



# Utilization of ArcGIS, Excel, VBA, and Python for the **General Plan Update Assistance Program**

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# Overview

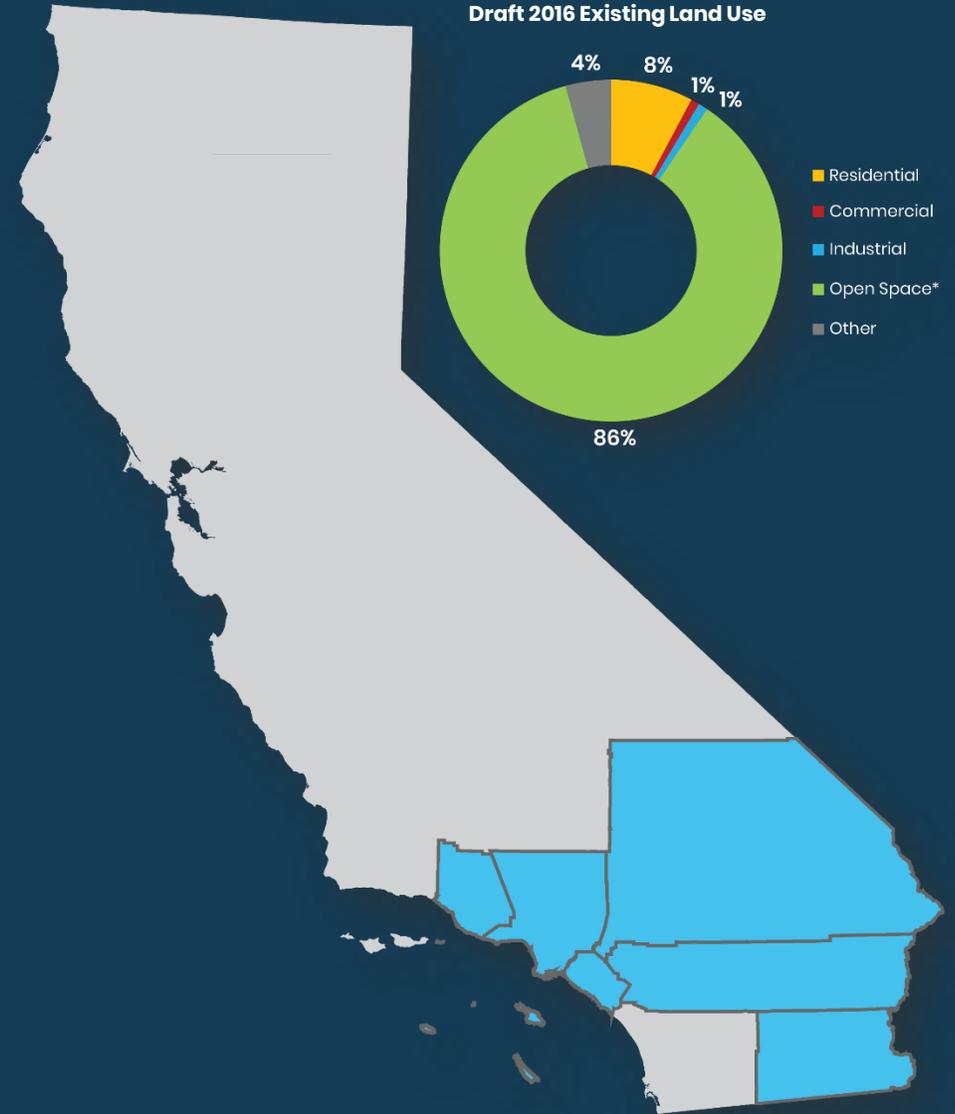


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# SCAG Introduction



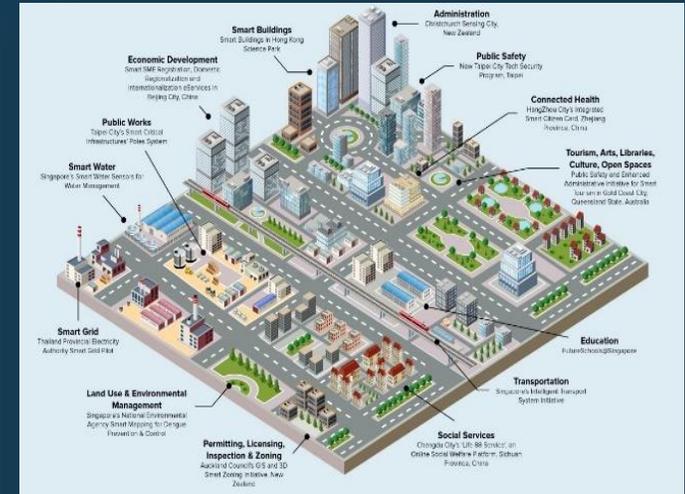
- Nation's largest Metropolitan Planning Organization (MPO)
- **6** counties and **191** cities
- **15** sub-regions
- **19** million people
- **38,000** square miles
- **15th** largest economy in the world (GRP: **\$1,259** Billion in 2017)
- Connect SoCal – Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)
- Regional Housing Needs Assessment (RHNA)



