

COMMONWEALTH OF PENNSYLVANIA
HOUSE OF REPRESENTATIVES

TRANSPORTATION COMMITTEE
PUBLIC HEARING

REGIONAL INDUSTRIAL
DEVELOPMENT CORPORATION
WESTMORELAND CONFERENCE CENTER
MOUNT PLEASANT, PA

THURSDAY, MARCH 17, 2022
12:35 P.M.

PRESENTATION ON HB 2398 (OBERLANDER)
HIGHLY AUTOMATED VEHICLES

BEFORE:

HONORABLE TIM HENNESSEY, MAJORITY CHAIRMAN
HONORABLE MINDY FEE
HONORABLE LORI A. MIZGORSKI
HONORABLE MARCI MUSTELLO
HONORABLE GREG ROTHMAN
HONORABLE MEGHAN SCHROEDER
HONORABLE MIKE CARROLL, DEMOCRATIC CHAIRMAN
HONORABLE SARA INNAMORATO
HONORABLE PERRY S. WARREN

ALSO IN ATTENDANCE:

HONORABLE ERIC DAVANZO
HONORABLE ERIC R. NELSON
HONORABLE DONNA OBERLANDER

* * * * *

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MAJORITY EXECUTIVE DIRECTOR

JAMES BOWES

MAJORITY RESEARCH ANALYST

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DEMOCRATIC EXECUTIVE DIRECTOR

KYLE WAGONSELLER

DEMOCRATIC RESEARCH ANALYST

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P R O C E E D I N G S

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MAJORITY CHAIRMAN HENNESSEY: Hello, and welcome to this committee meeting of the House Transportation Committee of the Pennsylvania House of Representatives.

I want to say hello and welcome to our Members who are here in attendance and virtually, to our witnesses who are about to testify, to members of the public, and to those who might be watching us on various streaming services.

Our purpose in being here today at the Regional Industrial Development Corporation's Westmoreland Conference Center campus is to educate ourselves more about the automated vehicle industry, the progress that has been made with regard to software in terms of controlling driverless vehicles. It's a technology that is coming fast upon us, and I think we need to be ready.

Yesterday, we took the Committee to three facilities, one called Motional, one Locomation, and one called Aurora. Those facilities are developing software for the automated vehicle industry. Today, we toured the Argo facility here on the RIDC campus, and now we're convening the hearing.

As a committee, as I said, we are trying to learn more about this industry. A number of our neighboring

1 States, Ohio and West Virginia, have already allowed
2 driverless cars on highways. We don't want to be left
3 behind in that technology, although I don't know that we're
4 ready as a committee necessarily to, you know, rush out any
5 kind of legislation today that might, you know, might
6 quickly put driverless cars on our highways. But it's
7 coming and it's coming soon. And we're not going to try
8 and tie up this bill. I think it's important that we move
9 it ahead, but we'll give some time for people to think
10 about it.

11 Since we are having just a meeting, I'll go
12 around the room and ask people to introduce themselves up
13 here at the head table, and then we'll introduce who the
14 Members are who are joining us virtually.

15 So, my name is Tim Hennessey. You might guess
16 from my tie and my lapel flower that today is St. Patrick's
17 Day 2022. We are in the Mount Pleasant facility. And I'm
18 Chairman, the Republican Chair of the House Transportation
19 Committee.

20 Joining us virtually is Mike Carroll, my
21 Democratic counterpart. But with that being said, I'll
22 ask, Eric, do you want to introduce yourself, please?

23 REPRESENTATIVE DAVANZO: Eric Davanzo, the
24 58th District that we are in today. It's always nice to get
25 this much attention in my district. I am also the better

1 Eric from Westmoreland County, as you'll hear in a second.

2 REPRESENTATIVE NELSON: Hello, everyone.

3 I'm Representative Eric Nelson, Westmoreland
4 County, right up to the border here. So great to be here.

5 Thank you.

6 REPRESENTATIVE OBERLANDER: Good afternoon.

7 I'm Donna Oberlander. I'm the State
8 Representative from the 63rd District, which includes all of
9 Clarion, part of Armstrong, and part of Forest, and the
10 prime sponsor of House Bill 2398.

11 Thank you.

12 REPRESENTATIVE INNAMORATO: Hello.

13 I'm State Representative Sara Innamorato. I
14 represent the 21st District. And I live in Lawrenceville,
15 so I think that's where everyone was yesterday, and we have
16 seen autonomous vehicles for quite some time in our
17 neighborhoods.

18 REPRESENTATIVE MUSTELLO: Thank you.

19 I'm Representative Marci Mustello in the
20 11th District, which is just north of here in Butler County,
21 and I'm really looking forward to this hearing today.

