

Employment centers in the San Diego region: An analysis of where people live and work

Downtown San Diego employment center



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Fast facts

Downtown San Diego employment center

76,228	employees
5.0%	region's employees
3 rd	largest of 79 employment centers
2.82	land area (square miles)
27,031	employees per square mile
49,738	residents
23,264	households



Please note this employment center packet represents Version 2. As these analyses are finalized there may be minor adjustments to the data presented here as centers and data elements are refined.

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As of January 23, 2019

Background

The San Diego region is a growing and dynamic place to live and work. As the community, policy makers, and other stakeholders collaborate regarding how we create transportation options for our residents that are competitive and environmentally responsible, it is essential we utilize the data we have regarding where people live and work to invest in strategies that will best serve our communities.

As we continue to work together to create a region that maintains and improves our quality of life now and in the future, the Data, Analytics, and Modeling Department of SANDAG is applying data analytics to multiple data sources to better understand where employment centers are in the region, where the employees in these areas commute from, and what their commutes look like.

This packet describes the **Downtown San Diego** employment center (Map 1) which is the third largest in the region per this analysis (following Sorrento Valley and Kearny Mesa), with nearly 77,000 employees and a resident population of almost 50,000.

Because the data shared here were analyzed specifically for the purposes of these analyses, it is important to note that these results may differ from other sources. Additional information regarding the data sources and important factors to consider when interpreting this information are provided at the end of this packet.

Map 1

Downtown San Diego employment center



Who works and lives in the Downtown San Diego employment center?

Highlight Table 1

Of the 76,228 jobs in the Downtown San Diego employment center, the top five are categorized as food services, local government, accommodations, professional services, and health care and social assistance. Compared to the region overall, there is an overrepresentation of accommodations and local government and an underrepresentation of retail.

Table 1

Top ten industries in the Downtown San Diego employment center

Industry	Total jobs	% of jobs
Food services	12,326	16%
Local government (excluding education)	11,804	15%
Accommodations	8,397	11%
Professional, scientific, & technical services	6,751	9%
Health care & social assistance	5,057	7%
Administrative support & waste services	3,241	4%
Federal government (excluding Department of Defense)	2,984	4%
Manufacturing	2,942	4%
Arts, entertainment, and recreation	2,799	4%
Real estate, rental, & leasing	2,508	3%

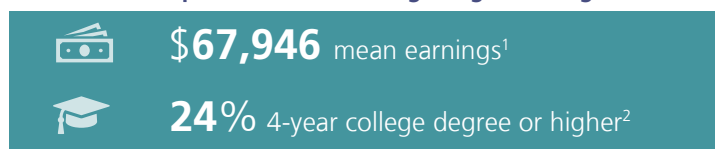
SOURCE: SANDAG Employment Estimates, 2016

Highlight Figure 1

The mean annual earnings of the Downtown San Diego employment center employees are \$67,946, higher than the regional average of \$55,801. Around one in four (24%) have a 4-year college degree (or higher), the same as the regional average (24%).

Figure 1

What Downtown San Diego employment center employees earn and what percent have a college degree or higher



SOURCES: ¹SANDAG Employment Estimates, 2016; ²LEHD LODES WAC 7.3, 2015

Highlight Figure 2

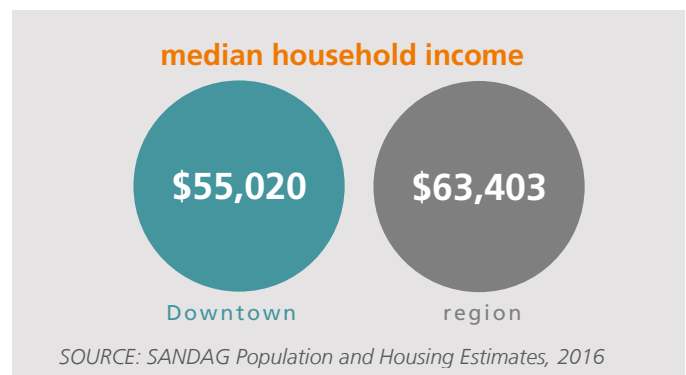
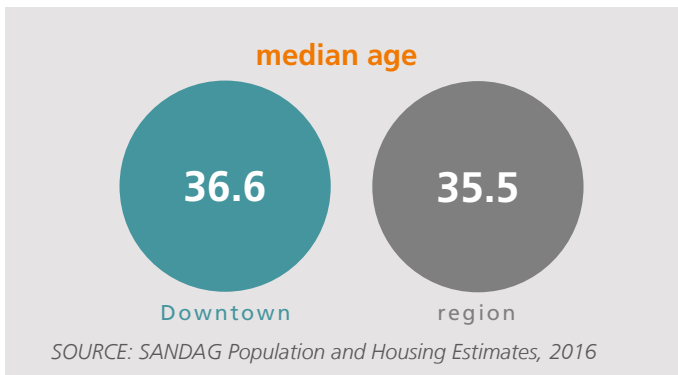
These 76,228 jobs in the Downtown San Diego employment center represent 5 percent of the jobs in the region and almost 7 percent of the region's total labor income.