\*Open Space category consists of open space, water, and vacant land use.  
Source: SCAG Draft 2016 Existing Land Use

# Why is the General Plan Important?

- ...is “the legal underpinning for land use decisions; it is a vision about how a community will grow, **reflecting community priorities and values while shaping the future**” (Governor’s Office of Planning and Research)
- **Land use** decisions affect **economy, society, environment, safety and transportation**, which directly impact quality of life
- Should be **regularly updated** to ensure they are in synch with emerging policies and changes within the community
- Southern California remains a **dynamically changing environment** and the coming decades will bring on new challenges with **significant demographic shifts**

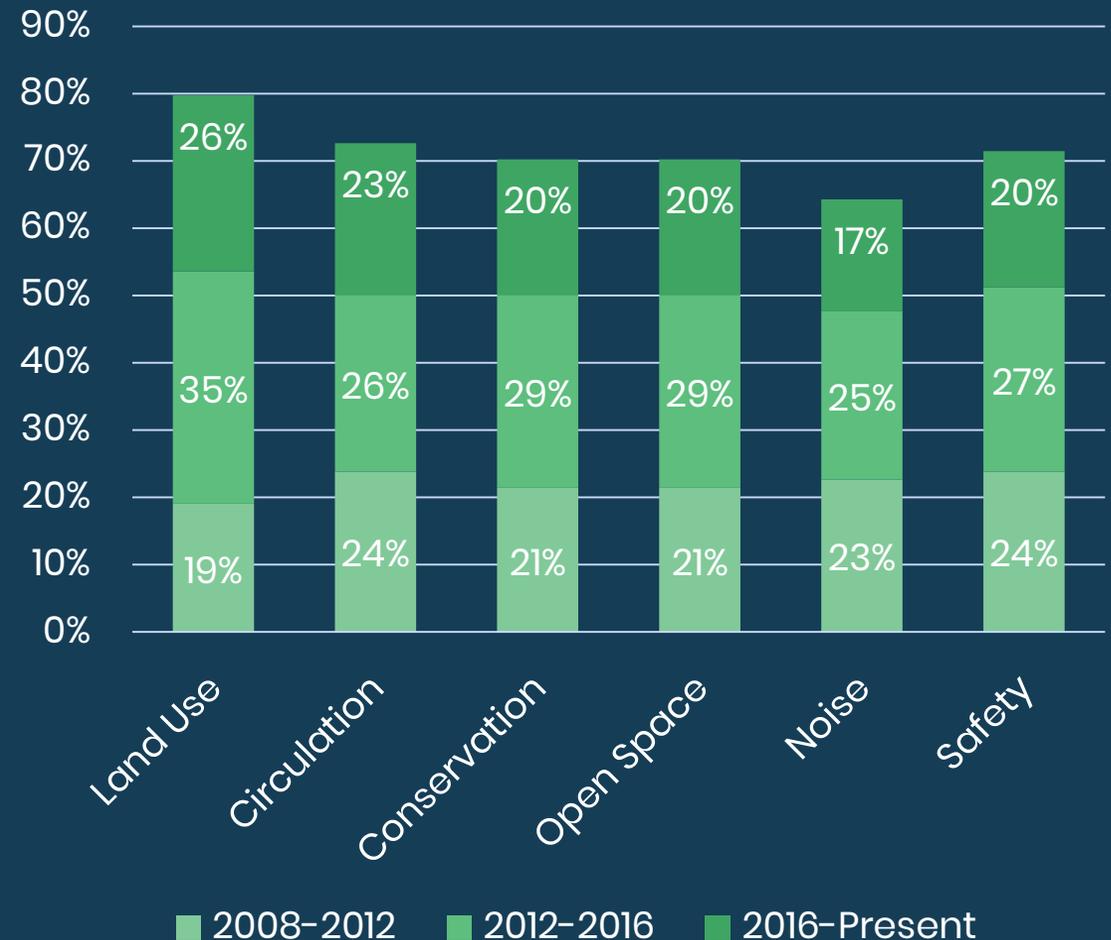


# SCAG's Connect SoCal Local Input Survey



- Local Input Survey for the development of Connect SoCal (2020 RTP/SCS) - 62 questions with 60% response rate
  - Land Use
  - Transportation
  - Environment
  - Public Health and Safety
  - Data

General Plan Update by Element



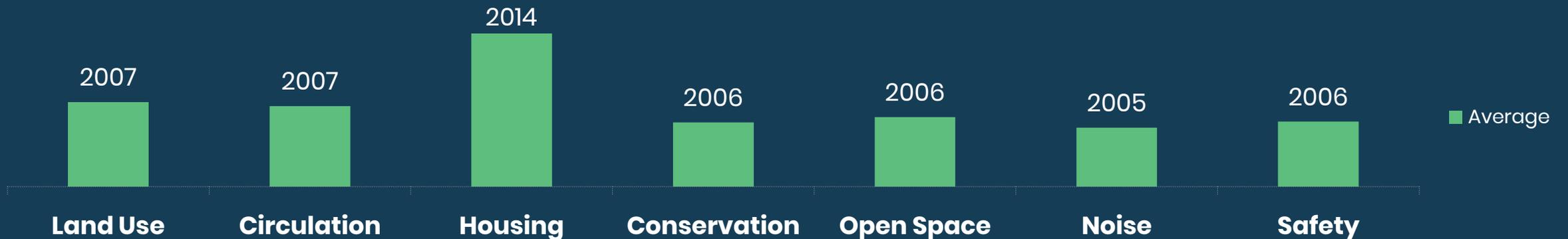
# SCAG's Connect SoCal Local Input Survey (cont.)



- On average, most of mandatory General Plan Elements are more than ten years old!

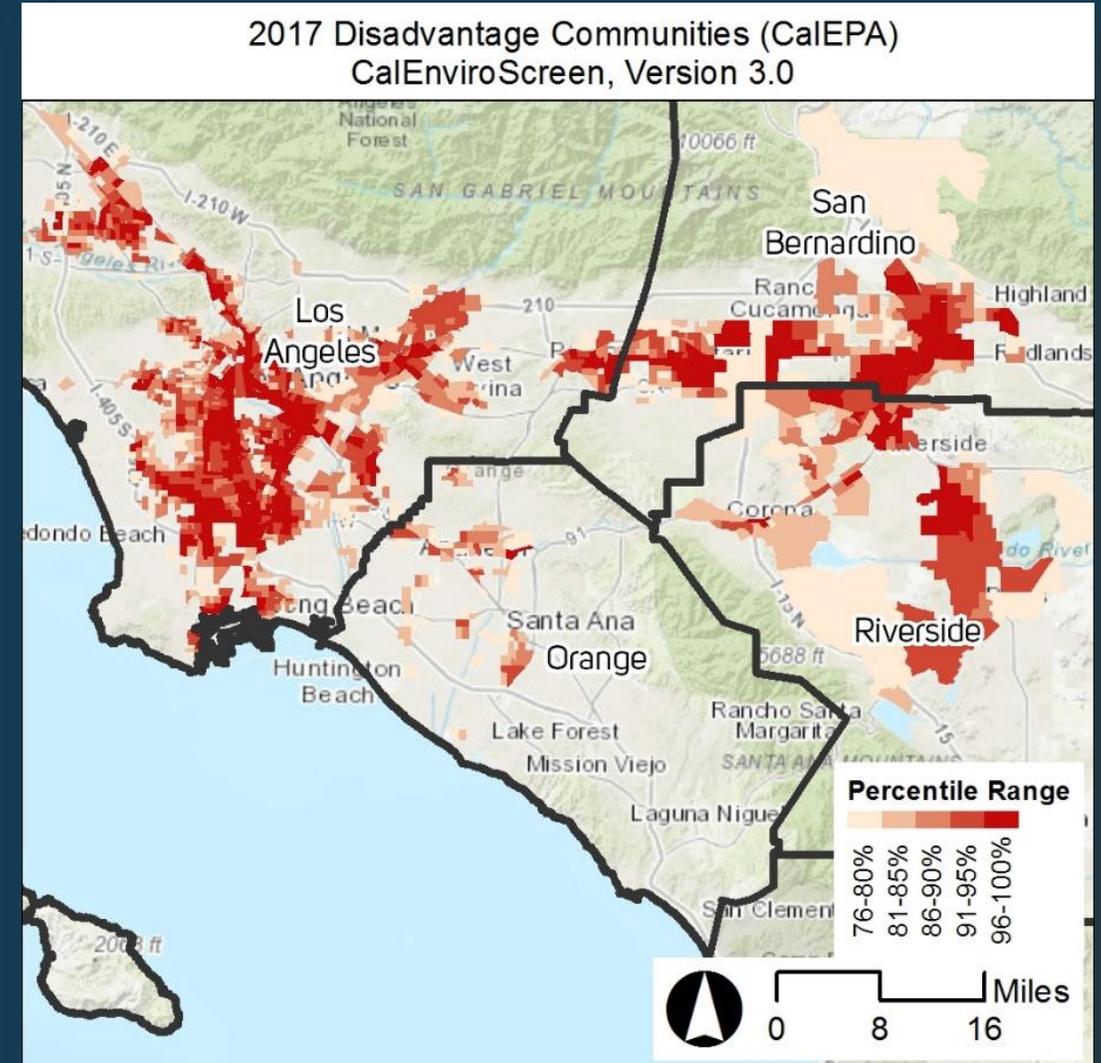
Statistics of Adopted Years of General Plan Elements							
Statistics	Land Use	Circulation	Housing	Conservation	Open Space	Noise	Safety
Minimum	1986	1982	1993	1966	1973	1974	1975
Maximum	2018	2018	2018	2018	2018	2018	2018
Median	2010	2009	2014	2009	2008	2007	2008
Average	2007	2007	2014	2006	2006	2005	2006

Source: SCAG's Connect SoCal LIS. These statistics are based on responses from 116 local jurisdictions in SCAG region.



# 2017 General Plan Guidelines & Senate Bill 1000

- OPR is required to adopt and periodically revise State guidelines for the preparation and content of GPs for all cities and counties in California (Government Code Section 65040.2)
- Legislature passed and Governor Brown signed Senate Bill 1000 in 2016
  - Jurisdictions have disadvantaged communities (DAC) is required to incorporate environmental justice (EJ) policies into their GPs



# Draft General Plan Update Tool

- City of Santa Ana as a Pilot Study
- Using SCAG's data clearinghouse (i.e. big data/open data) to provide necessary data/map for each required element
- Automated process to create a GP Data/Map Book for each local jurisdiction
- Elevate the GP Data/Map Book into an interactive and highly-efficient GIS platform (i.e. ESRI StoryMap, Urban Lab, Hub, Survey 123, GeoPlanner, etc.)

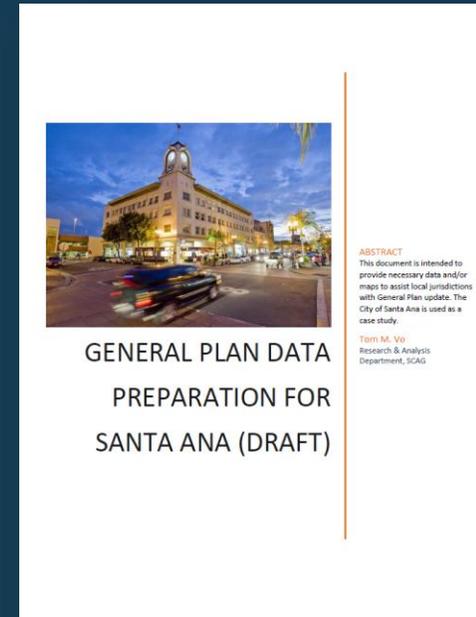
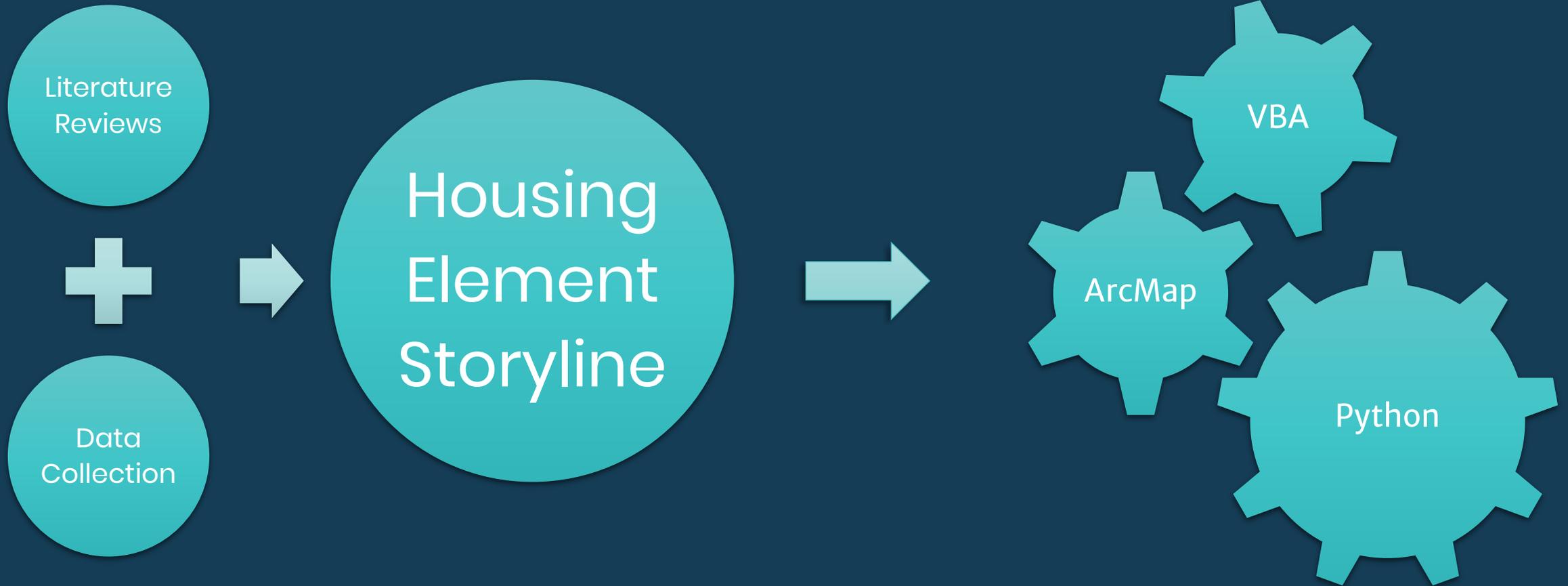


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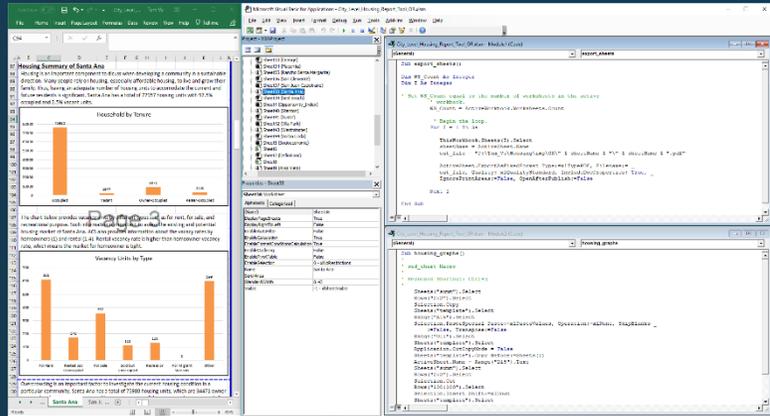
# Draft General Plan Update Tool – Housing Element



