Innovation-Driven Cycles Throughout History

The Dynamics of the San Diego Regional Economy

Board of Directors Joint Session
Item 4 | January 17, 2020

A Look at Innovation-Driven Cycles Throughout History and Five Key Sectors Driving the San Diego Regional Economy

- **SANDAG**
  - Ray Major, Chief Economist

- **Education**
  - Pradeep Khosla, Chancellor, University of California San Diego

- **Military**
  - Captain Brien Dickson, Commanding Officer, Naval Base Point Loma

- **Technology Innovation**
  - Kevin Carroll, Executive Director, Tech San Diego

- **Healthcare**
  - Dimitrios Alexiou, President/CEO, Hospital Association of San Diego & Imperial Counties

- **Tourism**
  - Kerri Verbeke Kapich, Chief Operating Officer, San Diego Tourism Authority
1880-1930 Electrification
Late Industrialization

- 1850: "New San Diego" is born
- 1886: Public transportation begins
- 1908: Great White Fleet
- 1915: Panama-California Exposition
- 1924: Ellen Browning Scripps funds 44 bed hospital

Image Source: MTS and Navy websites
1930-1970 Mobility
Service Society

- Convair moves to San Diego
- Ruben Fleet Consolidated Aircraft
- National war emergency declared
- San Diego City Council gifts land
- UC San Diego opens La Jolla campus

1970-2010 Technology
Knowledge Society

- City rezones Torrey Mesa pueblo lands
- Research Consortium
- UC San Diego Connect
- Business and Education partnerships
- Military begins pacific pivot
2010-Future Life Science
Health Age

- Information: Data Analytics
- Environmental Protection: Renewable Energy
- Artificial Intelligence: Robotics, Autonomous Technologies
- Biotechnology: Healthcare and Genomics

Five Key Sectors Driving the San Diego Regional Economy

- Tourism
- Healthcare
- Military
- Technology Innovation
- Education
### UC SAN DIEGO ECONOMIC IMPACT

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5.5 Billion</td>
<td>Annual revenues ($325M from the State)</td>
</tr>
<tr>
<td>$1.4 Billion</td>
<td>Annual sponsored research portfolio (5th in the nation)</td>
</tr>
<tr>
<td>$11.5 Billion</td>
<td>Annual economic impact in San Diego County</td>
</tr>
<tr>
<td>$16.5 Billion</td>
<td>Annual economic impact in California (more than total annual revenue of Arizona)</td>
</tr>
<tr>
<td>74,071</td>
<td>Jobs supported by UC San Diego throughout San Diego County (nearly twice the capacity of Petco Park)</td>
</tr>
<tr>
<td>100,492</td>
<td>Jobs supported throughout California</td>
</tr>
</tbody>
</table>
UC SAN DIEGO COMPANIES EXAMPLES

- Qualcomm
- Viasat
- GoPro
- Ballast Point Spirits
- Cymer
- Sapphire Energy
- Life Technologies
- Lytx
- Chuao Chocolatier
- American Specialty Health Networks
- Entropic

$32.4B Annual sales worldwide
1,000+ Companies use or have used tech created at UC San Diego
#4 Public institution for startup creation
#7 Public institution for patents issued

UC SAN DIEGO IS INNOVATION CENTRAL

The Basement
- Student startup incubator supporting social innovation and business venture ideas

Entrepreneurs-in-Residence
- Unites student entrepreneurs with 10 professionals who understand the startup mentality and the unique issues entrepreneurs face

Center for Novel Therapeutics
- Fosters collaboration with scientists and clinical researchers to accelerate therapies from the research bench to the patient’s bedside

Office of Innovation and Commercialization
- Places UC San Diego innovations with commercial partners for development into useful products
CROSS-COLLABORATIVE RESEARCH

Center for Marine Biotechnology and Biomedicine
•Focuses on marine biomedicine and marine drug discovery, with an emphasis on cancer and both infectious and inflammatory diseases

Microbiome and Microbial Sciences Initiative
•Creating technology to understand and control the complex microbial communities that underpin processes on scales from our bodies to our planet