Figure 2
Downtown San Diego employment center's share of regional jobs versus share of labor income



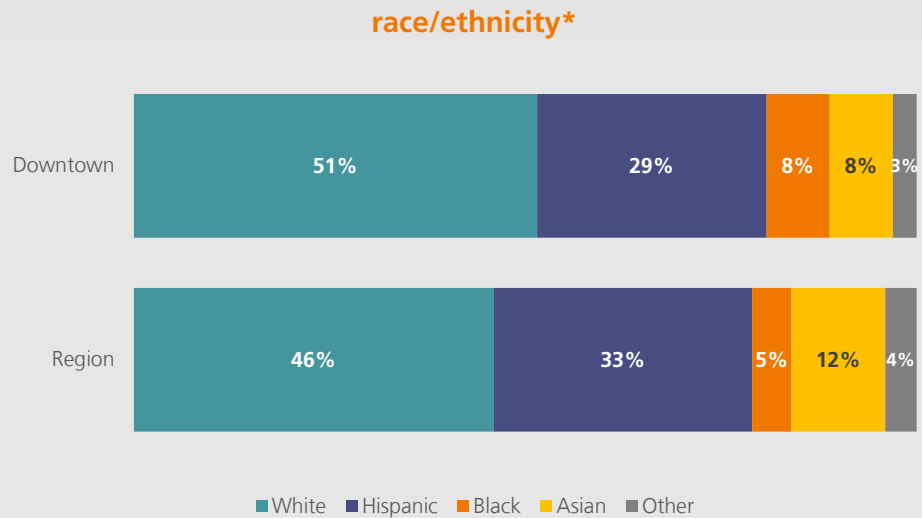
SOURCE: SANDAG Employment Estimates, 2016

Figure 3
Characteristics of Downtown San Diego employment center residents compared to the region



