



WASHINGTON STATE  
AUTONOMOUS VEHICLE  
WORK GROUP

## MEETING MINUTES

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**Meeting:** AV Subcommittee Safety Meeting #1

**Location:**

**Date:** August 21, 2018

**Time:**

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**Attendees:**

Name	Organization	Email
Mandie Dell	WTSC	
Shelly Baldwin	WTSC	
Debi Besser	WTSC	
Candice Bock		
Kenton Brine	NW Insurance Council	
Sheri Call	WTA	
Caron Cargill		
Barbara Chamberlin		
Matthew Couchman		
Doug Dahl	WTSC	
Ahmed Darrat		
Aimee D'Avignon	DOH	
Jo Deutsch		
Patti Enbody		
Matthew Enders		
Greg Fredericksen		
Joe Giammona		
Reema Griffith		
Daniel Hall	WSP	
Dezerae Hayes		



## MEETING MINUTES

Byran Jackson	DOL	
Joanne Kerrigan	WSTIP	
Francois Larrivee		
Steve Marshall	City of Bellevue	
Mark Medalen	WTSC	
John Milbrath	AAA	
Alison Mitchell		
Paula Reeves	DOH	
Lynn Rogers	PDSA	
Jon Snyder	GOV	
Warren Stanley	WSDOT	
Tetsujiro Takiguchi	Milton Police	
Michael Transue	Association of Global Automakeers	
Brian Ursino		
Shannon Walker	City of Seattle – DOT	
Jane Wall		
Yinhai Wang		
Angie Ward	WTSC	
Bryce Futurewise		
Kris Zachary		
Jay Cabezuela		
Darrin Grondel	WTSC	
Sonja Hallum	GOV	
Geri Nelson	WTSC	
Pam Pannkuk	WTSC	
Maz Severeid		
Trisena Shaff		
Kathy Strange		



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### Agenda Items:

1. Welcome and Opening Remarks:
  - Look at long-term and short-term goals
2. Meeting Structure:
  - 94% crashes are human error
  - Safety, labor, environment
3. Introductions:
  - 5-minute group discussion, group vote. If can't reach majority vote, then goes to co-chairs to decide
4. A/V 101:
  - See attached PowerPoint
  - Morning Consult Survey – Jan 2018
    - 2,200 adults (60%) of Americans know little to nothing about A/V
    - A slight majority distrust A/V, but may trust more as technology evolves
    - Multiple safety concerns:
      - Technical glitches (79%)
      - Driverless cars mixing with human-driven vehicles (78%)
      - Safety of personal data, such as GPS tracking (66%)
    - Distrust is actually increasing (Due to media)
  - Trevor Noah clip
  - Can't reprogram humans to prevent driving accidents/fatalities
  - 556 people killed on WA roadways in 2017 x 94% human error = 531 people killed by human drivers
  - Autonomous Vehicles features (see slide from attached PowerPoint)
  - Terminology
    - Autonomous Vehicles
      - Electric
      - Shared (Send for one like Uber/Lyft)
      - Connected (b to b, b to i)
    - 6 levels (see slide from attached PowerPoint)



## MEETING MINUTES

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- 0 - No automation
  - 1 – Driver assistance (cruise control, blind spot, lane keep)
  - 2 – (Some automation; Driver fully responsible for environment – Tesla)
  - 3 – Driver can take attention off road, but can return attention back in a few seconds
  - 4 – High automation (can take a nap; work within an area)
  - 5 – Full autonomous anywhere
- WAYMO Clip – Google driving vehicle (machine learning)
- Federal vs. state roles
  - NHTSA: Regulate automotive technologies and equipment, specifically the design, construction, or performance of a motor vehicle or motor vehicle equipment
  - States:
    - Vehicle registration requirements, including where and when AV can be operated
    - Training and licensing for “drivers/operators”
    - Insurance requirements
    - Traffic regulations
- SHB 2970 (Excerpt) –
  - Explore approaches to the modification of state policy, rules, and laws to further public safety and prepare the state for the emergence and deployment of autonomous vehicle technology. Areas for consideration may include, but are not limited to, manufacturer vehicle testing, vehicle registration and titling requirements, driver’s license requirements, rules of the road, criminal law, roadway infrastructure, traffic management, transit, vehicle insurance, tort liability, cybersecurity, privacy, advertising, impacts to social services, and impacts to labor and small businesses;
    - WSTC to submit report by November 15<sup>th</sup> each year
- Executive committee –
  - Members:
    - Governor
    - Insurance Commissioner
    - DOL Director
    - DOT Secretary
    - WSP Chief
    - Traffic Safety Commission Director
    - State Chief Information Officer
    - WSTC Chairman
    - Four members from Senate
    - Four members from House
  - Subcommittees:



## MEETING MINUTES

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- Licensing
- Infrastructure and Systems
- Liability
- Safety
- Tech and System Data Security
- All subcommittee's responsibilities –
  - Vet, explore, develop and identify challenges, needs, gaps and expectations related to AV policy, funding and jurisdiction.
  - Assess what other states are doing and seek model policies
  - Provide general public education by informing the public of subcommittee discussions and recommendations in a transparent and accessible manner.
  - Report information gathered and findings, along with recommendations to the Executive Committee.
- Safety subcommittee focus –
  - Drivers: Educating new and existing drivers on newer safety technology
  - Vulnerable users and hazards: Vehicle recognition and response to hazards and vulnerable users
  - Law enforcement: Knowledge of how to investigate and report on AV involved crashes
  - Law enforcement and emergency responders: Awareness of on-scene response to incidents/crashes involving driverless vehicles
  - Other: Other safety, law enforcement and emergency responder concerns
- 5. Subcommittee purpose:
  - Look at long-term and short-term goals
    - Long term (see agenda)
    - Short term (See agenda)
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- 6. Break:
- 7. Questions and areas of concern:
  - Whiteboards/paper on walls (ST=Short Term; LT=Long Term)
  - Drivers – Educating new & existing drivers on new safety technology:
    - ST: Human vs AV conflict
    - ST: Difference between autonomy and safety features; help public understand
    - ST: Help educate public on benefits of AV (and risks)
    - ST: Keep news media in loop
    - ST: Data driven approach to educate people when AV is safer than humans
    - ST: New driver curriculum changes?
    - ST: Human assumptions; Other drivers might not be aware that you have adaptive cruise control on/automated lights and might cause them to think you are break checking them/flashing them



## MEETING MINUTES

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- ST: Dealerships – let people know exactly what car does/how it works. How do we educate people?
  - ST: How AV affects other drivers – (safety features initiated by car not driver)
  - ST: State require a AV level 3 endorsement, etc. as we get higher levels of AV
  - ST: Identifying that a car is an AV. Some individuals might react poorly
  - LT: How will we train drivers in level 4/5 A/V if there is no steering wheel, etc.?
  - LT: Endorsement from manual car to AV
- Vulnerable users & hazards – vehicle recognition & response to hazards and vulnerable users:
  - ST: Potential impact to equity impact
  - ST: Disproportionate # of fatalities in lower income/communities of colors – equity impacts of Division 0 (Is there a disproportionate impact on lower income communities)
  - ST: Health impact assessment
  - ST/LT: Safety concerns for children, those with disabilities, elderly, i.e. only ones in car/shared ride. Who is responsible for insuring these groups/shared rides?
  - ST: Requirements of AV safety testing of car for Washington conditions (weather, road) Paula
  - ST: Who gets hit/who is responsible party
  - ST: Researching statements of principals around AV technology
  - ST: Safety should not rely on technology outside the vehicle
  - ST: Identification of walk/bike Infrastructure elements on
  - ST: Recognition of micro mobility devices
  - ST: Human assumptions
  - LT: Safety concerns for elderly/children/disabled/shared ride
- Law Enforcement – Knowledge of how to investigate & report on AV involved crashes
  - ST: Reach out to law enforcement to determine what they are doing now
  - ST: Access to black box data – potential legislation
  - ST: Law enforcement training
  - ST: 2019 collision rewrite form mentions switch vehicle aids (on/off)
  - ST: Funding for police officers – pay to take off road
  - ST: Revisit structure of law enforcement tickets - enforcement mechanism
  - ST: What technology will law enforcement need to investigate?
  - ST: Coordination of municipal codes – coordinate law enforcement among different jurisdictions
- Law enforcement & Emergency Responders: Awareness of on-scene response to incidents/crashes involving driverless vehicles
  - ST: Any additional safety risk for responders?
  - LT: How will evacuation of a city if cars all AV?
  - LT: HIPPA/PII
- Other



## MEETING MINUTES

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- ST: Need research funding
  - ST: What data and type of analysis do we need?
  - ST: What other states/localities have done
  - ST: Federal government regulations and criteria + other states
  - ST/LT: Vehicles going across jurisdictions (uniform law community)
  - ST: Research new liability standards; stricter/more comprehensive liability
  - ST: Engage with media as we learn
  - ST: How/when can AV provide option for older drivers who can no longer drive non-AV cars
  - ST: What is the registration criteria for after-market industry for non-AV cars being converted to AV cars
  - ST: What are measures of success – what data is needed to measure that?
  - ST/LT: Prevention of hacking of AV system and have people hijack car/turn off safety measures
  - ST: Data exchange – to avoid construction areas/be more aware of problems/car crashes
  - ST: Draw line on differentiating difference passenger vehicle versus freight versus transit and how to draw safety for all of them
  - ST: Data exchange – AV's should get data from cities/API/ports/DOC/DOT/Construction Zones/School zones/Active Situations/DNR/Tribal land/etc. (API); small cities may have difficulties doing this; possibility of grants from state to offset cost?
  - ST: Data from various government sources - Ports/DOC (escapes)/DOT/Construction Zones/School zones/Active Situations/DNR/Tribal land/etc. (API); small cities may have difficulties doing this; possibility of grants from state to offset cost?
  - ST: Ensure benefits for all – cities/state/people/business/OEMs/counties
  - ST: Ensuring safety/security standards for shared fleets
  - ST: Liability issues – how that structure drives people's decisions → safety
  - ST: Security against physical attacks by people outside vehicles
  - ST: Other AV types (from factors) – on sidewalk? Freight
  - ST: Fleet standards
  - ST: Maintenance standards... i.e. requirements to replace broken sensors
  - LT: What are the responsibilities of non-operating riders?
  - LT: Potential for collecting data from case to identify safety needs on updating inv.
  - LT: Implement other states/localities data/research
8. Prioritization and Break:
- See attached pictures
9. Next Steps:
- Three winners for voting





## MEETING MINUTES

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- Benefits of AVs – Educating public including driver specific information for current features already on vehicles/best features for what scenarios
- Disproportionate # of fatalities in lower income/communities of colors – equity impacts of Division 0 (Is there a disproportionate impact on lower income communities)
- ST/LT: Safety concerns for children, those with disabilities, elderly, i.e. only ones in car/shared ride. Who is responsible for insuring these groups/shared rides?
- Access to black box data and what data and type of data

10. Adjourn: