing
Instrument/supply Manufacturing	334517	Irradiation Apparatus Manufacturing
Instrument/supply Manufacturing	339112	Surgical and Medical Instrument Manufacturing
Instrument/supply Manufacturing	339113	Surgical Appliance and Supplies Manufacturing
Instrument/supply Manufacturing	339114	Dental Equipment and Supplies Manufacturing
Instrument/supply Manufacturing	339115	Ophthalmic Goods Manufacturing
Instrument/supply Manufacturing	423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers
Instrument/supply Manufacturing	423490	Other Professional Equipment and Supplies Merchant Wholesaler
Research and Testing	541380	Testing Laboratories
Research and Testing	541711	Research and Development in Biotechnology
Research and Testing	541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)
Research and Testing	541713	Research and Development in Nanotechnology
Research and Testing	541714	Research and Development in Biotechnology (except Nanobiotechnology)

¹⁴ Centers of Excellence, Los Rios Community College District, and Valley Vision, *Life Sciences & Health Services Cluster: Workforce Needs Assessment, Sacramento Capital Region*, Online Publication: Centers of Excellence, 2015.

¹⁵ Centers of Excellence et al., *Life Sciences & Health Services Cluster*.

¹⁶ Greater Sacramento Economic Council, “Health, Life Science – Industry Cluster,” Excel document: June 2019.

¹⁷ Cortright & Mayer, *Signs of Life*.

¹⁸ Delgado, Mercedes, Porter, Michael and Scott Stern, “U.S. Cluster Mapping Benchmark Definitions,” Excel document: 2014, accessed at www.clustermapping.us.

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Research and Testing	541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)
Research and Testing	621511	Medical Laboratories
Instrument/supply Manufacturing	811219	Other Electronic and Precision Equipment Repair and Maintenance

Appendix 5: Clean Economy Definition

The Clean Economy definition used in this analysis originates from Valley Vision's definition¹⁹ and is augmented by Brookings' definition.²⁰ It includes the following 7 sectors:

1. Energy and Water Efficiency
2. Renewable Energy
3. Sustainable Agriculture
4. Advanced Transportation
5. Environmental Compliance and Education
6. Recycling and Waste Reduction
7. Greenhouse Gas Reduction

Both Valley Vision and Brookings use slightly different names for these 7 sectors and their sub-sectors. Their definitions largely align but the most notable differences are:

- Valley Vision's expanded definition of 'Environmental Compliance and Education' to include governmental programs and pollution programs
- Valley Vision's inclusion of Advanced Transportation as a stand-alone sector
- Brookings' more robust 'Sustainable Agriculture' definition
- Brookings' addition of a 'Greenhouse Gas Reduction' category
- Brookings' addition of a 'Pollution Reduction and Cleanup' category which was included in the 'Recycling and Waste Reduction' category above as it largely aligned

Both Valley Vision and Brookings analyze the Clean Economy cluster using alternative methodologies to NAICS analyses, given that the Clean Economy includes several emerging industries.²¹ This analysis evaluates NAICS codes, and it should be noted that, just as the two referenced reports do not provide a comprehensive definition of the Clean Economy, neither does this methodology.

NAICS codes were assembled by compiling Clean-Economy-related keywords, sourced from Valley Vision's list, Brookings' list, and keywords pulled from local PitchBook data on Clean Economy companies²² (in order to capture Sacramento-specific nuances in the Clean Economy). Given that Advanced Transportation and Sustainable Agriculture are emerging industries, the keywords and subsequent list of NAICS codes did not adequately capture activity in these

¹⁹ Centers of Excellence et al., *Clean Economy Cluster: Workforce Needs Assessment*.

²⁰ Muro et al., *Sizing the Clean Economy*.

²¹ Valley Vision used an adapted version of the SIC system (an expanded version created by InfoUSA) to identify Clean Economy industries across six clusters. They note that the data represents a small percentage of the clean economy cluster – because industries were only included if they could be considered *fully* a part of the six clusters. Similarly, Brookings included Clean Economy clusters as part of their study only if they could *fully* be considered part of the Clean Economy's 39 sub-sectors. Their list of industry codes for the Clean Economy was assembled by piecing together SICs (a list of industries that could be considered completely within the Clean Economy, as assembled by Collaborative Economics and Berkeley researchers, and added to by Brookings) – and by adding 60 Clean Economy companies (determined from industry associations, certifications, federal grantees, venture capital recipients, patent assignees, and product lists).

²² Clean Energy Companies, Excel document: June 2019, provided by Greater Sacramento Economic Council [downloaded from PitchBook on 6/14/2019; US Metro Area (CSA): Sacramento-Roseville].

clusters. These sectors are therefore excluded from the Clean Economy analysis (in addition because they are included as separate sections in this report - see [Future Mobility section](#) and [Ag-Tech section](#)). The Greenhouse Gas Reduction sector, while Brookings included it as a separate category, was not broken out separately in this analysis.

The following NAICS are included in the analysis, listed by sector.

Renewable Energy

NAICS	Description
221111	Hydroelectric power generation
221112	Fossil fuel electric power generation
221113	Nuclear electric power generation
221114	Solar electric power generation
221115	Wind electric power generation
221116	Geothermal electric power generation
221117	Biomass electric power generation
221118	Other electric power generation
221330	Geothermal steam production
237110	Geothermal drilling
237130	Alternative energy (e.g., geothermal, ocean wave, solar, wind) structure construction
237990	Electricity generating plant, hydroelectric, construction
238160	Solar reflecting coating, roof, application
238220	Solar heating equipment installation
314994	Cord for reinforcing rubber tires, industrial belting, and fuel cells manufacturing
325120	Hydrogen manufacturing
333414	Solar energy heating equipment manufacturing
333611	Turbine and turbine generator set units mfg.
334413	Solar cells manufacturing
334514	Turbine meters, consumption registering, manufacturing
335121	Solar lighting fixtures, residential, electric, manufacturing
335122	Solar lighting fixtures (except residential), electric, manufacturing
335999	Electrochemical generators (i.e., fuel cells) manufacturing
423330	Solar reflective film merchant wholesalers
423690	Solar cells merchant wholesalers
423720	Solar heating panels and equipment merchant wholesalers
423860	Turbines, transportation, merchant wholesalers
454310	Alternative fuels, direct selling