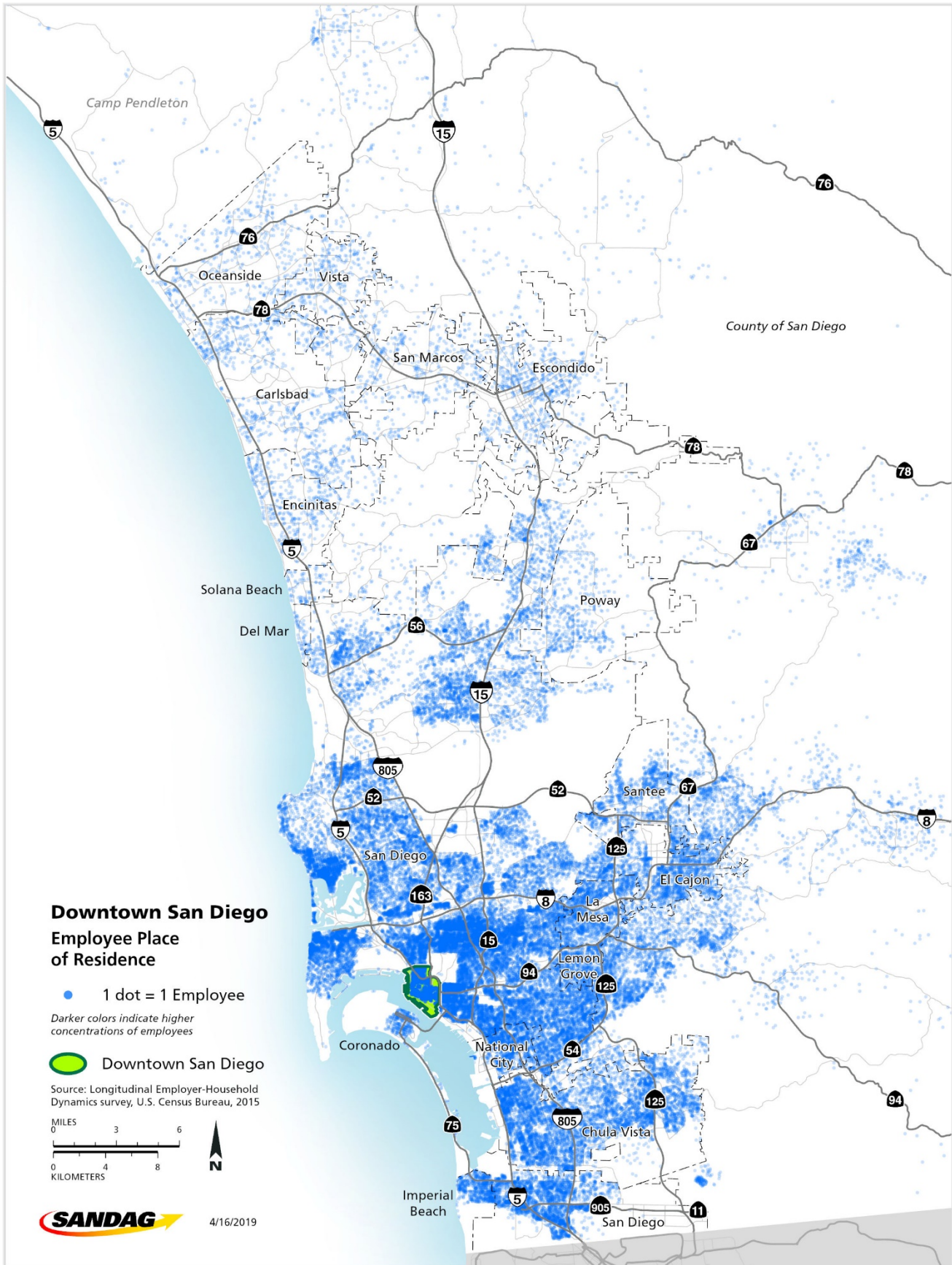
Highlight Figure 3

The 49,738 residents of this employment center represent 2 percent of the region's population. Compared to the region, the residents are about one year older, on average, have a lower median household income, and the proportion of residents that are White and Black is higher, and those that are Hispanic or Asian is lower.



*All categories except Hispanic represent the non-Hispanic population (e.g. Non-Hispanic white).
 SOURCE: SANDAG Population and Housing Estimates, 2016

Where do Downtown San Diego employment center employees live?



Where are Downtown San Diego employment center employees traveling from?

Highlight Table 2 and Figure 4

Table 2 shows where Downtown San Diego employment center employees live/travel from to get to their jobs. Around three-fifths (61%) of the employees live in San Diego, with the other top two areas including the unincorporated areas of the region and Chula Vista. Roughly 4 percent of these employees both live and work in the Downtown San Diego employment center (Figure 4).

Table 2

What jurisdictions Downtown San Diego employment center employees travel from

Jurisdiction	Number of workers in employment center	Percent of workers in employment center
San Diego	36,596	61%
Unincorporated	6,267	10%
Chula Vista	6,129	10%
La Mesa	1,724	3%
El Cajon	1,616	3%
National City	1,321	2%
Santee	1,152	2%
Lemon Grove	772	1%
Carlsbad	715	1%
Imperial Beach	644	1%
Escondido	607	1%
Poway	560	1%
Oceanside	471	1%
Coronado	421	1%
Encinitas	414	1%
Vista	348	1%
San Marcos	331	1%
Solana Beach	87	<1%
Del Mar	56	<1%
Total	60,231	100%

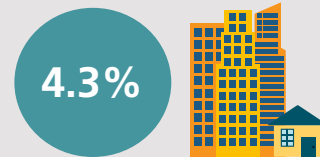
NOTE: Please note that the total number of employees shown here is lower than presented elsewhere because employees who travel from outside the region or have an unknown origin location are excluded and only primary jobs are included.