22 MAJORITY CHAIRMAN HENNESSEY: Thank you.

23 We also have joining us virtually Representatives
24 Mindy Fee, Lori Mizgorski, Perry Warren, Meghan Schroeder,
25 and finally, Representative Greg Rothman.

1 Since the focus of today's hearing is on
2 House Bill 2398 and the prime sponsor is Donna Oberlander
3 -- she also serves as our House Caucus Majority Whip in
4 Harrisburg -- I'll call on Donna to see if you want to make
5 some opening remarks.

6 Donna?

7 REPRESENTATIVE OBERLANDER: Thank you, Chairman.

8 And I thank all of you for attending today's
9 hearing and for going on the tours with us over the last
10 2 days. It is a pleasure to be here, and just a few
11 opening comments.

12 We are here regarding House Bill 2398. This is
13 an opportunity for us to take an industry and the standards
14 that have been set for this industry and continue to be on
15 the cutting edge.

16 As you have heard from the Chairman, 18 other
17 States have already taken the step that we're looking to
18 take next, and we want to keep that investment. We want to
19 keep those jobs in Pennsylvania and continue to grow that
20 industry. And the reason we want to do that and the reason
21 that they came here to begin with is Carnegie Mellon and
22 the brain power that we have right here in our area, the
23 transportation system that we have, the bridges, the
24 mountains, the turns. Those challenges that make life
25 interesting for all of us are interesting for an autonomous

1 vehicle. It does allow us to continue to be at the cutting
2 edge of this technology, investment, deployment, and
3 continued development.

4 We also know that we have eight companies that
5 are authorized to test in 56 countries, and I think it's
6 important that our region continue to be right there in the
7 run for all of this. I believe this will grow
8 Pennsylvania's economy while creating family-sustaining
9 jobs in the technology sector. I believe this will help
10 address current and continuing supply-chain issues and will
11 address shortages that we have in that labor force, and
12 ultimately, I believe that this will save lives and improve
13 safety.

14 With that, I turn it back over to the Chair, and
15 thank you all. I look forward to the testimony.

16 MAJORITY CHAIRMAN HENNESSEY: Thank you.

17
18 PANEL 1

19
20 MAJORITY CHAIRMAN HENNESSEY: With that, we will
21 kick right into testimony. Our first testifier is
22 Kathryn Marshall from the Autonomous Vehicle Industry
23 Association.

24 Welcome, Kathryn, and begin whenever you're
25 ready. Thank you.

1 MS. MARSHALL: Chair Hennessey, Chair Carroll,
2 and Members of the Committee, my name is Katie Marshall,
3 and I serve as counsel to the Autonomous Vehicle Industry
4 Association, also known as AVIA. Thank you for giving me
5 the opportunity to testify today in strong support of
6 House Bill 2398.

7 AVIA was founded in 2016 to be the unified voice
8 of the AV industry. We are committed to bringing the
9 tremendous safety, mobility, and economic benefits of AVs,
10 otherwise known as SAE Levels 4- and 5-capable vehicles, to
11 consumers in a safe, responsible, and timely manner.

12 Our members include the world's leading
13 autonomous vehicle companies, including Argo AI and Aurora,
14 which are both headquartered here and test here, and
15 Motional, which also tests here. Our members are
16 continuing to expand to Pennsylvania, with Waymo also
17 recently opening its first Pittsburgh office.

18 As the Commonwealth has long recognized, AVs
19 offer significant safety, mobility, and efficiency
20 benefits, holding the potential to save lives and to change
21 the way we move. Earlier this year, the National Highway
22 Traffic Safety Administration reported that nearly 32,000
23 Americans died on our roads in the first 9 months of 2021.
24 Those deaths represent the highest number of fatalities in
25 the first 9 months of any year in the last 15 years.

1 Moreover, in Pennsylvania specifically, traffic fatalities
2 increased 9.7 percent last year.

3 The 2021 fatality numbers reflect a pattern of
4 increasingly unsafe driving that is occurring in
5 Pennsylvania and across the country. Just a month ago, the
6 U.S. Department of Transportation also reaffirmed what we
7 have long known: Human behavior is a contributing factor
8 to the overwhelming majority of crashes, including drunk,
9 impaired, distracted, and reckless driving.

10 The AV industry was established to confront this
11 tragedy on our roads. The simple fact is that unlike human
12 drivers, AVs do not drive drunk, they do not text while
13 driving, they do not fall asleep at the wheel, and they do
14 not recklessly speed. Additionally, they are programmed to
15 abide by speed limits, respect school zones, and follow
16 traffic signage without exception. The record is clear:
17 AVs are being developed safely and will make our roads
18 safer.

