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**SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS**
900 Wilshire Blvd., Ste. 1700
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Energy & Environment
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Transportation
Curt Hagman, San Bernardino
County

**SPECIAL MEETING**

# EMERGING TECHNOLOGIES COMMITTEE

*Please Note Date and Time*
*Tuesday, January 22, 2019*
*9:30 a.m. – 10:30 a.m.*

**SCAG MAIN OFFICE**
**900 Wilshire Blvd., Ste. 1700**
**Policy Room B**
**Los Angeles, CA 90017**
**(213) 236-1800**
**See Next Page for Other Meeting Locations**

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Tess Rey-Chaput at (213) 236-1908 or via email at REY@scag.ca.gov. Agendas & Minutes are also available at: www.scag.ca.gov/committees

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 236-1908. We request at least 72 hours (three days) notice to provide reasonable accommodations and will make every effort to arrange for assistance as soon as possible.

**Special Meeting of the Emerging Technologies Committee**
**List of Members Participating at SCAG Offices* and Other Meeting Locations**
Date:     Tuesday, January 22, 2019
Time:     9:30AM – 10:30AM
Location: 900 Wilshire Boulevard, Suite 1700 – Policy Room B
          Los Angeles, CA 90017

| Members | Location |
|---|---|
| 1. **Hon. Alan D. Wapner**, *SBCTA*<br>President, SCAG | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 2. **Hon. Paul S. Leon**<br>City of Ontario | [not available] |
| 3. **Sup. Curt Hagman**<br>San Bernardino County | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 4. **Hon. Frank Navarro**<br>City of Colton | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 5. **Hon. Deborah Robertson**<br>City of Rialto | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 6. **Hon. Paul Rodriguez**<br>City of Chino | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017** |
| 7. **Hon. David Pollock**<br>City of Moorpark | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 8. **Sup. Luis Plancarte**<br>Imperial County | [not available] |
| 9. **Cheryl Viegas-Walker**<br>City of El Centro | 1503 N. Imperial Ave., Suite 104<br>El Centro, CA 92243* |
| 10. **Hon. James Predmore**<br>Imperial County Transportation Commission | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017** |
| 11. **Hon. Carol Moore**<br>City of Laguna Woods | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 12. **Hon. Steve Manos**<br>City of Lake Elsinore | 130 N Main Street<br>Conference Room B<br>Lake Elsinore, CA 92530** |

**Special Meeting of the Emerging Technologies Committee**
**List of Members Participating at SCAG Offices* and Other Meeting Locations**
Date:      Tuesday, January 22, 2019
Time:      9:30AM – 10:30AM
Location:  900 Wilshire Boulevard, Suite 1700 – Policy Room B
               Los Angeles, CA 90017

| Members | Location |
|---|---|
| 13. **Hon. Stacy Berry**<br>City of Cypress | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017** |
| 14. **Hon. Jan Harnik**<br>Riverside County Transportation Commission | City of Palm Desert<br>73510 Fred Waring Drive<br>Palm Desert, CA 92260 |
| 15. **Hon. Margaret E. Finlay**<br>City of Duarte | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 16. **Hon. Sean Ashton**<br>City of Downey | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 17. **Hon. Drew Boyles**<br>City of El Segundo | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |
| 18. **Hon. Edward H.J. Wilson**<br>City of Signal Hill | |
| 19. **Hon. Frank Zerunyan**<br>City of Rolling Hills Estates | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017** |
| 20. **Paul Marquez**<br>Caltrans District 7 | [not available] |
| 21. **Pam O'Connor**<br>California Road Charge Technical Advisory Committee | 900 Wilshire, Suite 1700<br>Los Angeles, CA 90017* |

# EMERGING TECHNOLOGIES COMMITTEE

## SPECIAL MEETING AGENDA

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700 – Policy Room B
Los Angeles, CA 90017
**Tuesday, January 22, 2019**
**9:30 a.m. – 10:30 a.m..**

**CALL TO ORDER AND PLEDGE OF ALLEGIANCE**
*(The Honorable Alan D. Wapner)*

**PUBLIC COMMENT PERIOD**
Members of the public desiring to speak on items on the Special Meeting agenda must fill out and present a Public Comment Card to the Assistant prior to speaking.  Comments will be limited to three (3) minutes per speaker. The Chair has the discretion to reduce the time limit based upon the number of speakers and may limit the total time for all public comments to twenty (20) minutes.