SOURCE: LEHD LODES OD, 7.3, 2015

Figure 4

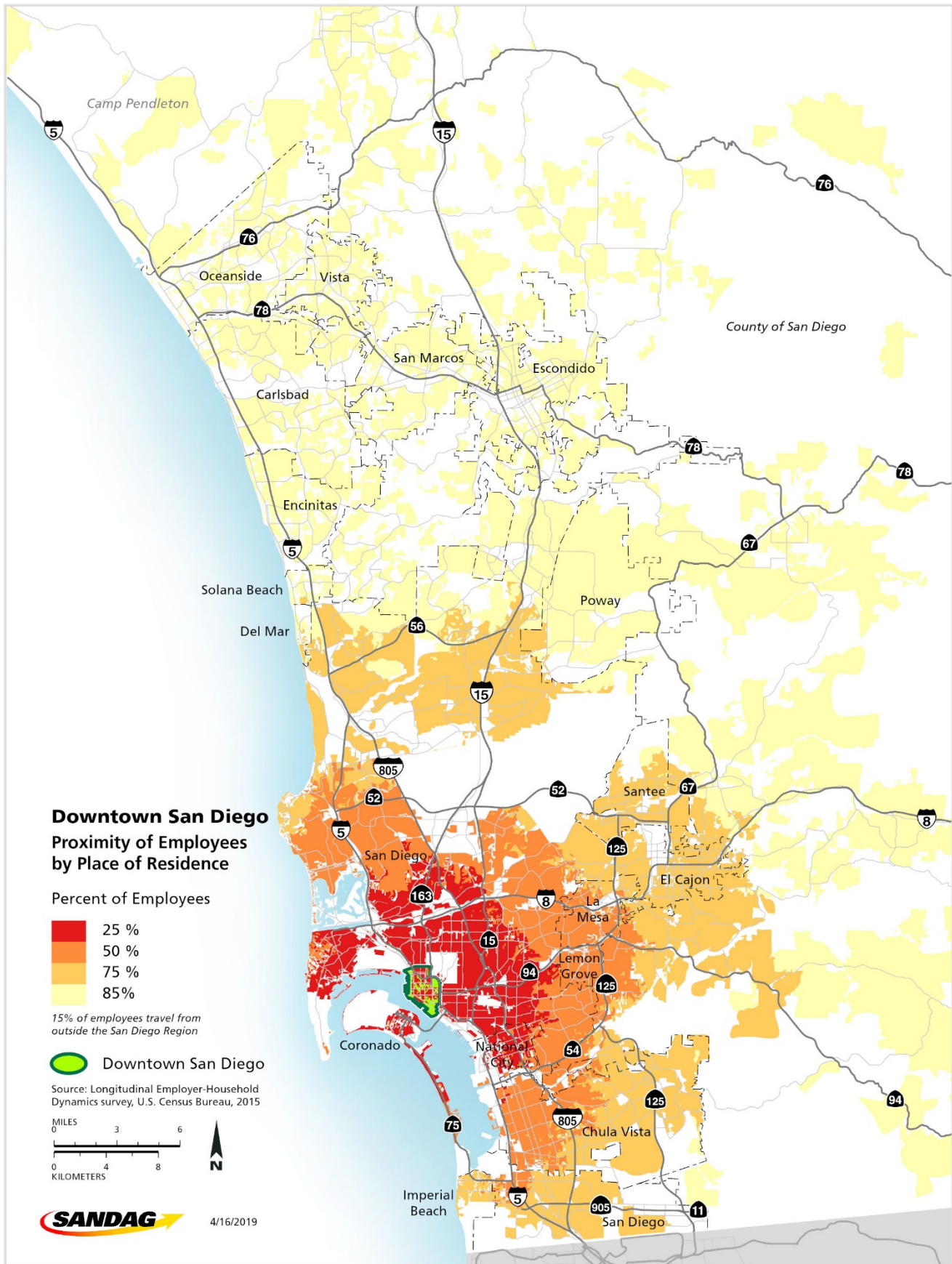
How many Downtown San Diego employees also live in this same employment center?