19 AV technology will also transform our
20 transportation system by making it more accessible,
21 efficient, and sustainable. For instance, Pennsylvania is
22 home to millions of individuals, including seniors and
23 those with visual impairments, who would benefit greatly
24 from the increased safety and mobility that AVs could
25 provide. For individuals like these who are too frequently

1 excluded from the traditional transportation system, AVs
2 hold tremendous potential to transform mobility, broaden
3 economic participation, and support greater independence.
4 In addition to offering safety and mobility benefits, AVs
5 can also help reduce traffic congestion, improve
6 environmental quality, and advance transportation
7 efficiency.

8 In addition, the AV industry is creating jobs and
9 providing opportunities for workers with a wide array of
10 expertise and educational backgrounds, including many jobs
11 that do not require a college degree. In Pennsylvania
12 specifically, AV developers and manufacturers are hiring
13 auto technicians, fleet manufacturers, safety operation
14 specialists, engineers, and many others to support AV
15 testing.

16 And a recent study performed for the Regional
17 Industrial Development Corporation also found that the AV
18 industry has created around 6500 new jobs in the
19 southwestern Pennsylvania region alone and that the global
20 autonomous vehicle industry could be worth \$1 trillion by
21 2026. Enabling the deployment of AVs through this bill
22 will help to ensure that well-paying jobs and economic
23 benefits of AVs continue to be brought to the Commonwealth.

24 AVs offer great opportunities, but a framework
25 that allows for the driverless deployment of this

1 technology is necessary to realize these benefits. As this
2 committee knows, currently, Pennsylvania allows only for
3 AV testing. While Pennsylvania is widely recognized as a
4 leader in the AV ecosystem, continuing to limit AV
5 operations to testing creates risk that the Commonwealth
6 will fall behind.

7 For a dozen years, AV technology has been tested
8 on America's public roads and maintains a remarkable safety
9 record. Like the bill before you -- also, other States
10 have taken notice of this safety record. Eighteen States
11 have laws that expressly authorize AVs to deploy with or
12 without a human driver. And like the bill before you,
13 these laws allow AVs to deploy with or without a human
14 driver, address obligations in the unlikely event of an
15 accident, and impose minimum insurance requirements, many
16 of which are actually lower than the \$1 million minimum
17 requirement found in this bill.

18 Further, all of the States that have established
19 frameworks for testing and deployment have relied on
20 existing laws and have not created new liability principles
21 for AVs. Recognizing the significant benefits of AV
22 deployment, more States are likely to enact similar laws
23 that will enable AV deployment this year.

24 Notably, just last week, Pennsylvania's southern
25 neighbor, West Virginia, passed a bill that permits AV

1 deployment with or without a human driver. Through this
2 bill, West Virginia has positioned itself to become a
3 leader in AVs and attract top talent to the State.
4 Additionally, New York, Oklahoma, and Kansas are each
5 considering bills that would enable AV deployment this
6 year.

7 As States across the country take steps to enable
8 driverless AV deployment, it is our hope that Pennsylvania
9 will do the same by enacting this bill. Doing so will help
10 the Commonwealth to retain its leadership position in the
11 AV ecosystem, support AV companies located here, and
12 attract new companies and jobs to the State.

13 We appreciate the opportunity to express our
14 strong support for House Bill 2398. Thank you for your
15 time and consideration, and I'm happy to answer any
16 questions you have.

17 MAJORITY CHAIRMAN HENNESSEY: Thank you, Kate.

18 Can you stay until the end? We have eight
19 testifiers, seven more.

20 MS. MARSHALL: I'd be happy to.

21 MAJORITY CHAIRMAN HENNESSEY: If you can stay
22 until the end, I'm going to ask Members to hold their
23 questions so that we make sure we can move the testifiers,
24 the witnesses, through.

25 MS. MARSHALL: Of course.

1 MAJORITY CHAIRMAN HENNESSEY: And then ask that,
2 you know, if you'll submit to questions at that point,
3 we'll be happy, all right?

4 MS. MARSHALL: I'd be happy to.

5 MAJORITY CHAIRMAN HENNESSEY: Thank you.

6 MS. MARSHALL: Thank you.

7
8 PANEL 2
9

10 MAJORITY CHAIRMAN HENNESSEY: Our next testifier
11 is joining us virtually: Noah Karn from the Insurance
12 Federation of Pennsylvania.

13 MR. KARN: Can everyone hear me?

14 MAJORITY CHAIRMAN HENNESSEY: Yes, we can.

15 MR. KARN: Okay. Good afternoon, and happy
16 St. Patrick's Day to you, Chairman Hennessey---

17 MAJORITY CHAIRMAN HENNESSEY: Thank you, Noah.

18 MR. KARN: ---Chairman Carroll, and Members of
19 the House Transportation Committee.

20 My name is Noah Karn. I serve as Director of
21 Government Affairs for the Insurance Federation of
22 Pennsylvania.

23 As many of you know, the Federation is a
24 nonprofit trade association that represents carriers from
25 all segments of the industry. On behalf of our members who

1 do business in this particular market segment and on behalf
2 of an industry that champions public safety as a means of
3 risk mitigation, you know, we appreciate the opportunity to
4 provide some general perspectives on HAV testing and
5 deployment, as well as some technical input on
6 Representative Oberlander's House Bill 2398 in its current
7 form.

8 And I'll say that as a son of southwestern
9 Pennsylvania, I would have loved to have joined you in
10 person this afternoon, but we have a quarterly board
11 meeting at the top of the hour, so thanks to committee
12 staff for making the accommodation to allow us to testify
13 virtually.

14 I understand you guys have been provided with
15 advanced copies of our testimony, and I know the Committee
16 has a full hearing agenda, so in the interests of time I'll
17 make some high-level comments, and I'm also happy to take
18 questions.

19 First and foremost, I would like the Committee to
20 understand that the insurance industry supports the
21 development of highly automated vehicles. As you have
22 already heard this afternoon, HAVs have enormous potential,
23 not just in terms of economic development, not just in
24 terms of convenience and efficiency, but also in terms of
25 safety.

1 When you consider that anywhere from 90 to
2 96 percent of car accidents are attributable, at least in
3 part, to human error, it's easy to get excited about
4 automation's upside potential as a risk mitigator, and as
5 we know, insurance markets respond positively to reductions
6 in risk. But it's just that, it's potential. Despite the
7 immense promise of driverless HAVs, this is still a nascent
8 technology that presents real dangers to people and
9 property.

10 According to the National Law Review,
11 self-driving vehicles are more than twice as likely to be
12 involved in a collision, sustaining 9.1 accidents per
13 million miles driven as opposed to 4.1 crashes per million
14 miles in traditional vehicles.

15 A 2020 AAA study found that vehicles equipped
16 with active driving assistance systems, ADAS, experience
17 some type of issue, on average, every 8 miles in real-world
18 driving.

19 Back in 2015, hackers remotely took over a Jeep,
20 forcing it to stop on a St. Louis highway while driving
21 70 miles per hour. The hackers were able to access the
22 car's braking and steering through an onboard entertainment
23 system. A simple Google search will show you, you know,
24 plenty of other headlines about software recalls, crashes,
25 even fatalities, as was, sadly, the case in Arizona a

1 couple of years ago.

2 As public policy makers, the challenge you guys
3 face is creating both a legal avenue -- no pun intended --
4 for continued innovation and a regulatory framework that
5 ensures appropriate oversight of an emerging industry and
6 protects public safety. That's a balance that, you know,
7 the General Assembly was able to strike when it approved
8 Act 106 of 2020, which, as you'll recall, provided for the
9 testing and deployment of personal delivery devices, and we
10 think a similar accord is achievable as it relates to HAVs.

11 To that end, we have a few recommendations:

12 First, Section 8510.1 on page 13 of the bill
13 allows PennDOT to promulgate regs or publish operating
14 guidelines, but it doesn't require that, and it certainly
15 doesn't require that before driverless HAV testing can
16 begin, and it should. Given the well-documented risks
17 associated with HAVs which I discussed, a clear regulatory
18 framework is needed at the outset with conditions for being
19 licensed to conduct driverless testing, both established
20 and met, before testing begins.

21 We recommend that any regs or guidelines be
22 developed in consultation with PennDOT's HAV Advisory
23 Committee, which was established back in 2018 for this
24 exact purpose. The Department should also consult with its
25 Pedestrian and Pedalcycle Advisory Committee in developing

1 regs and guidelines.

2 Second, the bill should include reporting
3 requirements for entities conducting HAV testing, including
4 real-time reporting to PennDOT of accidents, technological
5 breakdowns, and other pertinent safety metrics. The
6 Advisory Committee and the General Assembly should have
7 regular access to that data, and PennDOT should have the
8 ability to suspend testing operations based on the feedback
9 it receives. There should also be an opportunity for input
10 from the general public and local government entities prior
11 to testing.

12 The General Assembly saw the wisdom in doing all
13 of this for unmanned delivery devices that are operating on
14 sidewalks, and we question, why not do the same for
15 driverless vehicles operating on public roads in your
16 communities?