Center for Innovative Phage Applications & Therapeutics
•First phage center in North America, brings innovative research and clinical practice to the field of medicine

Halıcıoğlu Data Science Institute
•New methods and infrastructure in data science to solve the world’s most pressing challenges

WORKFORCE TRAINING

Degree Programs
•159 Bachelor’s Degree Programs
•76 Master’s Degree Programs
•72 Doctor’s Degree Programs
•100+ UC San Diego Extension Certificate/Course Programs

The U. Downtown (Park & Market) (Opening 2021)
•Employer partnerships (training and certification)
•SANDAG/UC San Diego Extension Partnership – customized courses for employees focused on data
CHALLENGES

Deterrents to Growth
- Housing/Cost of Living
- Transportation/Commute
- Student Basic Needs (housing and food insecurity are on the rise)

Addressing Housing Challenges
- Campus housing expansion (4-year guarantee at 20% below market)
- Faculty and staff housing (Regents Rd. corridor)

Addressing Transportation Challenges
- Gilman Bridge
- UC San Diego Blue Line
- Adaptive Traffic Signal Controls, Transit Signal Priority, and updating micro-mobility infrastructure

LONG-RANGE DEVELOPMENT PLAN

HOUSING

By Fall of 2020
- Adding 2,000 undergraduate beds and 2,100 graduate student beds
- Apartment-style accommodations for upper division and graduate students

By Fall of 2028
- Nation's largest residential system
- 10K net new beds
- Housing 62% of undergraduates on campus
- Four-year housing guarantee for undergraduate and graduate students at 20% below market rate
LONG-RANGE DEVELOPMENT PLAN

TRANSPORTATION

Install intelligent transportation systems and construct multi-modal transportation improvements by 2025 in collaboration with City of San Diego, Metropolitan Transit System (MTS) and CALTRANS

1. **Adaptive Traffic Signal Control:** Regents Rd. and La Jolla Village Dr. corridors (+ I-5 and I-805) – 18 intersections total to manage traffic flow

2. **Transit Signal Priority:** Regents Rd. and La Jolla Village Dr. (+ I-5 and I-805 interchanges) to improve regional bus service

3. **Micro-Mobility Infrastructure:** Pedestrian and bicycle mobility and safety improvements in and around campus to prepare for trolley
   - New traffic signal at east-bound La Jolla Village Drive and Gilman Drive
   - Crosswalk relocation at La Jolla Village Drive and Torrey Pines Road

IMPROVING CONNECTIONS TO CAMPUS

The U at UC San Diego

Opening 2021
We see the innovation economy expanding

1. **Workforce Training**: Continue to develop new degree programs, partner with employers to create certifications and training

2. **Public/Private Partnership**: Continue to build out research park with research partners to push innovation

3. **Idea Commercialization**: Continue to shepherd innovations through regulatory process to get products to market

**WHERE WE NEED HELP**

**Micro-Mobility Commitment**
- Partner with UC San Diego as we build out the last mile of the commute on our campus
- Help with micro-connections onto campus

**Mass Transit**
- Assistance/incentives for 75K new Trolley riders
- Expand connections to North County Transit
Navy Regional Economic Impact
Presented to:
SANDAG Board of Directors

CAPT Brien W. Dickson
NBPL Commanding Officer

SANDAG Board of Directors Joint Session
Item 4 | January 17, 2020

Special Thanks to:
SDMAC and PLNU for the
Military Economic Impact Study
https://www.sdmac.org/

Your Navy / Marine Corps in San Diego
Largest military concentration in the world

• 143,000 Personnel
  (116,000 Uniformed Service & 27,000 civilians)
• 60 Navy ships and 4 submarines
• 2 Aircraft Carriers - $1.6 billion impact

• $28 Billion in direct spending related to defense.
• 1 in 5 jobs in SD County created by the military sector.
• 22% of SD County’s total gross regional product

• Marine Corps
  • 3 major installations
  • 52,000 Marines
  • 3,600 Navy personnel and 4,000 civilians

Military is largest economic cluster in San Diego
Military Partners in San Diego

143,000 Personnel include:
- Navy Medicine - Coast Guard - Veterans Administration

- 2 San Diego hospitals
- NHRC – the Navy’s CDC
- Over 8,700 employees
- $1.3 billion in DoD funding

Coast Guard
- 1100 Active Duty & Civilians
- $112 million direct spending
- $300 million net contribution to SD GRP

Veterans Administration:
- Over 3100 employees
- Direct spending of $3.5 billion

Growing Military Economic Impact on Metro San Diego

- NBSD Growth Thru FY2025 - LCS laydown:
  - Training & Support
  - Mission Module Readiness Center
  - 16 Ships, 6.1k AD & DEPN
  - 4 DDG Ships, 2.4k AD & DEPN
  - 3 DDG-1000s – 1.06k AD & DEPN

- NBC Growth
- New Aircraft

- NBPL Growth Thru FY2029
  - 4 + Submarines
  - EOD Expansion
  - Cyberlab

- Naval Special Warfare Coastal Campus
Today’s Navy in the Southwest

Region Statistics
- Over $31 Billion in Assets
- 1.4 Million Acres
- $1.2 Billion Annual Budget
- Over 9,000 employees
- Directly serving over 250,000 base users

World Class Training Areas
Make for a World Class Navy
Naval Information Warfare System Command

- Headquarters located at Old Town Campus (NBPL)
- DON’s major acquisition command for:
  - Information Technology
  - Networks and Communications
  - Business Systems
- Major focus on cybersecurity
- ~ $3.5 billion contribution to San Diego region’s GRP in FY2019
- ~ 29,000 direct and indirect jobs in FY2019

Link Between the Navy and San Diego’s Technology Industry

Vision for Old Town Campus

NAVWAR Facilities Requirements
- Located on 70 acres of Navy owned land at OTC
- Current facilities originally built in 1940 as an assembly plant for the B-24 bombers
- 2018 - RFI to explore PPV opportunities
- 2019 – SECNAV signed agreement with SANDAG to allow collaboration and cooperation for redevelopment

Looking Forward, the Navy Requires:
- Secure, Safe and Modern Facilities
- Support NAVWAR’s Requirements
- Optimize use of Navy prime real estate property

End State:
- State-of-the-art facilities that is hub for Tech Development
- Nation’s premier center for Cyber Warfare
- Cornerstone of Midway-Pacific Highway Community
Military Housing in San Diego

San Diego Family Housing – 9,135 Homes
• DoN involved in all major decisions and actions
• Navy owns the land; ground lease for 50 years
• SDFH has legal ownership of the homes

Unaccompanied Housing: 12,000+ beds

<table>
<thead>
<tr>
<th>Location</th>
<th>Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naval Base San Diego</td>
<td>5,180</td>
</tr>
<tr>
<td>Naval Base Point Loma</td>
<td>1,348</td>
</tr>
<tr>
<td>Naval Base Coronado</td>
<td>5,744</td>
</tr>
</tbody>
</table>

Private options provide housing to:
• Over 80% of our uniformed service members and their families
• 100% of the 27,000 civilian work force

TRANSIT OPTIONS IMPACT OUR WORK FORCE DUE TO DISPERSED HOUSING

Navy Challenges/Opportunities in San Diego

Challenges:
• Anticipated growth further overloading support to our sailors and families:
  - Unaccompanied Housing & Child Development Centers
• Housing - Increased commute hours
• Aging Navy infrastructure: Piers, Hangers, Utilities

Opportunities:
• Public Private Ventures:
  - Broadway Complex, Old Town Childcare, Housing
• Out lease for floating dry dock for ship maintenance
• Transit Improvements: Vesta Street Bridge
• Expanding Transit: Ferries, Data Sharing
• Strategic Highway Network – STRAHNET
Regional Economy Panel
Technology Cluster/Mobility

Kevin Carroll, Executive Director, Tech San Diego

SANDAG Board of Directors Joint Session
Item 4 | January 17, 2020

The Past

- Regional planning decisions pushed by John Jay Hopkins, General Dynamics & Roger Revelle, Scripps Institution of Oceanography
  - Reserve and zone Torrey Pines for commercial use
    - Allowed ‘clustering’ for tech (military and life sciences)
- Defense downturn in 92
  - ViaSat, engineering talent cluster
- Qualcomm R&D hub led to tech clustering
  - Motorola, Nokia, HP, SONY
- Qualcomm/Hybritech family trees still resonates - led to clustering and put regional tech industry on the global map
- Earliest Data Science Cluster – including HNC, fraud detection