SOURCE: LEHD LODES OD, 7.3, 2015



Map 3

How far employees in the Downtown San Diego employment center have to travel?



How do Downtown San Diego employment center employees get to work, how far do they have to travel, and how long does it take them?

Highlight Figure 5

Fifty-eight percent (58%) of Downtown San Diego employment center employees get to their jobs driving alone, compared to 80 percent regionally. A greater percentage take transit (23%), compared to the region (4%). Twelve percent (12%) carpool, similar to the region (13%). Five percent (5%) walk, similar to the region (4%). Two percent (2%) bike, similar to the region (1%).

Highlight Figure 6

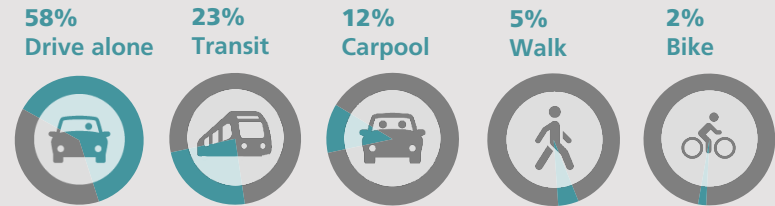
Employees traveling to the Downtown San Diego employment center by automobile traveled a mean of 11.7 miles. This average is slightly lower than the regional average of 12.2 miles.

Highlight Figure 7

Downtown San Diego employment center employees who are traveling by car during peak period drive a mean of 11.4 miles and it takes them a mean of 24.4 minutes. In comparison, those that take transit travel 11.1 miles on average and it takes them a mean of 52.3 minutes. Five percent (5%) walk, similar to the region (4%). Two percent (2%) bike, similar to the region (1%).

Figure 5

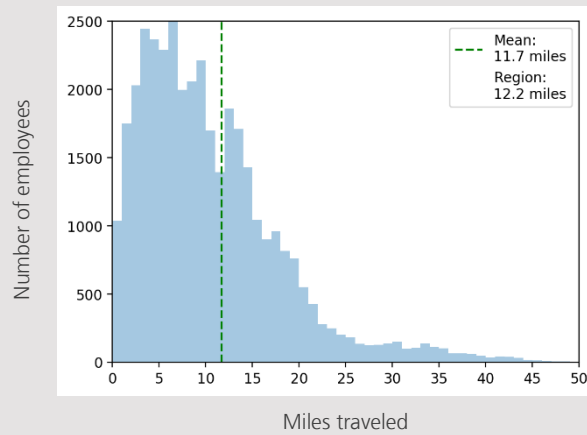
What mode of transportation do Downtown San Diego employment center employees use to get to work during peak period



SOURCE: SANDAG Activity Based Model, 2016

Figure 6

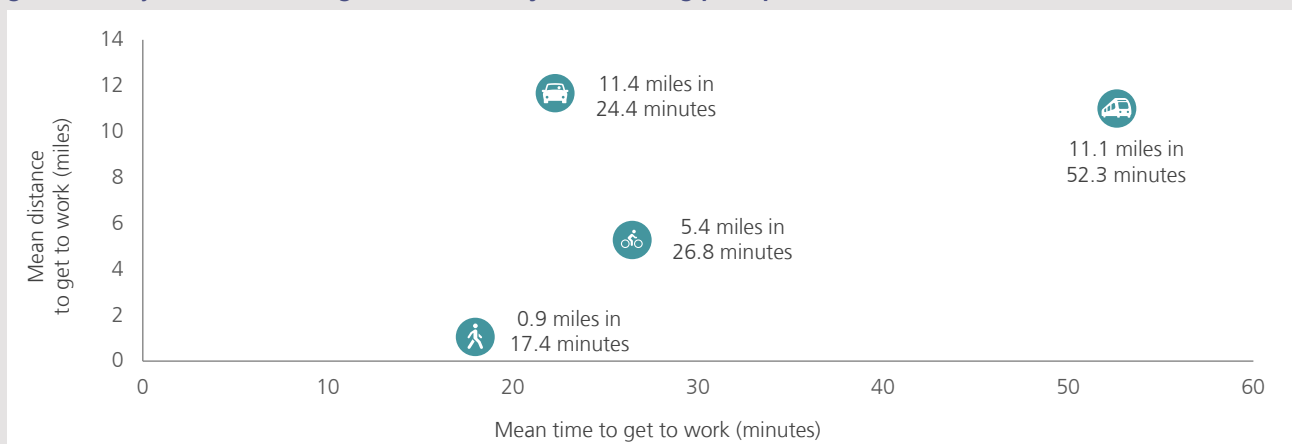
How far Downtown San Diego employees travel from home to work by automobile to get to this employment center at any time



SOURCE: SANDAG Activity Based Model, 2016

Figure 7

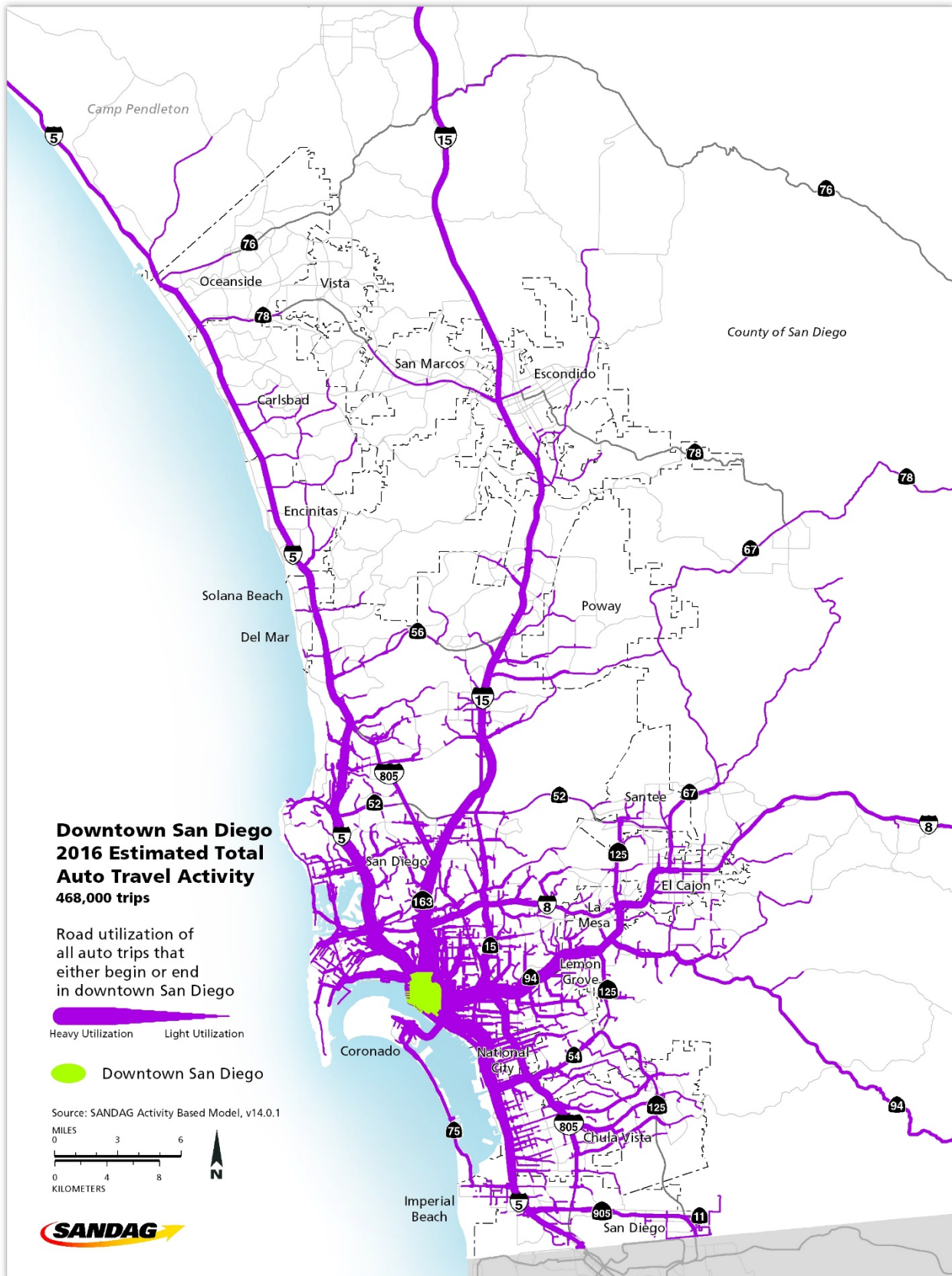
How far Downtown San Diego employment center employees travel to get to their jobs and how long it takes them by mode during peak period