**FUTURE AGENDA ITEM/S**

**ANNOUNCEMENT/S**

**ADJOURNMENT**

# REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
**January 22, 2019**

| | | |
|---|---|---|
| **To:** | Emerging Technologies Committee (ETC) | **INTERIM EXECUTIVE DIRECTOR'S APPROVAL** |
| **From:** | Philip Law, Manager of Transit/Rail, 213-236-1841 LAW@scag.ca.gov | |
| **Subject:** | Emerging Technologies and Metropolitan Planning | |

**RECOMMENDED ACTION:**
For Information Only - No Action Required

**STRATEGIC PLAN:**
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

**EXECUTIVE SUMMARY:**
*Mr. Jim Madaffer, President, Madaffer Enterprises and former Commissioner on the California Transportation Commission, will provide the committee with context from a subject matter expert perspective regarding the integration of innovative and disruptive technologies into SCAG's metropolitan planning process. He will also provide a framework for committee discussion of subsequent agenda items, including the draft agenda outlook and guiding principles for emerging technologies and services. Mr. Madaffer's presentation (to be provided at the meeting) will highlight some elements of emerging technologies and the potential opportunities for policy making in leveraging technology across our region.*

**FISCAL IMPACT:**
None

**ATTACHMENT/S:**
[Presentation to be provided at the meeting]

| **To:** | Emerging Technologies Committee (ETC) | **INTERIM EXECUTIVE DIRECTOR'S APPROVAL** |
|---|---|---|
| **From:** | Kimberly Clark, Regional Planner Specialist, Research & Analysis, (213) 236-1844, Clark@scag.ca.gov | |
| **Subject:** | Future Communities Initiative Update | |

**RECOMMENDED ACTION:**
For Information Only

**STRATEGIC PLAN:**
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians. 3: Be the foremost data information hub for the region. 4: Provide innovative information and value-added services to enhance member agencies' planning and operations and promote regional collaboration.

**EXECUTIVE SUMMARY:**
*On December 7, 2017 the Regional Council approved the Future Communities Framework which outlines Policies, Strategies, and a Future Communities Initiative to guide SCAG's future work related to data and technology. This report serves as an update of SCAG's progress to date of implementing the Future Communities Initiative (FCI) which is a three year work plan consisting of six work elements: Regional Data Platform, Policy Lab/Tool Builder, Data Science Fellowships, Future Communities Pilot Program, Future Communities Forum, and Advisory Committee. Staff have made significant progress on a number of these items and will continue to report on a regular basis on the initiative's progress.*

**BACKGROUND:**
Big Data and the rapid proliferation of new technologies are poised to transform and disrupt traditional policy making and planning within our local communities and across the Southern California region as a whole. Through improvements in data collection, analysis, and technology, governments have the opportunity to be more efficient, innovative, and transparent.

To ensure that public agencies in Southern California not only keep up with the pace of innovation, but lead the nation, SCAG hosted an Open Data/Big Data – Smart and Connected SCAG Region Committee (Committee) from March to November of 2017. The Committee discussed issues related to data and technology and how SCAG could play a role in supporting local governments by providing resources and supporting data tools. The work of the Committee culminated in a set of policy and strategy recommendations compiled in the *Future Communities Framework,* and a short-

term work plan, *Future Communities Initiative (FCI),* proposed by SCAG staff to implement the framework.

The Future Communities Initiative is a three year work program designed to facilitate early-actions, in partnership with other regional stakeholders, to implement strategies in the framework. Below is a summary of work performed to date on each of the elements contained in the FCI.

**Future Communities Pilot Program (FCPP):** SCAG launched a new grant program to support the piloting and assessment of new and smart technologies to reduce transportation demand and improve government service provision.

**Progress:** SCAG secured $2.7 million in grant funding for this effort, with support of the Mobile Sources Air Pollution Reduction Review Committee (MSRC). SCAG released a call for projects, received and scored applications, and developed a list of recommended projects to award. The recommended projects have been scored for their ability to advance the goals of the FCPP including their ability to reduce vehicle miles traveled (VMT) from local travel or municipal operations through the use of new technologies and enhanced data analytics. The project list will undergo evaluation by Regional Council in February 2019; if recommended to proceed, SCAG staff will begin the administration of each pilot project with project launch in the summer of 2019 and wrap up by December of 2020.

**Regional Data Platform:** SCAG is developing a Regional Data Platform (Platform) to serve as a clearinghouse of public sector demographic, land-use, transportation, and public opinion data updated on a transactional basis through bridging applications, data standardization, and local-use applications. SCAG's Platform will be initially geared to assist jurisdictions with the establishment of local General Plans; there will be an emphasis on reducing the cost for administering plan updates, highlighting regional best practices from a sustainability perspective, and facilitating data-driven collaboration amongst public agencies and with the general public.

**Progress:** SCAG solicited proposals this summer and received ten entries from a wide selection of firms. Estimated project costs ranged from $248,497 to $4,688,419 – with an average estimated cost of $1,969,817. SCAG assembled a Proposal Review Committee (PRC) with participants having expertise in local land use planning, regional planning, information technology, geographic information systems, data science, environmental justice, economics, and demography. Proposals were judged on several criteria: proposed technical approach (30%), project costs (30%), prior consulting experience (20%), project management (15%), reasonable of schedule (5%), and references (pass/fail). SCAG has selected a consultant, and anticipates project kickoff to occur by March 2019.