Energy and Water Efficiency

NAICS	Description
238210	Control system (e.g., environmental, humidity, temperature) installation
238310	Building insulation contractors
325412	Water (i.e., drinking) decontamination or purification tablets manufacturing
333318	Wash water recycling machinery manufacturing
334512	Computerized environmental control systems for buildings manufacturing
334513	Water quality monitoring and control systems manufacturing
334515	Energy measuring equipment, electrical, manufacturing
334519	Leak detectors, water, manufacturing
335911	Storage Battery Manufacturing
423830	Environmental controlling instruments and equipment merchant wholesalers
541690	Energy consulting services

Environmental Compliance and Education

541330	Environmental engineering services
541350	Energy efficiency inspection services
541380	Environmental testing laboratories or services
541620	Environmental reclamation planning services
541715	Environmental research and development laboratories or services (except biotechnology and nanotechnology research and development)
624229	Energy assistance programs
813312	Environmental advocacy organizations
923120	Environmental health program administration
924110	Environmental protection program administration
926110	Energy program administration
926130	Energy development and conservation programs, government

Recycling and Waste Reduction

NAICS	Description
325180	Nuclear fuel scrap reprocessing
325612	Recycling drycleaning fluids
325991	Reformulating plastics resins from recycled plastics products
325998	Recycling services for degreasing solvents (e.g., engine, machinery) manufacturing
423730	Pollution control equipment, air, merchant wholesalers
423930	Recyclable materials (e.g., glass, metal, paper) merchant wholesalers
484220	Ash, garbage, recyclable material, refuse, rubbish, trash, or waste hauling (except collection or disposal)
484230	Recyclable material hauling, long distance
562111	Recyclable material hauling, local
562910	Remediation services, environmental
562920	Recyclable materials recovery facilities
811212	Recycling inkjet cartridges

Appendix 6: Future Mobility Definition

The Future Mobility cluster does not have an established definition and is not yet captured by a list of NAICS codes. Therefore, this report assesses Mobility more broadly using the NAICS list below, then proceeds to assess Future Mobility through a more qualitative analysis of four Future Mobility sectors (see below).

Mobility

The more traditional definition of Mobility includes raw material production, components manufacturing, research, systems operation, and retail (note that retail is locally serving, but included here to help assess the relative strength of the traditional mobility cluster upon which future mobility strengths can be built). Select few of these NAICS codes address Future Mobility, for instance, semiconductors, storage batteries, data processing, and mobility-related NAICS classified as “other.”

Sub-sector	NAICS	Description
Raw Materials Production	324199	All Other Petroleum and Coal Products Manufacturing
Raw Materials Production	326211	Tire Manufacturing (except Retreading)
Raw Materials Production	326212	Tire Retreading
Raw Materials Production	326220	Rubber and Plastics Hoses and Belting Manufacturing
Raw Materials Production	326291	Rubber Product Manufacturing for Mechanical Use
Raw Materials Production	326299	All Other Rubber Product Manufacturing
Components Manufacturing	327215	Glass Product Manufacturing Made of Purchased Glass
Components Manufacturing	327910	Abrasive Product Manufacturing
Raw Materials Production	331110	Iron and Steel Mills and Ferroalloy Manufacturing
Raw Materials Production	331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel
Raw Materials Production	331221	Rolled Steel Shape Manufacturing
Raw Materials Production	331222	Steel Wire Drawing
Raw Materials Production	331313	Alumina Refining and Primary Aluminum Production
Raw Materials Production	331314	Secondary Smelting and Alloying of Aluminum
Raw Materials Production	331315	Aluminum Sheet, Plate, and Foil Manufacturing
Raw Materials Production	331318	Other Aluminum Rolling, Drawing, and Extruding
Raw Materials Production	331410	Nonferrous Metal (except Aluminum) Smelting and Refining
Raw Materials Production	331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding
Raw Materials Production	331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
Raw Materials Production	331511	Iron Foundries
Raw Materials Production	331512	Steel Investment Foundries
Raw Materials Production	331513	Steel Foundries (except Investment)
Raw Materials Production	331523	Nonferrous Metal Die-Casting Foundries
Raw Materials Production	331524	Aluminum Foundries (except Die-Casting)
Raw Materials Production	331529	Other Nonferrous Metal Foundries (except Die-Casting)
Raw Materials Production	332111	Iron and Steel Forging
Raw Materials Production	332114	Custom Roll Forming
Raw Materials Production	332813	Electroplating, Plating, Polishing, Anodizing, and Coloring

Raw Materials Production	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
Components Manufacturing	333120	Construction Machinery Manufacturing
Components Manufacturing	333242	Semiconductor Machinery Manufacturing
Components Manufacturing	333249	Other Industrial Machinery Manufacturing
Components Manufacturing	333611	Turbine and Turbine Generator Set Units Manufacturing
Components Manufacturing	333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing
Components Manufacturing	333613	Mechanical Power Transmission Equipment Manufacturing
Components Manufacturing	333618	Other Engine Equipment Manufacturing
Components Manufacturing	333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing
Components Manufacturing	334111	Electronic Computer Manufacturing
Components Manufacturing	334112	Computer Storage Device Manufacturing
Components Manufacturing	334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing
Components Manufacturing	334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
Components Manufacturing	334290	Other Communications Equipment Manufacturing
Components Manufacturing	334310	Audio and Video Equipment Manufacturing
Components Manufacturing	334412	Bare Printed Circuit Board Manufacturing
Components Manufacturing	334413	Semiconductor and Related Device Manufacturing
Components Manufacturing	334416	Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing
Components Manufacturing	334417	Electronic Connector Manufacturing
Components Manufacturing	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing
Components Manufacturing	334419	Other Electronic Component Manufacturing
Components Manufacturing	334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing
Components Manufacturing	334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
Components Manufacturing	334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
Components Manufacturing	334514	Totalizing Fluid Meter and Counting Device Manufacturing
Components Manufacturing	334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
Components Manufacturing	334516	Analytical Laboratory Instrument Manufacturing
Components Manufacturing	334519	Other Measuring and Controlling Device Manufacturing
Components Manufacturing	335110	Electric Lamp Bulb and Part Manufacturing
Components Manufacturing	335121	Residential Electric Lighting Fixture Manufacturing
Components Manufacturing	335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing
Components Manufacturing	335129	Other Lighting Equipment Manufacturing
Components Manufacturing	335311	Power, Distribution, and Specialty Transformer Manufacturing
Components Manufacturing	335312	Motor and Generator Manufacturing
Components Manufacturing	335313	Switchgear and Switchboard Apparatus Manufacturing
Components Manufacturing	335314	Relay and Industrial Control Manufacturing
Components Manufacturing	335911	Storage Battery Manufacturing