SOURCE: SANDAG Activity Based Model, 2016

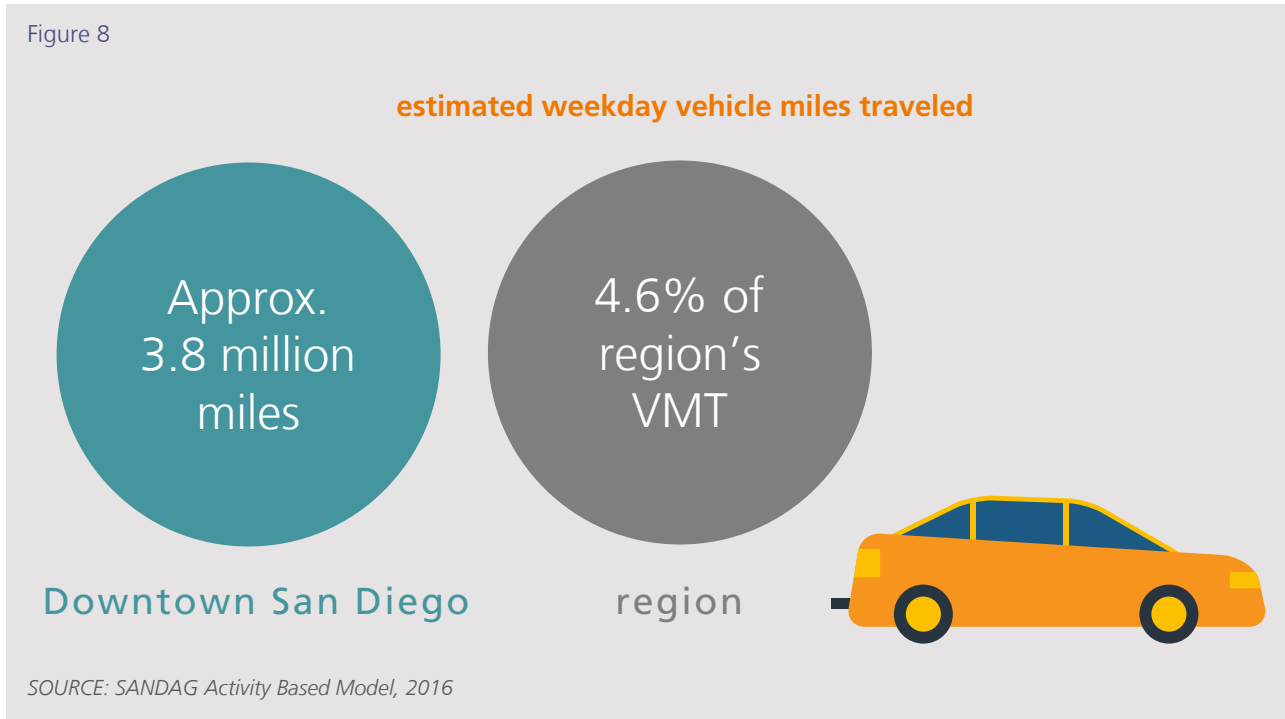
Map 4

All automobile trips that originate or end in the Downtown San Diego employment center



Estimated weekday vehicle miles traveled (VMT) from or to the Downtown San Diego employment center

On average, total vehicle miles traveled by automobile on a typical weekday from or to the Downtown San Diego employment center is approximately 3.8 million miles. This estimate is based on a snapshot from a fall weekday and represents 4.6 percent of the estimated VMT for the region.