**Policy Lab/Tool Builder:** The Future Communities Policy Lab/Tool Builder (Lab) is focused on testing and promoting new approaches and partnerships for utilizing data and analytic platforms to improve regional and local planning. Through the Policy Lab/Tool Builder, SCAG aims to illustrate and help member agencies apply new methods for visualizing, dashboarding and interpreting regional datasets alone or in combination with private, crowdsourced, or open data platforms to understand complex policy issues. This work will also include fostering research opportunities in partnership with regional university and international partners on common issues.

**Progress:** Staff have initiated several partnerships with local jurisdictions and regional universities in this area. Key products and programs underway or under development include:

- *FCI Research:* SCAG has initiated an 18 month "Future of the Workplace" study, which will analyze future changes in the nature of employment and the workplace which might impact the spatial relationship between job and work locations in order for SCAG to evaluate its future GHG reduction potential of teleworking, residential mobility, and structural changes in the nature of work. In addition, staff continues to pursue additional partnerships and grant funding to support cutting-edge research on the use of big data in planning, including submitting an application to National Science Foundation (NSF) to use of real-time data to help improve SCAG's transportation system for planned and unplanned (i.e. natural disaster) events.

- *Mapping Transit Supportive Measures in Southern California:* SCAG experimented with crowdsourcing data development to complement the 2020 RTP/SCS local input process by inviting students across the region to map existing and planned measures to reduce greenhouse gas emissions.

- *SCAG/Los Angeles Data Science Federation:* The Data Science Federation was founded by the City of Los Angeles Office of Innovation and Technology to address social, economic, and policy issues that could be better informed through data and come from departments, the City Council, the Mayor's office, and citizens. SCAG joined to expand this successful model to its member jurisdictions and additional regional universities, and launched three projects this year on behalf of partner agencies. Each project involves a local university partner, a set of domain experts from the partner agency, and supporting guidance from SCAG. Students and professors work with the agency in a variety of ways, including conducting in-depth research on policy topics, prototyping new technological approaches to city challenges, and creating example projects that can be applied to other communities across the region.

- *County of Los Angeles/City of Los Angeles/SCAG Data + Donuts Monthly Speaker Series:* Data + Donuts is a morning speaker series and networking event that brings together the makers and doers that are changing local government from the ground up by harnessing technology and data to drive meaningful change.

**Data Science Fellowship:** SCAG will partner with regional fellowship programs to provide fellows for local agencies to initiate open data programs, conduct data analysis, and accelerate the adoption of new technologies.

**Progress:** SCAG has secured six data science fellows over two terms through generous support from Randall Lewis, who are working on a number of projects to support implementation of the FCI, such as evaluating the potential of new data APIs (e.g. HERE, Census ACS, etc.) for integrating into the Regional Data Platform. In the near future, SCAG will expand the program to provide data science fellows for partner agencies to help with the deployment of open data platforms and the curation of data dashboards.

**Future Communities Forum:** SCAG will develop or partner on an annual event to showcase research, data tool, and lessons learned from regional and international partners related to data and technology.

**Progress:** The inaugural Future Communities Forum was held on May 2$^{nd}$, 2018 as part of SCAG's Annual General Assembly. The forum helped to develop momentum about the value that shared data/applications can bring to local governments and showcase the work of local and international partners in the realm of open/big data. This year's event will be a School of Data, which will bring together government data analysts, systems analysts, public decision makers, and project managers to address their biggest needs: to improve analytical skills, and to learn from peers across the Southern California region. This event will be hosted at SCAG's Downtown Los Angeles Offices on January 31 and February 1. Instructions for registration are available at http://schoolofdata.la/.

**Advisory Committee:** SCAG will develop an Advisory Committee consisting of elected officials and technical/policy experts on the topic to provide ongoing input and governance on Future Cities Initiative activities.

**Progress:** The Future Communities Initiative will be advised by SCAG's Policy Committees, including the newly formed Emerging Technologies Committee.

**FISCAL IMPACT:**
Funding to support the Future Communities Initiative is budgeted in 280.4820.01 (FY 18/19 OWP).

**ATTACHMENT:**
PowerPoint Presentation

# Future Communities Initiative

## Program Update

Kimberly Clark, Regional Planner Specialist

Research & Analysis



## SCAG's Future Communities Initiative

# Communities within the SCAG Region:

- **70%** have limited or minimal staff resources to analyze data
- **43%** have no in-house GIS services
- **84%** share data through direct communications

*SCAG Regional Data Survey, Fall 2017

# Future Communities Initiative: Supporting Outreach

**Open Data/Big Data: Smart and Connected SCAG Region Committee**

**Regional Data Survey**
*JURISDICTIONS WANT:*
- Access to, sharing of data
- Capacity for analysis
- Resource support
- SCAG to support innovation
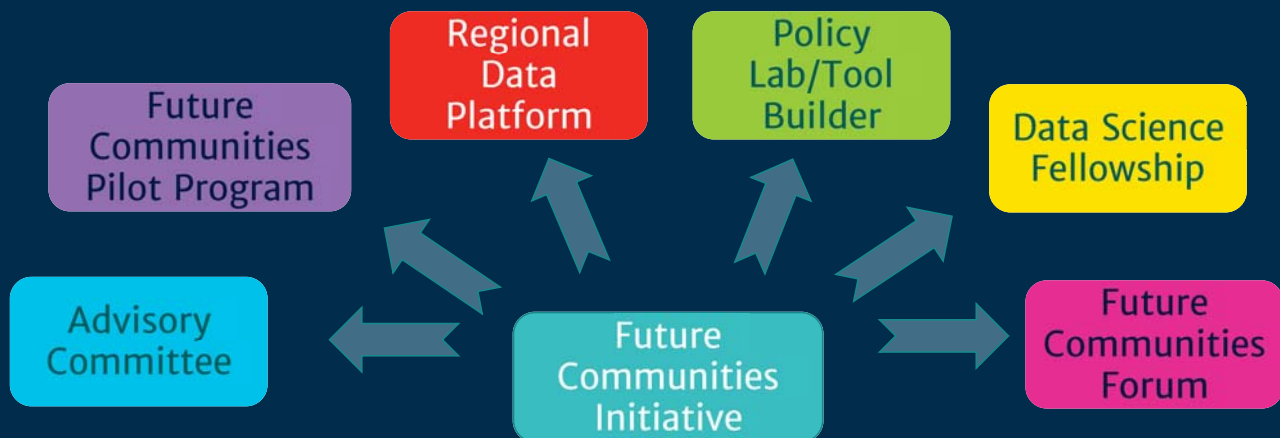- SCAG data is used frequently

**Consultant Roundtable**
*INDUSTRY WANTS:*
- SCAG to act as a data broker
- Raw data to encourage innovative use
- Clear goals & timeline for data release
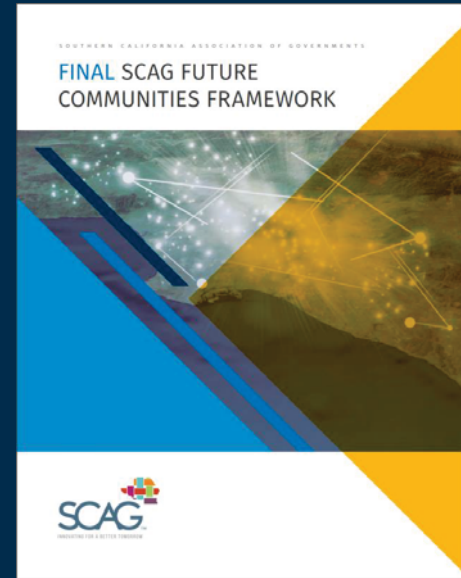- Increased availability of SCAG's GIS library through open data portal

# Future Communities Initiative: Program Details

Future Communities Pilot Program

Regional Data Platform

Policy Lab/Tool Builder

Data Science Fellowship

Advisory Committee

Future Communities Initiative

Future Communities Forum

**Partnership Framework**
- SCAG launched a 3-year, $8 m initiative to advance priority projects
- The initiative will leverage public/private funds, including $4.5 M in SCAG resources
- Projects will be administered by SCAG leveraging existing relationships and programs with cities/counties

# Future Communities Framework





# Future Communities Pilot Program Call for Projects

## Goals and Objectives

- Test technology and data-driven approaches to reducing municipal VMT and GHG production
- Promote innovation to best practices and policies
- Identify strategies to quantify and monitor the performance and efficacy

## Administration

- $2.7 M in grant funding (by MSRC and SCAG)
- 25% local match requirement

### Key Dates

**Call for Projects**

CFP opens – Nov 1, 2018
CFP closes – Dec 13, 2018
Application Workshop #1 – Nov 13, 2018
Application Workshop #2 – Dec 4, 2018
CFP award recommendations – Jan 2019
SCAG Board approval – Feb 2019

**Pilot Programs**

Launch – Summer 2019
Wrap Up – December 2020
Final Reporting – December 2020

# Regional Data Platform



|  | DATA COLLECTION | DATA COMMUNICATION | KNOWLEDGE & ACTION |
|---|---|---|---|
| **TECHNOLOGY** | Collect accurate relevant data about Southern California | Automate, visualize, and distribute insights via dashboards with good story-telling | Technology that drives beneficial action across campaigns & content |
| **PEOPLE** | Conduct trainings to ensure that people are empowered to utilize the platform | Interpretation of data into actionable insights and knowledge | Foster citizen engagement |
| **PROCESS** | Enable users to improve the platform through data revision and insight sharing | Empower local partners to use the platform for local initiatives | Continuous result-oriented experimentation and innovation |

Sources: MITX, Freepik.com

# Policy Lab/Tool Builder

## Policy Lab
- Future of the Workplace Study
- SCAG/Los Angeles Data Science Federation
- County of Los Angeles/City of Los Angeles/ SCAG Data & Donuts Monthly Speaker Series

## Tool Builder
- Mapping Transit Supportive Measures in Southern California
- Active Transportation Database

# Data Science Fellowship

- Fellowship Program for undergraduate and graduate university students in Data Science
- Links public agencies with data science staffing resources
- Funded with support from SCAG and Partners for Better Health

# Future Communities Forum

The inaugural Future Communities Forum was held on May 2nd, 2018 as part of SCAG's Annual General Assembly. The forum helped to develop momentum about the value that shared data/applications can bring to local governments and showcase the work of local and international partners in the realm of open/big data.