San Diego strengths – adapting, repurposing & small and mid-size companies
The Future

- San Diego is the 6th fastest growing tech hub – 16% growth in tech employment
  - Double average wage @ $106K
  - Migrating over 5K tech workers per year (those with tech degrees) University Drain
- Software industry has matured
  - Intuit, Seismic, Lytx, Classy,
- Multiple & diverse geographic clusters led by Sorrento Valley, Kearney Mesa & Palomar Airport
  - Downtown growing tech hub...however Sorrento Valley, Kearney Mesa, Palomar Airport will continue rapid growth
- Data Science/Al/Machine Learning/Predictive analytics
  - Early cluster gives region a head start
  - UCSD created HDSI – one of the first interdisciplinary data science programs in the nation
  - EVERYONE USES DATA SCIENCE
- What is a tech company – IT, Software, IOT, Data enables virtually ALL commercial enterprises
  - Big chunk of civilian military workforce is tech – Cybersecurity, Data Science, Software integration
- Myth of the millennial tech worker - data shows they do live in suburbia
  - Growing evidence with regions R&D background that tech workforce skews more mature

First – the good news

- Holders of tech degrees in San Diego no more (or less) likely to commute by car – no inherent bias against transit
  - All commuters – 84.7%
  - Tech Degree holders – 84.5%
  - Non Tech Degrees – 84.9%
- Most regional Tech workers are not super commuters
- Bay Area/Los Angeles has much higher % of ‘super commuters’
  - Palomar Airport Road – 10.5 mile auto trip vs. 12.0
  - Sorrento Mesa –14.9 miles
Small and Mid-Size Innovation Economy reside in business parks

- Most of the business parks our companies are located in are NOT transit friendly

Business parks are also unfriendly to enter

Not pedestrian friendly
One way entry and exit – designed for cars
Tech Clusters are creating the problem

- All of the SANDAG defined ‘Tier 1’ employment centers are primarily tech hubs
  - Sorrento Valley
  - Kearney Mesa
  - Palomar Airport
  - Downtown

Sorrento Valley
- Qualcomm
- Apple
- Illumina
- Torrey Pines Mesa

- Note how Mira Mesa, Rancho Penasquitos, Rancho Bernardo, Poway and University City are key neighborhoods for these workers
  - Higher wage tech jobs want higher performing schools
Infrastructure connecting Sorrento North and East NOT (presently) transit friendly (aka do you build a subway in Penasquitos Canyon? Do you build a heavy rail line under Sorrento Mesa?)

Almost 60% of workers transiting from North County Palomar Airport Key Technology Clustering Area
- Viasat
- Nordson
- Thermo Fisher

Note how move employees are located in North County (And challengingly, not along existing transit corridors or where transit corridors would be easy to build)

0.1% of workers also live in Job Center; 17% live in Carlsbad (12% in Vista)

Carlsbad zoning largely PRECLUDES residences in this area
The big challenge for mobility

- How do you solve the first and last ¼ mile problem: Both business parks and residential neighborhoods NOT built for transit
- Topography not conducive
  - Consider that PQ and heart of Sorrento is <6 miles as crow flies but 12.7 by roads since canyon in between
  - $$ $$ $$ and environmental concerns preclude transiting PQ canyon
- Easier solution would be to focus on south of 8 and some other less complex challenges – PLEASE DON’T
- Sorrento Valley, Kearney Mesa, Palomar airport will continue to drive regional tech employment and regional economic growth
- Small and mid-size tech will continue to reign in region
- Housing challenges critical factor in mobility
  - Density, affordability, mixed use, co-location

Tech San Diego stated goal
25% of Tech workforce have access to efficient mobility/transit solutions
Hospitals & Health Systems

Dimitrios Alexiou, FACHE
President & CEO
Hospital Association of San Diego & Imperial Counties

January 17, 2020

HASD&IC Members
Snapshot

Statewide:
• Over 400 hospitals
• $268 Billion in economic output

Regionally:
• 33 hospitals
• Over 7,000 licensed beds
• Over 1 million emergency department visits annually

Workforce

<table>
<thead>
<tr>
<th>Organization</th>
<th>Total Local Employees</th>
<th>Full-Time</th>
<th>Part-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharp HealthCare</td>
<td>18,870</td>
<td>12,587</td>
<td>6,183</td>
</tr>
<tr>
<td>Scripps Health</td>
<td>14,941</td>
<td>12,153</td>
<td>2,788</td>
</tr>
<tr>
<td>Kaiser Permanente</td>
<td>9,630</td>
<td>5,318</td>
<td>4,312</td>
</tr>
<tr>
<td>UC San Diego Health</td>
<td>8,932</td>
<td>8,104</td>
<td>828</td>
</tr>
<tr>
<td>Rady Children’s Hospital – San Diego</td>
<td>5,541</td>
<td>4,007</td>
<td>1,534</td>
</tr>
<tr>
<td>Palomar Health</td>
<td>4,200</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>VA San Diego Healthcare System</td>
<td>3,735</td>
<td>3,250</td>
<td>485</td>
</tr>
<tr>
<td>Tri-City Medical Center</td>
<td>2,177</td>
<td>1,518</td>
<td>659</td>
</tr>
</tbody>
</table>

• Approximately 70,000 jobs
• $4 billion in salaries, wages and benefits
Macro Pressures

Legislative/Regulatory

- Seismic compliance will cost between $34 billion and $143 billion statewide—to meet 2030 state seismic safety standards (https://www.rand.org/news/press/2019/03/28.html)
- Nationally, health systems, hospitals and PAC providers spend nearly $39 billion a year solely on the administrative activities related to regulatory compliance (https://www.aha.org/system/files/2018-02/regulatory-overload-report.pdf)

Financial

- Underpayment of government payor sources (Medi-Cal and Medicare)
- Uncertainty of the future of ACA/coverage expansion

Aging Population

- This impacts both the patients we serve, as well as our workforce
2019 CHNA findings

- Transportation barriers and housing affordability were identified as challenges in the following areas of the Community Health Needs Assessment (CHNA):
  - Access to Care
  - Economic Security
  - Homelessness & Housing Instability

Opportunities

How health care is delivered is already shifting & will continue to shift in the future

- Transportation
- Affordability of housing

➢ Both of these impact our workforce and patients
Questions?

DAlexiou@hasdic.org
858-614-0200
@DimitriosHASDIC
San Diego Tourism Authority

• Founded in 1954
• NON PROFIT 501(c)6
• MISSION: To drive visitor demand to economically benefit the San Diego region
• VISION: Leading San Diego to be the most desirable destination
• $52 million FY20 organizational budget
Tourism Drives Regional Economies

194,000 Jobs That Can’t Be Outsourced

- Tourism represents 1 in every 8 jobs in San Diego County
- 53% of tourism employees earn a middle-class salary or higher
- Tourism supports educational opportunity – one-third of those who work part-time while going to school are employed in the travel industry
Tourism Generates Tax Revenues
County TOT Has Grown 10-fold In Last 30 Years

San Diego County Transient Occupancy Collections

Tourism’s Regional Impact

<table>
<thead>
<tr>
<th>FY 2019</th>
<th>35 MILLION VISITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$11.6 B ANNUAL VISITOR SPENDING</td>
<td>$19.2 B ANNUAL REGIONAL IMPACT</td>
</tr>
<tr>
<td>$31.8 M SPENT DAILY BY VISITORS</td>
<td>$855 M TOTAL TAXES GENERATED BY VISITORS ANNUALLY*</td>
</tr>
<tr>
<td>$329 M FY19 TOT COLLECTED IN COUNTY</td>
<td>17.72 M HOTEL ROOM NIGHTS SOLD</td>
</tr>
<tr>
<td>68% OF REGIONAL IMPACT DRIVEN BY HOTEL VISITORS</td>
<td>70% OF VISITOR DOLLARS SPENT AT NON-LODGING BUSINESSES</td>
</tr>
</tbody>
</table>

SOURCE: DC Research, Smith Travel Research, San Diego County Cities
*State and local transient occupancy, sales & property taxes
San Diego Tourism

- 5th most visited destination for domestic travelers
- 11th most visited U.S. city by international travelers
- 5th largest U.S. meetings & convention destination
- 12 million SAN air arrivals
- 1.2 million arrivals via TIJ Airport Cross Border Xpress
- 14 million Southern California day visitors
- 15 million attraction attendees

The Challenge

- Traveling to a region for vacation or meeting is a customer CHOICE
- Cities must MARKET to be competitive in a global economy
- Customers look at REPUTATION, AMENITIES, and COSTS
- Cities must evolve TOURISM PRODUCT and INFRASTRUCTURE to attract visitors and create a sustainable tourism economy for the future
3 KEY GROWTH STRATEGIES

Advocate for Tourism Infrastructure

- Convention Center expansion
- Transportation solutions
- Port waterfront development
2 Promote “NEW” Leisure Assets

- Raise the profile of Balboa Park to iconic park status
- Secure and promote major events

3 Deploy GLOBAL Marketing Targeting Top 8 Countries
Includes National Advertising across the United States

National Media Campaigns – TV and Digital

Protect traditional volume markets – Los Angeles, Phoenix and San Francisco

“Always On” content showcasing breadth of San Diego experiences from culinary to neighborhoods to attractions
Thank you!
@VisitSanDiego
@kvkapich
How does San Diego participate in the future?
Background

- **February 2019**: Board approved action plan to develop new vision for 2021 Regional Plan
- **April 2019**: 5 Big Moves presented as key strategies to develop bold new vision
- **July 2019**: Update on 5 Big Moves and Board prioritized four key Complete Corridors to include in the vision
- **September 2019**: Board approved $593.4 million to advance planning for 12 Complete Corridors and a Central Mobility Hub with airport connectivity in addition to other regional needs and programs related to the 5 Big Moves
- **October 2019**: Board adopted Federal Regional Transportation Plan
A Refresher on the 5 Big Moves

- **NEXT OS**: Enabling Technology
- **COMPLETE CORRIDORS**: Smart, connected, and multimodal transportation network
- **FLEXIBLE FLEETS**: Shared mobility services that complement transit
- **TRANSIT LEAP**: High speed and frequent public transportation
- **MOBILITY HUBS**: Transfer points at activity centers

Data-Driven Planning
Using empirical data to drive our vision

**Population**
- 2050: 4.0 million (20% increase from 2019)
- 2019: 3.4 million

**Vehicle Miles Traveled**
- 2050: 103 million (24% increase from 2018)
- 2018: 84 million

- 64% of trips are considered “mandatory”
- 1 of 3 trips are for work or work related
- 12.2 mile average commute to work
Where People Live and Work

Connecting Population and Employment Centers

- Major Employment Centers
Non-Work Trips

Data Source: Teralytics

Border (Person Trips)

Data Source: Teralytics
Commercial Trips (Cross Border)

Data Source: StreetLight

Corridor Types (Highway)

Regional and Interregional Corridors
Urban Corridors
Rural Corridors
Regional and Interregional Corridors

**Trip Distance**
- >20 miles (60%)
- 5-20 miles (30%)
- <5 miles (10%)

**Peak Period Performance**
- Vehicle Miles Traveled (Freeway): Approx. 2/3
- Delay (Freeway): Approx. 2/3

Urban Corridors

**Trip Distance**
- >20 miles (10%)
- 5-20 miles (80%)
- <5 miles (10%)

**Peak Period Performance**
- Vehicle Miles Traveled (Freeway): Approx. 1/3
- Delay (Freeway): Approx. 1/3
Rural Corridors

Trip Distance
- >20 miles (10%)
- 5-20 miles (80%)
- <5 miles (10%)

Peak Period Performance
- Vehicle Miles Traveled (Freeway)
  - Approx. <5%
- Delay (Freeway)
  - Approx. <5%