Methodology, data sources, and other things to consider

Methodology

SANDAG used a collaborative empirical approach to identifying employment centers across the San Diego region. Building-level SANDAG Employment Estimates (2016) were summarized by ¼ mile radius hexagons. Local-maxima were identified as starting points, and regions were grown to include neighboring hexagons meeting a minimum employment density threshold within an approximate 2-mile radius. The resulting boundaries were generalized (taking into account major barrier features such as topography and freeways) and used to select SANDAG Master Geographic Reference Areas (MGRAs) by activity-weighted (population and employment) centroid. Through this process, over 70 initial employment centers were identified. These centers provided the geographies to evaluate travel patterns, employment information, and resident information. Additional technical information regarding this methodology is available by contacting the Data Analytics and Modeling Department at SANDAG.

Data sources and other things to consider

Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) 7.3 (2015)

The Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statics (LODES) data are a publicly available product of the U.S. Census Bureau. The LODES data are an extract of the LEHD infrastructure which is composed of administrative records, census, and survey data. The LODES data provide counts of unemployment insurance-covered wage and salary jobs, including private sector and state, local and federal government jobs. Workplace location and residential location of an employee is measured at the census block-level (2010). The 2015 data that are used here reflect the latest available data (version 7.3) at the time of this analysis and included two primary tables: Original-Destinations (OD) (used in Table 2 and Figures 1 and 4), and Workplace Area Characteristics (WAC) (used in Figure 1). It should be noted that these data (1) contain wage and salary jobs (and exclude self-employed individuals); (2) do not include military and other security-related federal agencies, postal workers, some employees at nonprofits and religious institutions, and informal workers; and (3) only includes an individual's primary job if an individual has more than one. These analyses reflect preliminary results and are pending final verification. Additional information is available at <https://lehd.ces.census.gov/data/>.

SANDAG Employment Estimates (2016)

On a regular basis, SANDAG produces estimates of employment and individual earnings for the San Diego region. These estimates were used in Table 1 and Figures 1 and 2. These estimates utilize California Employment Development Department (EDD) data, the Quarterly Census of Employment and Wages (QCEW) data, and the LEHD LODES data from the U.S. Census Bureau. among other sources. The employment estimates include wage and salary for private sector and government workers, as well as the self-employed. Uniformed military are not included. Additional information regarding these estimates is available by contacting the Economic and Demographic Analysis Modeling team at SANDAG.

SANDAG Population and Housing Estimates (2016)

Each year SANDAG produces estimates of population and housing for the San Diego region. These estimates utilize several data sources including the California Department of Finance, the U.S. Census Bureau, and a variety of other publicly available datasets. These small-area estimates contain information on the characteristics of the population (ethnicity, age, sex) and housing units (occupied, vacant, unoccupiable) in the region. The population living in military barracks, college dorms and other institutional facilities are included in the population and are counted in housing referred to as Group Quarters. The active military population and their dependents who live in households are included in the household population counts. The population and housing estimates are created in a process similar to the Regional Growth Forecast and contain similar information, however the Population and Housing estimates reflect current conditions. These data are presented in Figure 3. Additional information regarding these estimates is available by contacting the Economic and Demographic Analysis team at SANDAG.

SANDAG Activity Based Transportation Model (2016)

In order to plan and complete regional transportation projects, SANDAG creates and maintains a transportation model which uses a variety of regional transportation survey and socioeconomic and demographic data (e.g., count of trips from home to work, how people carpool, what bus routes are most frequented, and which highways are used and when). These data are then utilized in the Activity Based Model (ABM) to simulate individual and household transportation choices. These choices include how individuals travel around the region (the mode), why people travel around the region (the trip purpose), and when they travel (time of day). The ABM model is refined based on transportation data and expert feedback on methodology and data sources. For this analysis, SANDAG utilized release version 14.0.1 of ABM to estimate travel for the year 2016 (reference scenario #232). Data in Figures 5, 6, and 7 are restricted only to transportation trips in the model in which (1) the trip begins at home and ends at work and does not have any intermediary stops (e.g., dropping a child at school); and (2) the trip's purpose is work. Transit travel time includes initial wait time, walk time to transit stop, transfer time between stops, in vehicle time, and walk time to the destination. Data in Figures 5 and 7 are based on peak period which is 6:00 am to 8:59 am and 3:30 pm to 6:59 pm. It should be noted that estimated auto trip path and VMT data from the model to create Map 4 and Figure 8 include vehicle travel across all trip purposes that either start or end in the study area. Additional information about the ABM is available here: sandag.org/index.asp?subclassid=120&fuseaction=home.subclasshome