Data + Donuts LA presents...
SCHOOL OF DATA 2019!

THURSDAY, JANUARY 31ST – FRIDAY, FEBRUARY 1ST
LOS ANGELES, CA
Apply by January 18! We'll continue to take applications after that but you'll be placed on the waitlist.

APPLY NOW!

We are committed to creating a harassment-free experience for all attendees.
Read about our Code of Conduct policies here.

# Thank you

Kimberly Clark
clark@scag.ca.gov



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# Future Communities Framework Policies

**Promote Data-Driven Decision Making**

**Increase Efficiency of Public Services**

**Protect our Systems and People**

**Champion Social Equity and Public Engagement**

**Collaborate on the Future of Cities**

**Model Best Practices**

# Future Communities Framework Strategies

**Provide Guidance**

**Support Coordination and Standardization**

**Expand Partnerships**

**Provide Resources**

**REPORT**

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
**January 22, 2019**

**To:** Emerging Technologies Committee (ETC)

**From:** Philip Law, Manager of Transit/Rail, 213-236-1841
LAW@scag.ca.gov

**Subject:** Draft Committee Agenda Outlook

**INTERIM EXECUTIVE DIRECTOR'S APPROVAL**

**RECOMMENDED ACTION:**
For Information Only – No Action Required

**STRATEGIC PLAN:**
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

**EXECUTIVE SUMMARY:**
*Staff will discuss a proposed agenda outlook and seek input from committee members on future agenda items.*

**BACKGROUND:**
The Emerging Technologies Committee is convened to research and identify new and emerging technologies that play an important role in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and is intended to serve as a resource for the Regional Council and be a new Policy Committee along with the existing three SCAG Policy Committees: Community, Economic and Human Development Committee (CEHD), Transportation Committee (TC), and Energy and Environment Committee (EEC).

The Emerging Technologies Committee objectives include:

- Identify technological and societal trends (e.g. Mobility as a Service; Zero Emission, Autonomous and Connected Vehicles; Smart Cities and Intelligent Transportation Systems) that may fundamentally alter and improve the use of the region's transportation system.

- Frame potential policy considerations to enable the region to harness the benefits of emerging technologies that reduce sprawl, vehicle miles traveled (VMT), and greenhouse gas (GHG) emissions.

- Highlight opportunities for under-represented, disadvantaged communities to utilize emerging technologies.

- Explore technologies which, while in a nascent or testing stage, remain relevant to the future of the region's transportation system.

Staff seeks the Committee's input on the following proposed draft agenda outlook covering the next five meetings. Each meeting is proposed to be structured around a specific theme or objective. The order of topics may be subject to change based on Committee direction, and also may be dependent upon availability of subject matter experts that may be invited to speak. Meetings may also include periodic updates of related staff work.

**Draft Agenda Outlook (order and topics subject to change)**

**Meeting #2 – Connected and Autonomous Vehicles (CAV)**
Objective: hear the latest research on potential impacts of connected and autonomous vehicles, and how state and local governments should prepare

Potential agenda items/speakers:
- Dan Sperling – 3 Revolutions
- Caltrans or California Department of Motor Vehicles
- SCAG/4 MPO Future Mobility Research Program
- Metro CAV Readiness Study and CAV Strategic Plan

**Meeting #3 – Shared Mobility and Mobility as a Service**
Objective: understand how shared mobility continues to impact our region, and how mobility as a service can support congestion reduction and sustainability

Potential agenda items/speakers:
- Shared mobility research
- LA Blue electric vehicle carsharing pilot
- Mobility as a Service concept overview
- Metro TAP mobility wallet and mobile app

**Meeting #4 – Curb Space Management**
Objective: discuss how cities can use technology to monitor curb space utilization and leverage their curb space assets to reduce congestion and encourage multi-modal travel.