# Draft General Plan Update Tool – Housing Element (cont.)

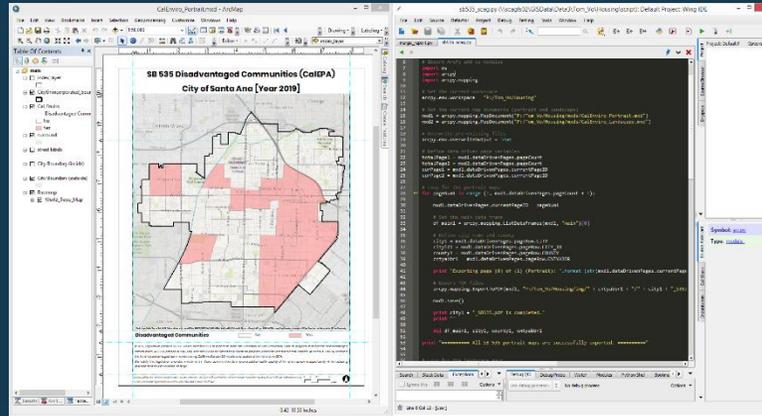


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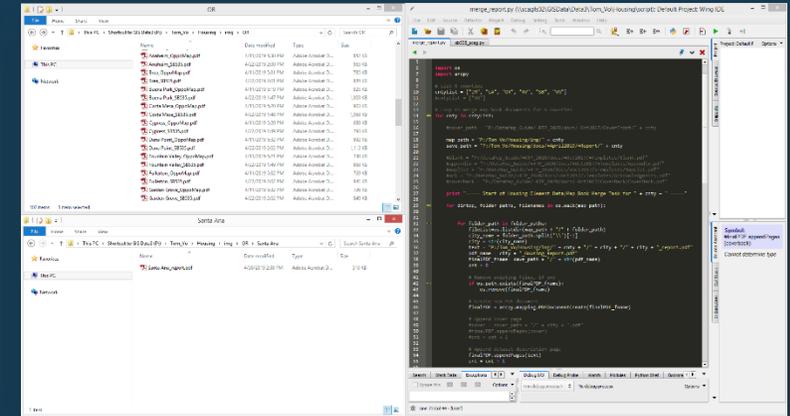
Utilize Visual Basic to automatically export reports

2



Utilize ArcMap and Python to automatically export maps

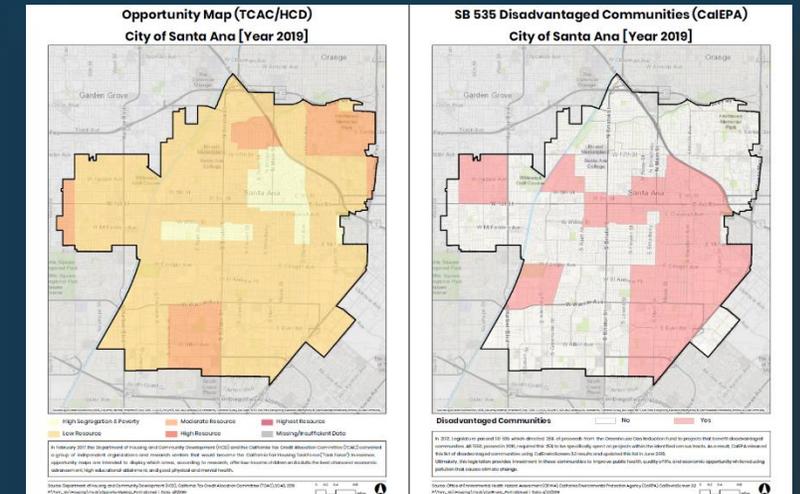
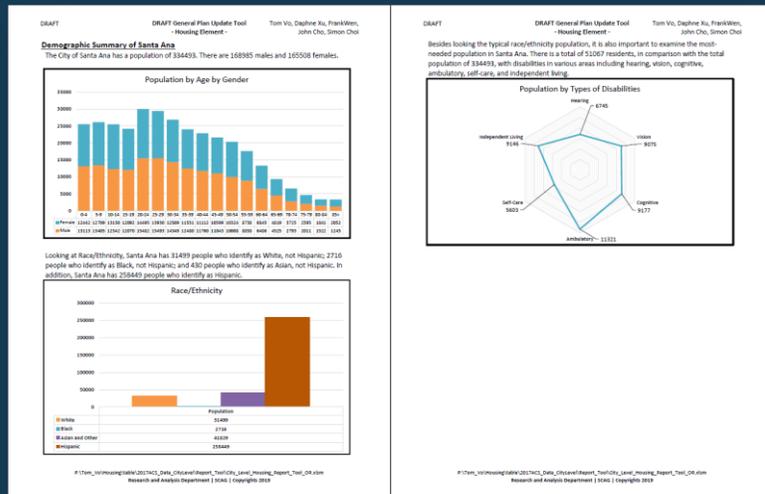
3



Utilize Python to automatically merge reports and maps

# Draft GP Data/Map Tool – Housing Element (cont.)

- Highlighting features of the Housing Element Update Tool
  - Ability to generate dynamic figures, maps, and text
  - Ability to automatically generate full report for 197 cities/counties in the region



Demographic Summary Section

Housing Summary Section

Spatial Visualization Section

# Conclusion

- Future improvements
  - Gather feedbacks from SCAG's subcommittee meetings, technical working groups, and sub-regional meetings
  - Develop online GIS application to assist local jurisdictions with their General Plan updates and additional useful information
- General Plan update is important to thrive a healthy and sustainable community as well as coping with the future growth
- General Plan update is a time-consuming and costly process
- SCAG can assist local jurisdictions with General Plan update by providing technical and analysis capabilities (e.g. draft GP update tool)





**Thank You!**

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