Components Manufacturing	335912	Primary Battery Manufacturing
Components Manufacturing	335921	Fiber Optic Cable Manufacturing
Components Manufacturing	335929	Other Communication and Energy Wire Manufacturing
Components Manufacturing	335931	Current-Carrying Wiring Device Manufacturing
Components Manufacturing	335932	Noncurrent-Carrying Wiring Device Manufacturing
Components Manufacturing	335991	Carbon and Graphite Product Manufacturing
Components Manufacturing	335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing
Components Manufacturing	336111	Automobile Manufacturing
Components Manufacturing	336112	Light Truck and Utility Vehicle Manufacturing
Components Manufacturing	336120	Heavy Duty Truck Manufacturing
Components Manufacturing	336211	Motor Vehicle Body Manufacturing
Components Manufacturing	336212	Truck Trailer Manufacturing
Components Manufacturing	336213	Motor Home Manufacturing
Components Manufacturing	336214	Travel Trailer and Camper Manufacturing
Components Manufacturing	336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
Components Manufacturing	336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing
Components Manufacturing	336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
Components Manufacturing	336340	Motor Vehicle Brake System Manufacturing
Components Manufacturing	336350	Motor Vehicle Transmission and Power Train Parts Manufacturing
Components Manufacturing	336360	Motor Vehicle Seating and Interior Trim Manufacturing
Components Manufacturing	336370	Motor Vehicle Metal Stamping
Components Manufacturing	336390	Other Motor Vehicle Parts Manufacturing
Components Manufacturing	336411	Aircraft Manufacturing
Components Manufacturing	336412	Aircraft Engine and Engine Parts Manufacturing
Components Manufacturing	336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing
Components Manufacturing	336414	Guided Missile and Space Vehicle Manufacturing
Components Manufacturing	336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing
Components Manufacturing	336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing
Components Manufacturing	336510	Railroad Rolling Stock Manufacturing
Components Manufacturing	336611	Ship Building and Repairing
Components Manufacturing	336612	Boat Building
Components Manufacturing	336991	Motorcycle, Bicycle, and Parts Manufacturing
Components Manufacturing	336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing
Components Manufacturing	336999	All Other Transportation Equipment Manufacturing
Retail	423110	Automobile and Other Motor Vehicle Merchant Wholesalers
Retail	423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers
Retail	423130	Tire and Tube Merchant Wholesalers
Retail	423140	Motor Vehicle Parts (Used) Merchant Wholesalers
Research	423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers
Retail	423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers

Research	425110	Business to Business Electronic Markets
Retail	441110	New Car Dealers
Retail	441120	Used Car Dealers
Retail	441210	Recreational Vehicle Dealers
Retail	441222	Boat Dealers
Retail	441228	Motorcycle, ATV, and All Other Motor Vehicle Dealers
Retail	441310	Automotive Parts and Accessories Stores
Retail	441320	Tire Dealers
Retail	443142	Electronics Stores
Research	454111	Electronic Shopping
Research	454112	Electronic Auctions
Systems Operation	481111	Scheduled Passenger Air Transportation
Systems Operation	481112	Scheduled Freight Air Transportation
Systems Operation	481211	Nonscheduled Chartered Passenger Air Transportation
Systems Operation	481212	Nonscheduled Chartered Freight Air Transportation
Systems Operation	481219	Other Nonscheduled Air Transportation
Systems Operation	482110	Rail transportation
Systems Operation	483111	Deep Sea Freight Transportation
Systems Operation	483112	Deep Sea Passenger Transportation
Systems Operation	483113	Coastal and Great Lakes Freight Transportation
Systems Operation	483114	Coastal and Great Lakes Passenger Transportation
Systems Operation	483211	Inland Water Freight Transportation
Systems Operation	483212	Inland Water Passenger Transportation
Systems Operation	484110	General Freight Trucking, Local
Systems Operation	484121	General Freight Trucking, Long-Distance, Truckload
Systems Operation	484122	General Freight Trucking, Long-Distance, Less Than Truckload
Systems Operation	484210	Used Household and Office Goods Moving
Systems Operation	484220	Specialized Freight (except Used Goods) Trucking, Local
Systems Operation	484230	Specialized Freight (except Used Goods) Trucking, Long-Distance
Systems Operation	485111	Mixed Mode Transit Systems
Systems Operation	485112	Commuter Rail Systems
Systems Operation	485113	Bus and Other Motor Vehicle Transit Systems
Systems Operation	485119	Other Urban Transit Systems
Systems Operation	485210	Interurban and Rural Bus Transportation
Systems Operation	485310	Taxi Service
Systems Operation	485320	Limousine Service
Systems Operation	485410	School and Employee Bus Transportation
Systems Operation	485510	Charter Bus Industry
Systems Operation	485991	Special Needs Transportation
Systems Operation	485999	All Other Transit and Ground Passenger Transportation
Systems Operation	487110	Scenic and Sightseeing Transportation, Land
Systems Operation	487210	Scenic and Sightseeing Transportation, Water
Systems Operation	488111	Air Traffic Control
Systems Operation	488119	Other Airport Operations
Systems Operation	488190	Other Support Activities for Air Transportation
Systems Operation	488210	Support Activities for Rail Transportation
Systems Operation	488310	Port and Harbor Operations
Systems Operation	488320	Marine Cargo Handling

Systems Operation	488330	Navigational Services to Shipping
Systems Operation	488390	Other Support Activities for Water Transportation
Retail	488410	Motor Vehicle Towing
Systems Operation	488490	Other Support Activities for Road Transportation
Systems Operation	488510	Freight Transportation Arrangement
Systems Operation	488991	Packing and Crating
Systems Operation	488999	All Other Support Activities for Transportation
Systems Operation	491110	Postal Service
Systems Operation	492110	Couriers and Express Delivery Services
Systems Operation	492210	Local Messengers and Local Delivery
Systems Operation	493110	General Warehousing and Storage
Systems Operation	493120	Refrigerated Warehousing and Storage
Systems Operation	493130	Farm Product Warehousing and Storage
Systems Operation	493190	Other Warehousing and Storage
Research	511210	Software Publishers
Research	515210	Cable and Other Subscription Programming
Systems Operation	517110	Wired Telecommunications Carriers
Research	517210	Wireless Telecommunications Carriers (except Satellite)
Research	517410	Satellite Telecommunications
Retail	517911	Telecommunications Resellers
Research	517919	All Other Telecommunications
Research	518210	Data Processing, Hosting, and Related Services
Research	519130	Internet Publishing and Broadcasting and Web Search Portals
Systems Operation	531130	Lessors of Mini-warehouses and Self-Storage Units
Retail	532111	Passenger Car Rental
Retail	532112	Passenger Car Leasing
Retail	532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing
Retail	532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing
Research	541330	Engineering Services
Research	541380	Testing Laboratories
Research	541430	Graphic Design Services
Research	541490	Other Specialized Design Services
Research	541511	Custom Computer Programming Services
Research	541512	Computer Systems Design Services
Research	541513	Computer Facilities Management Services
Research	541519	Other Computer Related Services
Research	541614	Process, Physical Distribution, and Logistics Consulting Services
Research	541690	Other Scientific and Technical Consulting Services
Research	541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)
Research	541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)
Research	541990	All Other Professional, Scientific and Technical Services
Research	611210	Junior Colleges
Research	611310	Colleges, Universities, and Professional Schools
Research	611420	Computer Training

Systems Operation	621910	Ambulance Services
Systems Operation	713930	Marinas
Retail	811111	General Automotive Repair
Retail	811112	Automotive Exhaust System Repair
Retail	811113	Automotive Transmission Repair
Retail	811118	Other Automotive Mechanical and Electrical Repair and Maintenance
Retail	811121	Automotive Body, Paint, and Interior Repair and Maintenance
Retail	811122	Automotive Glass Replacement Shops
Retail	811191	Automotive Oil Change and Lubrication Shops
Retail	811192	Car Washes
Retail	811198	All Other Automotive Repair and Maintenance
Retail	811212	Computer and Office Machine Repair and Maintenance
Retail	811213	Communication Equipment Repair and Maintenance
Systems Operation	812930	Parking Lots and Garages
Research	813920	Professional Organizations

Future Mobility

For the purposes of this report, the cluster is defined as being comprised of four sectors: connected, autonomous, shared, and electric mobility.

Connected Mobility

The connected mobility market is expected to grow by 19% CAGR between 2018 and 2023.²³ The market is diverse, and can be segmented in several different ways: by connection type (5G, Wi-Fi, Bluetooth, etc.), by application (by vehicle type (personal or commercial), etc. Prominent firms include Mitsubishi Motors Corporation (Japan), Robert Bosch GmbH (Germany), Siemens AG (Germany), Cisco System Inc (U.S.), Nokia Networks (Finland), Molex Incorporated (U.S.), Deutsche Telekom AG (Germany), HUBER+SUHNER (Switzerland), NXP Semiconductors N.V. (Netherlands).

Autonomous Mobility

The field is currently seeing much activity in research, development and prototyping, as well as commercialization of existing AV technology. Currently, no fully autonomous vehicles are commercially available. Semi-autonomous vehicles are on the market, with technology in new cars including self-piloting in traffic jams, self-parking, and autopilot. Most of these features are found in familiar automobile brands, like Audi, Toyota, and Honda. Tesla's Model 3 goes so far as to come with an autopilot function for highway driving, although its full capabilities are limited by government regulations.

²³ Reuters, "Connected Mobility Solutions Market 2019 Global Industry Size, Growth Analysis, Segmentation, Future Trends, Sales Revenue, Key Vendors by Forecast to 2027."

The industry narrative suggests that fully autonomous vehicles may be imminent, although past predictions have overestimated their arrival to market. Level 4 AV technology (high automation) is predicted to be available between 2020 and 2022, with level 5 technology (full automation) projected to arrive by 2030.²⁴ These expectations are coupled with a similar expectation of growth in the market, to reach a value of \$127 billion by 2027. However, industry leaders have lamented difficulties developing fully autonomous vehicles to readiness for market-entry; past predictions have proved inaccurate.²⁵ Therefore, these projections have a significant margin of error. Implications for AV technology are still to be fully determined by policymakers, including comprehensive federal and state regulations as well as liability.

Supply chain components for AVs include radar sensors, high-powered cameras, LIDAR (laser illuminating detection and ranging), GPS (global positioning software), and computer processors.²⁶ Leaders in AV development span industries, and include hardware companies, software companies, rideshare companies, and automakers. Generally speaking, many of the firms developing and testing AVs are large and well-established and can bear the high costs for research and development. However, there are some smaller players that have attracted significant VC funding.

Regarding autonomous research and development, state regulations play a major role in where companies develop, test, and manufacture AVs. The California DMV has permitted roughly 45 companies to test AVs so far.²⁷

Prominent firms developing AVs include:

- **Ride-sharing companies** – Uber has invested \$1+ billion into AV research, and its AV division is currently valued at \$7.25 billion.
- **ICT companies** – Waymo is regarded as having the most advancement in the field, launching a self-driving robo-taxi service in the Phoenix area. Apple recently bought Drive.ai to further its AV research after shutting down its internal AV division in January 2019.
- **AV-specific companies** – Aurora is backed by Sequoia Capital and Amazon.
- **Automobile manufacturers** – Volvo; Daimler, teamed up with BMW; General Motors; Ford.

Shared Mobility

There are more than 400 cities in North America with car-sharing systems, more than 400 with bike-sharing systems, and more than 600 cities with ride-sharing systems.²⁸ In 2018, the number of trips taken on shared bikes and scooters doubled to 84 million.²⁹ However, shared

²⁴ McKinsey Center for Future Mobility, “Autonomous Driving.”

²⁵ NY Times, “Despite High Hopes, Self-Driving Cars are ‘Way in the Future.’”

²⁶ <http://www.automotivetechologies.com/autonomous-self-driving-cars>

²⁷ Approximately 20 states allow for AV testing. In addition to California, Arizona and Michigan are notable examples.

²⁸ Shared-Use Mobility Center, “Blog,” accessed August 14, 2019, <https://sharedusemobilitycenter.org/>.

²⁹ National Association of City Transportation Officials, “84 Million Trips Taken on Shared Bikes and Scooters Across the U.S. in 2018.”

mobility's overall transportation market share is still small; less than 1 percent of total global miles driven originates from e-hailing trips.