Potential agenda items/speakers:
- Coding the curb – using data and technology to understand and manage curb space utilization
- City of Santa Monica Shared Mobility Pilot Program
- National Association of City Transportation Officials (NACTO) curbside management strategies

**Meeting #5 – Technology and Equity**

Objective: understand how public agencies can use new technology to ensure and improve transportation equity, access and mobility

Potential agenda items/speakers:

- Metro Mobility-on-Demand Pilot (e.g. Metro OEI)
- Research on transportation network companies (TNCs) and equity
- Equity and broadband access, 5G

**Meeting #6 – Electrification**

Objective: discuss the changing nature of electricity demand due to adoption of zero emission technologies

Potential agenda items/speakers:

- National Renewable Energy Laboratory – Electrification Futures Study
- Electrification and goods movement
- Innovative Clean Transit

**FISCAL IMPACT:**
None

**ATTACHMENT/S:**
PowerPoint Presentation

# Draft Agenda Outlook

## Emerging Technologies Committee

Philip Law
Transit/Rail Manager
January 22, 2019

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## Committee Purpose

- Research and identify new and emerging technologies that play an important role in the RTP/SCS
- Be a new Policy Committee and serve as a resource for the Regional Council

# Committee Objectives

- Committee objectives include:
  - Identify technological and societal trends that may fundamentally alter the use of the region's transportation system
  - Frame potential policy considerations to enable the region to harness the benefits of emerging technologies that reduce sprawl, vehicle miles traveled (VMT), and greenhouse gas (GHG) emissions
  - Highlight opportunities for under-represented, disadvantaged communities to utilize emerging technologies
  - Explore technologies which, while in a nascent or testing stage, remain relevant to the future of the region's transportation system

# Draft Agenda Outlook

- Staff seeks the Committee's input on the proposed draft agenda outlook
- Meetings are structured around a specific theme or objective
- Topics and order are subject to change based on Committee direction
- Subject matter experts will be invited to speak
- Meetings to also include periodic updates of related staff work, such as:
  - Future Communities Initiative
  - 4 MPO Future Mobility Research Program
  - TDM Strategic Plan

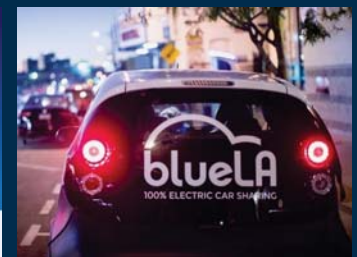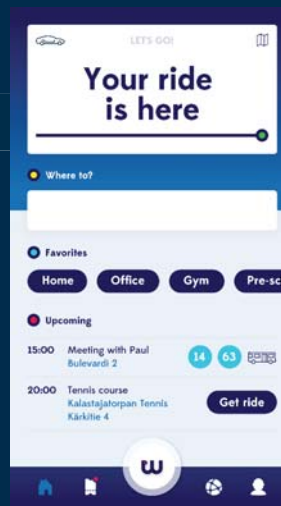# Meeting 2: Connected and Autonomus Vehicles (CAV)

- Objective: hear the latest research on potential impacts of connected and autonomous vehicles, and how state and local governments should prepare
- Potential agenda items:
  - Dan Sperling, UC Davis – 3 Revolutions
  - Caltrans or Department of Motor Vehicles (DMV)
  - 4 MPO Future Mobility Research Program
  - Metro CAV Readiness Study and CAV Strategic Plan

# Meeting 3: Shared Mobility and Mobility as a Service

- Objective: understand how shared mobility continues to impact our region, and how mobility as a service can support congestion reduction and sustainability
- Potential agenda items:
  - Shared mobility research
  - LA Blue electric vehicle carsharing pilot
  - Mobility as a service – concept overview
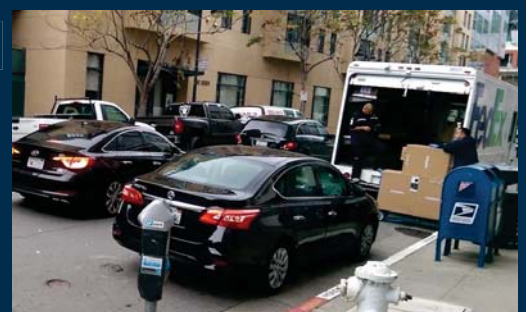  - Metro TAP mobility wallet and mobile app

# A Topology of Mobility as a Service



| | | |
|---|---|---|
| 4 | **Integration of societal goals** <br> Policies, incentives, etc. | |
| 3 | **Integration of the service offer** <br> Bundling/subscription, contracts, etc. | **UbiGo** <br> **whim** |
| 2 | **Integration of booking & payment:** <br> Single trip - find, book and pay | **HANNOVERmobil** <br> smi)e einfach mobil <br> **moovit** |
| 1 | **Integration of information:** <br> Multimodal travel planner, price info | **Qixxit** Einfach. Unterwegs. **Google** |
| 0 | **No integration:** <br> Single, separate services | **TRANSPORT FOR LONDON** **lyft** <br> **Hertz** **sunfleet** |

Sochor, Jana & Arby, Hans & Karlsson, Marianne & Sarasini, Steven. (2017). *A topological approach to Mobility as a Service: A proposed tool for understanding requirements and effects, and for aiding the integration of societal goals.*

# Meeting 4: Curb Space Management

- Objective: discuss how cities can use technology to monitor curb space utilization and leverage their curb space assets to reduce congestion and encourage multi-modal travel
- Potential agenda items:
  - Coding the curb – using data and technology to understand and manage curb space utilization
  - City of Santa Monica Shared Mobility Pilot Program
  - National Association of City Transportation Officials (NACTO) curbside management strategies

