Planning for the Future of Mobility

California State Association of Counties
Innovation Summit
November 27, 2018
SANDAG Overview

• Metropolitan Planning Organization and Regional Transportation Planning Agency

• 18 cities and County of San Diego

• Forum for regional decision making

• Plan, design, build, operate
Regional Policy & Data Clearinghouse

- **Forum for regional decision-making:** transportation; regional planning and public safety
- **San Diego Forward: The Regional Plan** long-range blueprint to meet mobility needs – projects, programs, and policies
- Administers the **TransNet program** – a local sales tax that is used for regional transportation priorities.

**Clearinghouse / Data Hub:**

- Population Growth
- Transportation
- Transit construction
- Habitat planning
- Public Safety
- Binational Planning
- Housing
- Census Data
- Energy
- Economic prosperity
- Shoreline preservation
- Interregional planning
SANDAG Transportation Demand Management

• Commuter services
  – SANDAG Vanpool Program
  – Guaranteed Ride Home
  – Bike encouragement
  – Carpool and transit incentive programs

• Outreach and education
  – Employer services
  – Campaigns
  – Mini-grants

• TDM planning and pilot projects
  – Shared mobility
  – Technology
Here are 200 people in 177 cars

Images of downtown Seattle's 2nd Avenue
From the International Sustainability Institute's Commtuter Toolkit poster

on bikes

on 3 buses

on 1 light rail train

Source: www.strongtowns.org
Source: International Sustainability Institute
Adoption Rate of New Technology

Technology Adoption in the U.S.

Sources: Data aggregated by Horace Dediu, Clayton Christensen Institute; Statista
Trends in Transportation Technology

1. Shared Mobility
2. Zero Emission Vehicles
3. Connectivity
4. Automation
1. Shared Mobility

Technology fuels growth and variance in business models, blurring lines between public and private transportation.
Shared Mobility
2. Zero Emission Vehicles
Dropping battery costs, increase in vehicle choice, and Zero Emission Buses push market development
# Zero Emission Vehicles

The Tesla Model 3 is blowing away the competition

Estimated U.S. small and midsize luxury car sales in July 2018

<table>
<thead>
<tr>
<th>Model 3 (TESLA)</th>
<th>Sales</th>
</tr>
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<tbody>
<tr>
<td>2, 3, 4, 5 Series</td>
<td>12,811</td>
</tr>
<tr>
<td>C, CLA, CLS, E-Class</td>
<td>11,835</td>
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<tr>
<td>A3, A4, A5, A6, A7</td>
<td>9,282</td>
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<tr>
<td>ES, GS, IS, RC</td>
<td>6,866</td>
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<td>ATS, CT6, CTS, XTS</td>
<td>4,382</td>
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<td>Q50, Q60</td>
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<td>RLX, TLX</td>
<td>2,536</td>
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<tr>
<td>60, 90 Series (VOLVO)</td>
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</tr>
<tr>
<td>Giulia (FIAT)</td>
<td>1,028</td>
</tr>
<tr>
<td>XE, XF (JAGUAR)</td>
<td>648</td>
</tr>
</tbody>
</table>

Source: Zachary Shahan – Clean Technica & Good Car Bad Car
3. Connectivity

Connected vehicles communicate with the world around them improving safety and efficiency across all modes.
Connectivity
4. Automation

Self-driving delivery services, taxis, and shuttles bring significant potential benefits and concerns.
Trends in Transportation Technology

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on 1 light rail train
Here are 200 people in 177 cars in electric cars in connected cars in autonomous cars.
Shared, Electric, Connected and Autonomous Means....

- Less space for cars and more space for people, housing, open space.
- Better air quality and a healthier environment.
- Safety, efficiency, accessibility and greater mobility.
Preparing for a Shared, Electric, Connected and Autonomous Future

• Regional Mobility Hub Strategy
• Automated Vehicle (AV) Proving Ground
• Smart Mobility Strategic Plan
Mobility Hub Concept

1. Bikeshare
2. Carshare
3. Scootershare
4. On-demand rideshare
5. Package delivery
6. Mobile retail services
7. Microtransit
8. Smart parking
9. Wireless EV charging
10. Neighborhood electric vehicles (NEVs)
11. Rideables
12. Shared, connected, and autonomous vehicles
Active Transportation

- Walkways
- Crossings
- Bikeways
- Bike parking
Support Services and Amenities

- Real-time travel information
- Electric vehicle charging
- Wayfinding
- Package delivery
- Mobile retail services
Intelligent Transportation Solutions

- Wireless vehicle charging
- Smart parking
- Autonomous vehicles
- Connected vehicles
Mobility Hub Concept

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Regional Mobility Hub Strategy

- Mobility Hub Features Catalog
- Mobility Hub Prototypes
- Conceptual Designs and Visual Simulation
- Implementation Guidance
San Diego AV Proving Ground

- Facilitate testing and validation of connected and autonomous vehicle technologies while ensuring public safety and security.

- Inform public policy and long-range planning that guides deployment in support of the region’s goals for mobility, sustainability, and economic prosperity.
Active Traffic and Demand Management Concept (ATDM)

1. Active Lane Use Control
2. Speed Harmonization
3. Active HOV/Managed Lanes
4. Active Smart Intersections
5. Smart Ramp Meters
6. Active Arterial Routing
7. Active Shared Mobility Services
8. Active Smart Parking Management
9. Active Transit Connection
The Transportation Mobility Cloud

- Collect data
- Connect modes and services
- Analyze data and information
- Manage information, modes and services
- Monitor performance
- Inform users, modes and services
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Questions?
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