In 2017, the global shared mobility market size was valued at approximately \$105 billion and will grow by 25% CAGR between 2018 and 2025 to a value of \$620 billion.³⁰ This growth is enabled by an increasingly connected ecosystem, including connected vehicles and smartphones. This growth is also fueled by increasing traffic, gas prices, and increasing lack of parking. The Asia-Pacific market is forecasted to have the highest share of revenue growth in this timeframe, while the Middle East and African market is poised to grow by 26%.³¹

While ride-hailing dominates the shared-mobility market in 2017, docked bike sharing is forecasted to experience the highest growth from 2018 to 2025. There have been significant investments lately; for example, LimeBike raised \$62 million in 2017 to expand operations.³² Dockless bike-sharing is largely expected to disappear given consumer demand for e-scooters; several dockless bike-sharing companies recently re-focused their fleet on e-scooters.³³

Electric Mobility

There were over 2 million EVs sold in 2018. The electric vehicle market is expected to pass \$420 billion by 2025. By 2040, 57 percent of all vehicles sold will be EVs, and 30 percent of all cars on the road will be EVs.³⁴ This expected proliferation of EVs is a result of dropping costs for batteries. The assembly and sale of electric automobiles largely fits into traditional automobile clusters throughout the country.

This sector is driven by legislation. In 2018, the State of California passed numerous pieces of legislation to aggressively curb carbon emissions³⁵, and in addition, specific legislation to increase the number of electric vehicles in use.

As a result, the California has become the nationwide epicenter for clean energy innovations, including electric vehicles. California holds ~5% of EV sales (2017) and EVs are the state's seventh largest export. There are currently ~ 350,000 zero emission vehicles (ZEVs) on the road, with a 2030 goal by Executive order of 5 million.

³⁰ Grand View Research, *Shared Mobility Market Size, Share & Trends Analysis Report By Vehicle, By Service Model, And Segment Forecasts*.

³¹ Grand View Research, *Shared Mobility Market Size, Share & Trends Analysis Report By Vehicle, By Service Model, And Segment Forecasts*.

³² Grand View Research, *Shared Mobility Market Size, Share & Trends Analysis Report By Vehicle, By Service Model, And Segment Forecasts*.

³³ National Association of City Transportation Officials, "84 Million Trips Taken on Shared Bikes and Scooters Across the U.S. in 2018."

³⁴ BNEF, "Electric Vehicle Outlook 2019."

³⁵ Michael J. Coren, "California's 2018 legislative blitzkrieg delivered its most ambitious climate policies ever."

Appendix 7: Agriculture and Food and Beverage Manufacturing Cluster Definition

The “Food and Agriculture Cluster and Workforce Needs Assessment” by SACOG defines a Food and Agriculture cluster, which consists of four subsectors – Distribution, Processing, Production, and Support. Although SACOG’s definitions were used as a point of reference, the cluster definitions below are based on a different approach to classifying food related clusters. Instead of identifying the entire Food, Beverage and Agriculture domain as one cluster, the analysis below reorganizes the NAICS codes within the Food, Beverage and Agriculture domain into three clusters, Production, Manufacturing and Retail. Sub-clusters exist within these clusters, and the cluster write up focuses on NAICS codes related to Food and Beverage Manufacturing.

The following list was derived from NAICS codes and cluster definitions received from SACOG and U.S. Cluster Mapping Benchmark Definitions, namely Agriculture Inputs and Services, and Food Processing and Manufacturing.

Manufacturing		
Sub-sector	NAICS	Description
Food Processing	311211	Flour Milling
Food Processing	311212	Rice Milling
Food Processing	311213	Malt Manufacturing
Food Processing	311221	Wet Corn Milling
Food Processing	311224	Soybean and Other Oilseed Processing
Food Processing	311225	Fats and Oils Refining and Blending
Food Processing	311230	Breakfast Cereal Manufacturing
Food Processing	311313	Beet Sugar Manufacturing
Food Processing	311314	Cane Sugar Manufacturing
Food Processing	311340	Nonchocolate Confectionery Manufacturing
Food Processing	311351	Chocolate and Confectionery Manufacturing from Cacao Beans
Food Processing	311352	Confectionery Manufacturing from Purchased Chocolate
Food Processing	311411	Frozen Fruit, Juice, and Vegetable Manufacturing
Food Processing	311412	Frozen Specialty Food Manufacturing
Food Processing	311421	Fruit and Vegetable Canning
Food Processing	311422	Specialty Canning
Food Processing	311423	Dried and Dehydrated Food Manufacturing
Food Processing	311512	Creamery Butter Manufacturing
Food Processing	311513	Cheese Manufacturing
Food Processing	311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
Food Processing	311520	Ice Cream and Frozen Dessert Manufacturing
Food Processing	311611	Animal (except Poultry) Slaughtering
Food Processing	311612	Meat Processed from Carcasses
Food Processing	311613	Rendering and Meat Byproduct Processing
Food Processing	311615	Poultry Processing

Food Processing	311710	Seafood Product Preparation and Packaging
Food Processing	311812	Commercial Bakeries
Food Processing	311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
Food Processing	311821	Cookie and Cracker Manufacturing
Food Processing	311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour
Food Processing	311830	Tortilla Manufacturing
Food Processing	311911	Roasted Nuts and Peanut Butter Manufacturing
Food Processing	311919	Other Snack Food Manufacturing
Food Processing	311920	Coffee and Tea Manufacturing
Food Processing	311930	Flavoring Syrup and Concentrate Manufacturing
Food Processing	311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
Food Processing	311942	Spice and Extract Manufacturing
Food Processing	311991	Perishable Prepared Food Manufacturing
Food Processing	311999	All Other Miscellaneous Food Manufacturing
Beverage Processing (non-alcoholic)	311511	Fluid Milk Manufacturing
Beverage Processing (non-alcoholic)	312111	Soft Drink Manufacturing
Beverage Processing (non-alcoholic)	312112	Bottled Water Manufacturing
Beverage Processing (non-alcoholic)	312113	Ice Manufacturing
Beverage Processing (alcoholic)	312120	Breweries
Beverage Processing (alcoholic)	312130	Wineries
Beverage Processing (alcoholic)	312140	Distilleries
Feed Processing	311111	Dog and Cat Food Manufacturing
Feed Processing	311119	Other Animal Food Manufacturing
Related Industries	333241	Food Product Machinery Manufacturing
Ag Storage and Distribution	424510	Grain and Field Bean Merchant Wholesalers
Ag Storage and Distribution	424520	Livestock Merchant Wholesalers
Ag Storage and Distribution	424590	Other Farm Product Raw Material Merchant Wholesalers
Ag Storage and Distribution	493120	Refrigerated Warehousing and Storage
Ag Storage and Distribution	493130	Farm Product Warehousing and Storage
Food Storage and Distribution	424410	General Line Grocery Merchant Wholesalers
Food Storage and Distribution	424420	Packaged Frozen Food Merchant Wholesalers
Food Storage and Distribution	424430	Dairy Product (except Dried or Canned) Merchant Wholesalers
Food Storage and Distribution	424440	Poultry and Poultry Product Merchant Wholesalers
Food Storage and Distribution	424450	Confectionery Merchant Wholesalers
Food Storage and Distribution	424460	Fish and Seafood Merchant Wholesalers
Food Storage and Distribution	424470	Meat and Meat Product Merchant Wholesalers
Food Storage and Distribution	424480	Fresh Fruit and Vegetable Merchant Wholesalers
Food Storage and Distribution	424490	Other Grocery and Related Products Merchant Wholesalers
Food Storage and Distribution	424810	Beer and Ale Merchant Wholesalers
Food Storage and Distribution	424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers
Food Storage and Distribution	493120	Refrigerated Warehousing and Storage