# Meeting 5: Technology and Equity

- Objective: understand how public agencies can use new technology to ensure and improve transportation equity, access and mobility
- Potential agenda items:
  - Metro Mobility-on-Demand Pilot
  - Research on transportation network companies (TNCs) and equity
  - Equity and broadband access, 5G



# Meeting 6: Electrification

- Objective: discuss the changing nature of electricity demand due to adoption of zero emission technologies
- Potential agenda items/speakers:
  - National Renewable Energy Laboratory – Electrification Futures Study
  - Electrification and goods movement
  - Innovative Clean Transit Rule

## Additional Topics?

- Blockchain
- Artificial intelligence/robotics
- Privacy and ethics
- Internet of Things
- 3D printing
- Augmented reality/virtual reality
- Quantum computing
- Hyperloop/gondola/dugout loop

# Thank you

Philip Law

law@scag.ca.gov

213-236-1841

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
**January 22, 2019**

| | | |
|---|---|---|
| **To:** | Emerging Technologies Committee (ETC) | **INTERIM EXECUTIVE DIRECTOR'S APPROVAL** |
| **From:** | Thomas Bellino, Associate Regional Planner, Transit and Rail, 213.236.1830, bellino@scag.ca.gov | |
| **Subject:** | Guiding Principles for Emerging Technologies | |

**RECOMMENDED ACTION:**
For Information Only

**STRATEGIC PLAN:**
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians. 2: Advance Southern California's policy interests and planning priorities through regional, statewide, and national engagement and advocacy.

**EXECUTIVE SUMMARY:**
*The current rapid pace of innovation in technology and new mobility services provides potentially both opportunity and risk, and certainly profound changes to how people live and travel in the region. Guiding principles can provide a framework for the objective evaluation of technology to ensure that impacts and outcomes are consistent with shared goals such as sustainability, equity, and safety. Staff will discuss examples of guiding principles from San Francisco and an international nonprofit for the committee's consideration.*

**BACKGROUND:**

**San Francisco's Guiding Principles for Emerging Mobility**
As new transportation technologies and services are developed and utilized by private companies on our streets, it is critical to evaluate their presence in an objective and uniform fashion. While local and regional agencies may not have direct regulatory authority over these companies' operations, it is useful to monitor their impacts and work with them if they are falling short of collective goals. A good way to do this is to set up a series of stakeholder-informed principles that will guide any evaluation. This will ensure a transparent and fair process that facilitates trust between public and private partners.

In 2017, the San Francisco County Transportation Authority (SFCTA) partnered with the San Francisco Municipal Transportation Agency (SFMTA) to perform outreach and internal work to develop "guiding principles" for evaluating existing and future private transportation services on that city's streets. After developing a loose framework for these principles, the agencies solicited feedback from transportation stakeholder groups and the public at large via the existing Citizens

Advisory Committee and a new web form. Simultaneously, SFCTA and SFMTA staff met with private transportation companies such as Uber, Lyft, Scoot and Chariot to discuss how these principles could be crafted in such a way to facilitate cooperation with the companies to avoid a surprising or negative reception on their part.

The community input led to greater emphasis on equity and accessibility principles. In addition to concerns for safety, sustainability, data and noncompetition with transit, the public requested greater accountability regarding accessibility and the holistic effects these services have on issues such as employment practices, housing affordability and cultural fit.

In 2018, the agencies released the principles and a series of accompanying reports that detailed services and technologies that the principles applied to, an explanation of the principles themselves, and an evaluation of existing services and technologies in the city, based on the principles.

The principles are focused on: Collaboration, Safety, Transit, Congestion, Sustainability, Equitable Access, Accountability, Labor, Disabled Access, and Financial Impact.

**Shared Mobility Principles for Livable Cities**
This is a broader, internationally-focused set of principles that aim to set the course of global transportation technology trends and regulations toward equity, sustainability and human-scale livability. The principles were developed by Robin Chase (the founder of Zipcar) and some prominent NGOs.

Some governments (such as Paris) and public transportation agencies (such as San Antonio's VIA) have signed on to the principles, but the vast majority of signatories are nonprofits, advocacy groups and private companies.

**The principles are:**

1.  WE PLAN OUR CITIES AND THEIR MOBILITY TOGETHER.
2.  WE PRIORITIZE PEOPLE OVER VEHICLES.
3.  WE SUPPORT THE SHARED AND EFFICIENT USE OF VEHICLES, LANES, CURBS, AND LAND.
4.  WE ENGAGE WITH STAKEHOLDERS.
5.  WE PROMOTE EQUITY.
6.  WE LEAD THE TRANSITION TOWARDS A ZERO-EMISSION FUTURE AND RENEWABLE ENERGY.
7.  WE SUPPORT FAIR USER FEES ACROSS ALL MODES.
8.  WE AIM FOR PUBLIC BENEFITS VIA OPEN DATA.
9.  WE WORK TOWARDS INTEGRATION AND SEAMLESS CONNECTIVITY.
10. WE SUPPORT THAT AUTONOMOUS VEHICLES (AVS) IN DENSE URBAN AREAS SHOULD BE OPERATED ONLY IN SHARED FLEETS.

**Next Steps**

Staff will receive feedback from the committee and return in future meetings with additional discussion items on developing potential guiding principles for the SCAG region.

**FISCAL IMPACT:**

None

**ATTACHMENT/S:**

PowerPoint Presentation

# Emerging Technologies Committee

## Guiding Principles for Emerging Technologies

Tom Bellino

Associate Regional Planner

1/22/19

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## Guiding Principles for Emerging Technologies

- Used to monitor and track impacts of new transportation providers, technology and services

- Sets objective goals from outset
  - Builds trust between government and community
  - Shows transparency toward companies/providers

# San Francisco's Guiding Principles

- SFMTA and SFCTA

- Developed in 2017, released in 2018

- Created to evaluate current and future services in uniform way

- Developed with extensive stakeholder input

- Specific but holistic to include indirect impacts

# San Francisco's Guiding Principles

**TEN GUIDING PRINCIPLES**

**Collaboration**
Emerging Mobility Services and Tecl with each other and the community

**Congestion**
Emerging Mobility Services and Technologies must consider the effects on traffic congestion, including the resulting impacts on road safety, modal choices, emergency vehicle response time, transit performance and reliability.

**Safety**
Emerging Mobility Services and Tecl Francisco's goal for achieving Visior security.

**Sustainability**
Emerging Mobility Services and Technologies must support sustainability, including helping to meet the city's greenhouse gas (GHG) emissions reduction goals, promote use of all non-auto modes, and support efforts to increase the resiliency of the transportation system.

**Transit**
Emerging Mobility Services and Tecl services, must account for the oper occupancy modes.

**Equitable Access**
Emerging Mobility Services and Tecl regardless of age, race, color, gend any other protected category, shou and groups who have historically la benefit most.

**Labor**
Emerging Mobility Services and Technologies must ensure fairness in pay and labor policies and practices. Emerging Mobility Services and Technologies should support San Francisco's local hire principles, promote equitable job training opportunities, and maximize procurement of goods and services from disadvantaged business enterprises.

**Accountability**
Emerging Mobility Services and Tecl and the public can effectively evalu system and determine whether the

**Disabled Access**
Emerging Mobility Services and Technologies must be inclusive of persons with disabilities. Those who require accessible vehicles, physical access points, services, and technologies are entitled to receive the same or comparable level of access as persons without disabilities.

**Labor**
Emerging Mobility Services and Tecl practices. Emerging Mobility Servic principles, promote equitable job t services from disadvantaged busine

**Financial Impact**
Emerging Mobility Services and Technologies must promote a positive financial impact on the City's infrastructure investments and delivery of publicly-provided transportation services.

# Shared Mobility Principles for Livable Cities



Shared Mobility Principles for Livable Cities

The future of mobility in cities is multimodal and integrated. When vehicles are used, they will be right-sized, shared*, and zero emission. These principles guide urban decision-makers and stakeholders toward the best outcomes for all.

1. Plan cities and mobility together
2. Focus on moving people, not cars
3. Encourage efficient use of space and assets
4. Engage stakeholders in decision making
5. Design for equitable access
6. Transition toward zero emissions
7. Seek fair user fees
8. Deliver public benefits via open data
9. Promote integration and seamless connectivity
10. Automated vehicles must be shared

- Developed by an internationally-focused group of NGOs and private companies
- Some governments have signed on
- Anticipate large-scale adoption of AVs
- Broad and focused on human experience

# Principles in Practice – SFCTA Evaluation

- SFCTA released evaluation of existing services based on Principles
- Used standardized scoring and consistent metrics, grouped by type of service and principle
- Produced policy and operational recommendations for city agencies



Table 8: Accountability Principle Evaluation Results

| EVALUATION CRITERIA | BIKE SHARE | MOPED SHARE | CAR SHARE | RIDE SHARE | RIDE HAIL | MICRO TRANSIT | COURIER NETWORK SERVICES |
|---|---|---|---|---|---|---|---|
| OUTCOME METRIC | | | | | | | |
| *No outcome metrics were identified for the Accountability Principle* | | | | | | | |
| POLICY AND DESIGN FEATURES | | | | | | | |
| 1 TRIP DATA — Provide extensive trip data on a recurring basis to help support public agencies transportation network management efforts. | 🟢 | 🟢 | 🟡 | 🔴 | 🔴 | 🟢 | 🔴 |
| 2 USER DATA — Provide anonymized and aggregated user data to local planning agencies. | 🟢 | 🟢 | 🟡 | 🔴 | 🔴 | 🟢 | 🔴 |

# Thank you

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