Transit Travel Time Analysis

Data Source: SANDAG 2017-2018 State of the Commute Report, SANDAG. Freeway travel times are from Caltrans PeMS, and reflect mainline freeway travel only. Transit travel times are from MTS and NCTD via Ridecheck Plus, and reflect the time between the first departing stop and the last arriving stop along each transit route.
Agency Interviews and Surveys
Technology and Data Assessment

<table>
<thead>
<tr>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>58%</td>
<td>Data collection and analysis is manual</td>
</tr>
<tr>
<td>95%</td>
<td>Data sharing is ad-hoc and manual</td>
</tr>
<tr>
<td>58%</td>
<td>Technology solutions are not integrated</td>
</tr>
<tr>
<td>63%</td>
<td>Performance measures are evaluated based on historical data</td>
</tr>
<tr>
<td>69%</td>
<td>Policies do not respond to real-time conditions</td>
</tr>
</tbody>
</table>

19 Surveys
7 Interviews

Industry Engagement

- Industry interviews
- Vision Advisory Panel provides expert input on emerging technology solutions

Panelists represent:
- Wireless communications
- Connected vehicles
- Zero emission vehicles
- Emerging mobility services
- Data analytics
Education and Outreach

- 135+ presentations regionwide
  - Member agencies, professional associations, community groups, etc.
- 5 Big Moves webinar series
- Coordination meetings with partner transportation agencies
- Ongoing Community Based Organization (CBO) outreach
- Social media posts and emails
- Vision Lab Open Hours and Open Houses

Stakeholder Workshops

- October 2019
  - SANDAG Working Group Forum
  - Tribal Transportation Workshop
- November 2019 and January 2020
  - Employer Focus Groups
- December 2019
  - Crossborder Mobility Workshop
Resident Insights
Transit doesn’t work for many people today

**safety and security**

- “I wouldn’t let my kids take public transit here because of safety and security concerns.”
- “Safety is a huge factor in riding public transit for me and as a woman I don’t feel safe riding alone.”

**reliability and speed**

- “The bus is not reliable and takes planning. Before I had a car, I would take the bus – I had to leave super early and really plan ahead.”
- “I wish I could take public transit, but it takes a long time and there is a lack of frequency options, and a last mile issue.”

**incomplete transit network**

- “The network is too linear. If you go to any major city, public transit is just as easy and just as fast as driving.”
- “I’m surprised there’s no transit to the airport… We need airport connectivity.”

**inadequate service for transit dependent**

- “I don’t have a car, so I take the bus and COASTER to get to Encinitas for work. I leave Chula Vista at 6 a.m. for my 10 a.m. shift.”
- “I have to walk home from work at 11 p.m. because it’s too late for the buses.”
Resident Insights

lack of school bus service

“We used to have buses in middle school, but not anymore. People getting to school creates most of the traffic.”

Trying to get across Mira Mesa Blvd. after picking up my daughter from school can take up to 20 minutes.”

“It would be great if you could fix the traffic lights because the ones near the school get backed up for miles.”

unsafe biking conditions

“I like riding my bike at the beach, but I don’t feel safe on the roads.”

“Biking outside of the neighborhood is unsafe. People text and drive and go into the bike lanes a lot.”

people plan their lives around traffic

“The traffic in Sorrento Valley is so bad, I would never take a job there.”

“I plan my day around traffic patterns.”

“I like the scooters and bikes, especially around colleges and schools. If I had some dedicated lanes to take a scooter to school, I wouldn’t be driving.”

“Scooters should have their own lanes and be regulated, or they should go altogether.”

“The traffic in Sorrento Valley is a nightmare. I plan my commute around when the red lines on Google Maps disappear.”

micromobility infrastructure and regulations needed

Next Steps

• Regional Plan Board presentation topics (January – March 2020):
  – Our Local Economy
  – Big Data – Harnessing the Benefits of Data-Powered Governance
  – Overview of Air Quality, Vehicle Miles Traveled, and Greenhouse Gas Emissions Requirements
  – Primer on Modeling
  – Environmental Impact Reports
  – Spring 2020: Presentation of the Vision for the 2021 Regional Plan