Appendix 8: Headquarters and Business Services Cluster Definition

The headquarters and business services cluster definition combine and is informed by following existing definitions:

- **U.S. Cluster Mapping Benchmark’s definition** of the business services cluster
- **Our definition of a *headquarters-supporting business services* cluster** that was developed for a Chicagoland regional plan.

The following sub-clusters are included in the headquarters and business services cluster definition:

- Accounting Services
- Advertising Services
- Business Services
- Business Support Services
- Education / Training / Networking
- Facilities Management
- Headquarters
- IT Services
- Legal Services
- Local Transportation and Logistics
- Local Trucking
- Management Services
- Other Professional Services
- Real Estate
- Repair and Servicing
- Specialized Design Services

Sub-sector	NAICS	Description
Accounting Services	541214	Payroll Services
Accounting Services	541211	Offices of Certified Public Accountants
Accounting Services	541213	Tax Preparation Services
Accounting Services	541219	Other Accounting Services
Advertising Services	541810	Advertising Agencies
Advertising Services	541820	Public Relations Agencies
Advertising Services	541830	Media Buying Agencies
Advertising Services	541840	Media Representatives
Advertising Services	541850	Display Advertising
Advertising Services	541860	Direct Mail Advertising
Advertising Services	541870	Advertising Material Distribution Services
Advertising Services	541890	Other Services Related to Advertising
Business Services	561311	Employment Placement Agencies
Business Services	561312	Executive Search Services

Business Services	561330	Professional Employer Organizations
Business Services	561421	Telephone Answering Services
Business Services	561422	Telemarketing Bureaus
Business Services	561110	Office Administrative Services
Business Services	561310	Employment Placement Agencies
Business Services	561320	Temporary Help Services
Business Services	561410	Document Preparation Services
Business Services	561431	Private Mail Centers
Business Services	561439	Other Business Service Centers (including Copy Shops)
Business Services	561440	Collection Agencies
Business Services	561450	Credit Bureaus
Business Services	561491	Repossession Services
Business Services	561492	Court Reporting and Stenotype Services
Business Services	561499	All Other Business Support Services
Business Support Services	518210	Data Processing, Hosting, and Related Services
Business Support Services	532112	Passenger Car Leasing
Business Support Services	533110	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)
Business Support Services	561920	Convention and Trade Show Organizers
Business Support Services	323111	Commercial Gravure Printing
Business Support Services	323116	Manifold Business Forms Printing
Business Support Services	425110	Business to Business Electronic Markets
Business Support Services	518111	Internet Service Providers
Business Support Services	518112	Web Search Portals
Business Support Services	519190	All Other Information Services
Business Support Services	532420	Office Machinery and Equipment Rental and Leasing
Business Support Services	561611	Investigation Services
Business Support Services	561613	Armored Car Services
Business Support Services	561910	Packaging and Labeling Services
Business Support Services	561990	All Other Support Services
Education / Training / Networking	611410	Business and Secretarial Schools
Education / Training / Networking	611420	Computer Training
Education / Training / Networking	611430	Professional and Management Development Training
Education / Training / Networking	611630	Language Schools
Education / Training / Networking	611699	All Other Miscellaneous Schools and Instruction
Education / Training / Networking	813910	Business Associations
Education / Training / Networking	813920	Professional Organizations
Facilities Management	561210	Facilities Support Services
Facilities Management	541350	Building Inspection Services
Facilities Management	561612	Security Guards and Patrol Services
Facilities Management	561621	Security Systems Services (except Locksmiths)
Facilities Management	561622	Locksmiths
Facilities Management	561710	Exterminating and Pest Control Services
Facilities Management	561720	Janitorial Services
Facilities Management	561730	Landscaping Services
Facilities Management	561740	Carpet and Upholstery Cleaning Services
Facilities Management	561790	Other Services to Buildings and Dwellings

Headquarters	551111	Offices of Bank Holding Companies
Headquarters	551112	Offices of Other Holding Companies
Headquarters	551114	Corporate, Subsidiary, and Regional Managing Offices
IT Services	541511	Custom Computer Programming Services
IT Services	541512	Computer Systems Design Services
IT Services	541513	Computer Facilities Management Services
IT Services	541519	Other Computer Related Services
Legal Services	541199	All Other Legal Services
Legal Services	541110	Offices of Lawyers
Legal Services	541120	Offices of Notaries
Legal Services	541191	Title Abstract and Settlement Offices
Local Transportation and Logistics	485310	Taxi Service
Local Transportation and Logistics	485320	Limousine Service
Local Transportation and Logistics	485999	All Other Transit and Ground Passenger Transportation
Local Transportation and Logistics	485410	School and Employee Bus Transportation
Local Transportation and Logistics	485510	Charter Bus Industry
Local Transportation and Logistics	485991	Special Needs Transportation
Local Transportation and Logistics	488410	Motor Vehicle Towing
Local Transportation and Logistics	492110	Couriers and Express Delivery Services
Local Transportation and Logistics	492210	Local Messengers and Local Delivery
Local Trucking	484110	General Freight Trucking, Local
Local Trucking	484210	Used Household and Office Goods Moving
Local Trucking	484220	Specialized Freight (except Used Goods) Trucking, Local
Management Services	541611	Administrative Management and General Management Consulting Services
Management Services	541612	Human Resources and Executive Search Consulting Services
Management Services	541614	Process, Physical Distribution, and Logistics Consulting Services
Management Services	541618	Other Management Consulting Services
Management Services	541613	Marketing Consulting Services
Other Professional Services	541690	Other Scientific and Technical Consulting Services
Other Professional Services	541930	Translation and Interpretation Services
Other Professional Services	541990	All Other Professional, Scientific, and Technical Services
Other Professional Services	541620	Environmental Consulting Services
Other Professional Services	541910	Marketing Research and Public Opinion Polling
Other Professional Services	541921	Photography Studios, Portrait
Other Professional Services	541922	Commercial Photography
Real Estate	522292	Real Estate Credit
Real Estate	531110	Lessors of Residential Buildings and Dwellings
Real Estate	531120	Lessors of Nonresidential Buildings (except Miniwarehouses)
Real Estate	531130	Lessors of Miniwarehouses and Self-Storage Units
Real Estate	531190	Lessors of Other Real Estate Property
Real Estate	531210	Offices of Real Estate Agents and Brokers
Real Estate	531311	Residential Property Managers
Real Estate	531312	Nonresidential Property Managers
Real Estate	531320	Offices of Real Estate Appraisers
Real Estate	531390	Other Activities Related to Real Estate

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Repair and Servicing	811212	Computer and Office Machine Repair and Maintenance
Repair and Servicing	811219	Other Electronic and Precision Equipment Repair and Maintenance
Repair and Servicing	811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance
Repair and Servicing	811411	Home and Garden Equipment Repair and Maintenance
Repair and Servicing	811412	Appliance Repair and Maintenance
Repair and Servicing	812320	Drycleaning and Laundry Services (except Coin-Operated)
Repair and Servicing	812331	Linen Supply
Repair and Servicing	812332	Industrial Launderers
Specialized Design Services	541310	Architectural Services
Specialized Design Services	541320	Landscape Architectural Services
Specialized Design Services	541330	Engineering Services
Specialized Design Services	541340	Drafting Services
Specialized Design Services	541360	Geophysical Surveying and Mapping Services
Specialized Design Services	541370	Surveying and Mapping (except Geophysical) Services
Specialized Design Services	541380	Testing Laboratories
Specialized Design Services	541410	Interior Design Services
Specialized Design Services	541420	Industrial Design Services
Specialized Design Services	541430	Graphic Design Services
Specialized Design Services	541490	Other Specialized Design Services

Appendix 9: DNT Typology Analysis of Sacramento

Part of matching neighborhoods with the projects and initiatives that will best help them grow involves understanding those neighborhoods' trajectories, the type of neighborhood they hope to become in the short- and medium-term, and the specific interventions that will move communities in those desired directions. Advanced analytics exist that can aid in this assessment, including the DNT Typology, which generates a sophisticated shorthand to categorize and assess diverse places by analyzing 23 variables of an area's people, businesses and land through a hierarchical clustering methodology.³⁶ This methodology sorts Census tracts and assembles them with the other tracts to which they are most similar. With these relationships established, groups of neighborhoods with common traits emerge. In the DNT Typology, these groups have been broken up into one of nine neighborhood types (see table below) and 33 sub-types. Each neighborhood type has a distinct identity – for example “Port of Entry” neighborhoods are largely immigrant communities, “Urban Tapestry” types have a more diverse, eclectic character, “No Place Like Home” neighborhoods are middle-income bedroom communities and so on.

Summary of Main DNT Typology Types

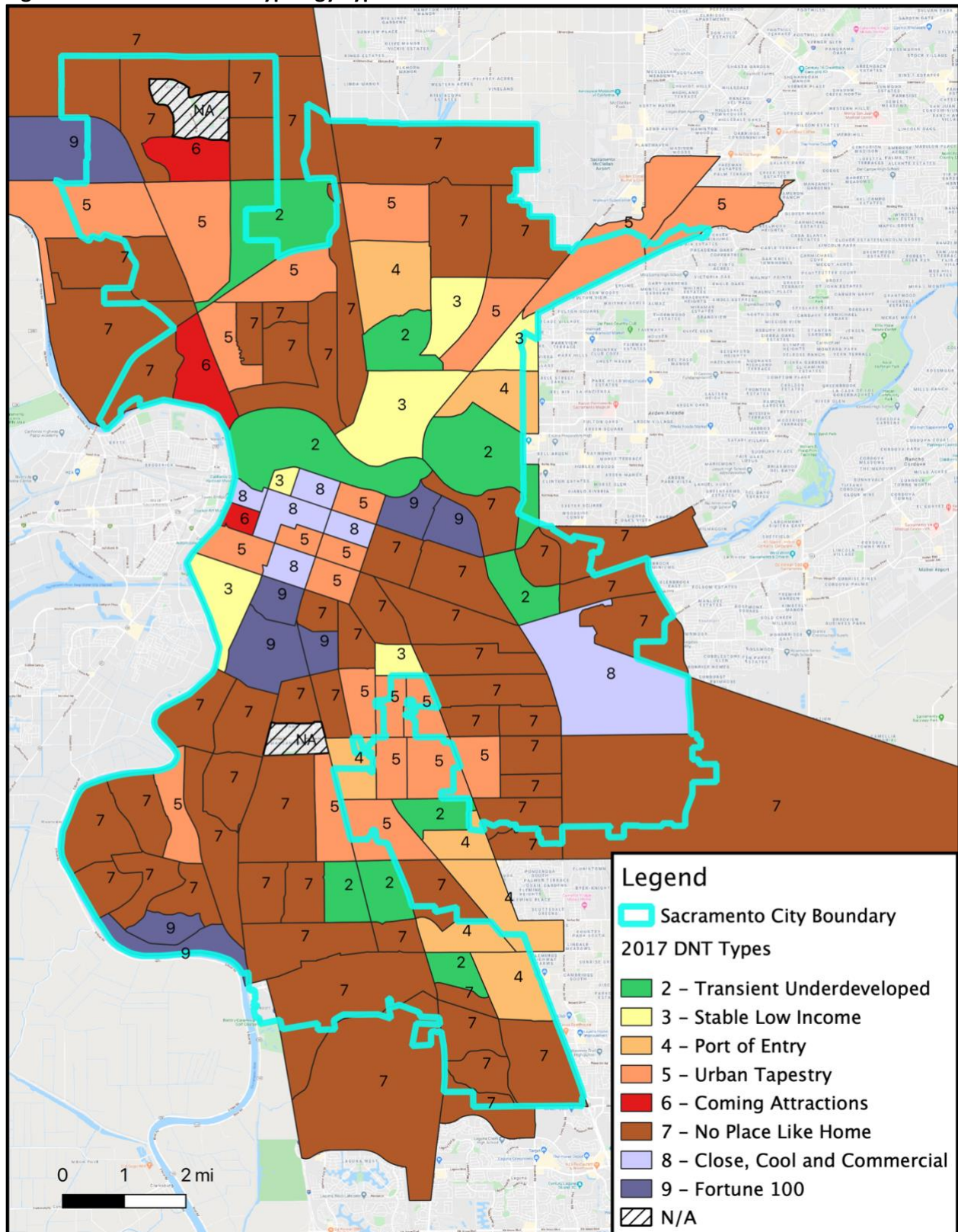
Type Name	Description
Type 1: The Truly Disadvantaged	Highest rates of poverty, crime, unemployment; lowest incomes Mostly single parents and children, seniors Many vacant lots and housing units
Type 2: Transient Underdeveloped	High rates of resident turnover, frequent moves Low home ownership rates, most housing units in apartments Lower employment rate, educational attainment
Type 3: Stable Low Income	Mostly residential, limited business presence Stable populations, lower turnover, higher home ownership Struggle with unemployment, high foreclosure rates
Type 4: Port of Entry	Mostly immigrant communities, often with Hispanic majority Most residents born outside of U.S. Larger business presence and diversity, higher employment rates
Type 5: Urban Tapestry	Most “eclectic,” racially diverse type Highly educated, generally middle-income Mostly residential with moderate business presence
Type 6: Coming Attractions	Newer developments (less than 20 years old), recent in-movers

³⁶ See Weissbourd, Bodini and He, *Dynamic Neighborhoods: New Tools for Community and Economic Development*, Living Cities, 2009. Chapter VII outlines the of the typology and describes each of its types and sub-types in detail.

	Younger, well-educated population; few children Very diverse business presence
Type 7: No Place Like Home	Most “suburban” feel; almost all residential, few businesses Population includes families and retirees aging in place Very stable population, longest tenures
Type 8: Close, Cool and Commercial	“Young professional” population; recent college grads, few kids Mostly renters of high-end apartments, moved in recently High retail concentration and diversity of types
Type 9: Fortune 100	Highest income type; average median of ~\$100,000 Population skews older, but still plenty of families Mostly expensive single-family homes, high ownership rates

Identifying neighborhoods with common types draws connections between areas that share similar challenges, opportunities and likely trajectories for change. Historical data can illustrate the patterns of change that neighborhoods have tended to make from type to type, informing the leverage points that other neighborhoods can experiment with to affect similar change. For Sacramento, DNT types from 2017 show an array of neighborhoods, with many tracts falling in the Urban Tapestry type, often an indicator of a relatively diverse racial and ethnic mix of residents (see Figure 3). There are also indicators of more disconnected areas, including the northeastern portion of the city (around neighborhoods such as Noralto, Wills Acres, Richardson Village, etc.) and the southeastern section (Meadowview, Parkway and Valley Hi/North Laguna). Further DNT analysis – both of trends over time as well as the specific characteristics driving the type assignments – can clarify opportunities and leverage points for affecting neighborhood change in desired directions.

Figure 3: Sacramento DNT Typology Types - 2017



Appendix 10: Glossary of Acronyms

Following is a glossary of terms used throughout the Action Agenda, including their abbreviations and acronyms.

Abbreviation	Full Term
API	Active Pharmaceutical Ingredients
Ag-Biotech	Agricultural Biotechnology
Ag-Tech	Agricultural Technology
ACR	Align Capital Region
AI	Artificial Intelligence
AR	Augmented Reality
AV	Autonomous Vehicle
ATOS	Autonomous Transportation Open Standards Lab
CLSA	California Life Sciences Association
CLSI	California Life Sciences Institute
CMC	California Mobility Center
CMTC	California Manufacturing Technology Consulting
CORE	Cannabis Opportunity Reinvestment and Equity
CNI	Chicago Neighborhood Initiatives
CFI	Child Family Institute for Innovation and Entrepreneurship
CEDS	Comprehensive Economic Development Strategy
CDMO	Contract development and manufacturing organization
CMO	Contract manufacturing organization
CRO	Contract research organization
CSR	Corporate Social Responsibility
DRIVE	Distributed Research, Incubation, and Venture Engine
DNT	Dynamic Neighborhood Taxonomy
EV	Electric Vehicle
ETP	Employment Training Panel
ETTC	Engineering Translational Technology Center
EBSP	Evidence-Based Selection Process
FDF	Finished Dosage Form
GPS	Global Positioning Systems
GMP	Good Manufacturing Practice
GRP	Gross Regional Product
IP	Intellectual Property
IoT	Internet of Things
LQ	Location Quotient
MEP	Manufacturing Extension Partnerships program
Meda	Metropolitan Economic Development Association
MPOs	Metropolitan Planning Organizations
MSA	Metropolitan Statistical Area
MAGMA	Michigan Alliance for Greater Mobility Advancement

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MARC	Mid-America Regional Council
NIST	National Institute of Standards and Technology
NDAT	Neighborhood Development Action Team
NAICS	North American Industry Classification System
OZ	Opportunity Zone
OEMs	Original Equipment Manufacturers
R&D	Research and Development
SACOG	Sacramento Area Council of Governments
SCI	Sacramento Center for Innovation
SCUSD	Sacramento City Unified School District
SETA	Sacramento Employment and Training Agency
SMF	Sacramento International Airport
SMUD	Sacramento Municipal Utility District
SacRT	Sacramento Regional Transit
SUTL	Sacramento Urban Technology Lab
SVMI	Sacramento Valley Manufacturing Initiative
STAIR	Science Translation and Innovative Research
SBDC	Small Business Development Center
SBIR	Small Business Innovation Research
STTR	Small Business Technology Transfer
START	Smart Toolkit of Accelerated Research Translation
SCS	Sustainable Communities Strategy
TalNet	Talent Innovation Network of West Michigan
TPM	Talent Pipeline Management
TIE	Talent-to-Industry Exchange
VC	Venture Capital
VR	Virtual Reality
WIB	Workforce Investment Board
WBC	World Business Chicago