17 With respect to the bill's insurance provisions
18 on pages 12 and 13 of the bill in Section 8509, it talks
19 about HAV "owners" having at least \$1 million in insurance
20 coverage, and that sounds great, but we need to resolve
21 some ambiguities regarding coverage and liability. For
22 instance, does that million dollars cover each claim, all
23 claims in an individual accident, or all claims in the
24 aggregate? Is that an annual requisite? Does it cover
25 only accidents caused by the owner? What about accidents

1 caused by the vehicle manufacturer or the software
2 developer, remote operators, et cetera?

3 How does that bill's million-dollar insurance
4 requisite compare to other State jurisdictions? We heard
5 that it's high compared to other jurisdictions, but our
6 research shows at least a half dozen, if not more States
7 that have a higher requisite.

8 All these are issues that should be resolved at
9 the outset in a clear and prescriptive statute. And as
10 you'll see in our formal testimony, we recommend that
11 HAV owners be subject to a strict liability standard for
12 third-party claims arising during the testing phase. Not
13 only will this ensure the swift resolution of claims, but
14 it will mitigate needless litigation and inevitable
15 finger-pointing. We have submitted amendment language to
16 that effect for the Committee's consideration.

17 We have some other suggestions that are outlined
18 in our testimony, but just to summarize, you know, we as an
19 industry acknowledge the promise of HAV technology, and we
20 want to be partners in facilitating innovation in this
21 area, but we also need to speak candidly about the
22 associated risks and remain mindful of those risks when
23 crafting statewide public policy.

24 As an aside, we are also cognizant of ongoing
25 discussions at the Federal level. Just last Thursday, it's

1 our understanding that NHTSA issued final rulemaking,
2 eliminating the need for highly automated and self-driving
3 vehicles to have manual controls, like use steering wheels
4 or pedals. We are still reviewing those NHTSA rules, but
5 we understand they place a heavy emphasis on safety, and we
6 simply think that focus should be shared by State lawmakers
7 and regulators.

8 So again, we think that's all very achievable.
9 We appreciate the opportunity to participate in this
10 dialogue, and we thank the Committee for its attention to
11 this important matter.

12 MAJORITY CHAIRMAN HENNESSEY: Thank you for your
13 comments, Noah, on behalf of the Insurance Federation.

14 Did I understand you to say that you had to leave
15 at 1 o'clock for another meeting?

16 MR. KARN: No, I'm going to stick on. I guess at
17 the top of the hour -- I meant 2 o'clock.

18 MAJORITY CHAIRMAN HENNESSEY: Oh, okay.

19 MR. KARN: And I just realized our logo is
20 backwards here, so I'm going to get that straightened out
21 in the meantime.

22 MAJORITY CHAIRMAN HENNESSEY: Okay. Thanks. So
23 hang around then, and we'll ask some questions a little bit
24 later.

25 MR. KARN: Thanks, Chairman.

1 MAJORITY CHAIRMAN HENNESSEY: Thank you for your
2 testimony.

3
4 PANEL 3

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6 MAJORITY CHAIRMAN HENNESSEY: Our next testifier
7 also is joining us virtually, and that is Kelley Yemen,
8 Director of Complete Streets for the City of Philadelphia.

9 Welcome, Kelley.

10 MS. YEMEN: Good afternoon, and thank you for
11 having me, both Chairman Hennessey and Representative
12 Oberlander and Members of the House Transportation
13 Committee.

14 My name is Kelley Yemen. I'm the Director of
15 the Office of Complete Streets within the Office of
16 Transportation, Infrastructure, and Sustainability for the
17 City of Philadelphia, and I'm here to submit testimony
18 regarding proposed legislation, HAV legislation, SB 965 and
19 HB 2398.

20 The City of Philadelphia's Office of
21 Transportation, Infrastructure, and Sustainability,
22 otherwise known as OTIS, is responsible for driving change
23 through Philadelphia's transportation and infrastructure
24 systems. OTIS leads a diverse group of city departments
25 and divisions, including my office, the City of Complete

1 Streets, the Department of Streets, and the Philadelphia
2 Water Department, among others. Through our policies and
3 programs, we work to provide cost-effective, quality
4 services with a focus on Philadelphia's 1.6 million
5 residents.

6 We appreciate the Legislature's attention to the
7 future of highly autonomous vehicles in the Commonwealth.
8 Our concerns with the HAV legislation, as drafted, are
9 threefold: The legislation preempts a municipality's
10 ability to regulate HAV operations in a similar manner to
11 how municipalities regulate non-HAV vehicles today.
12 Secondly, the amendments to the legislation from its
13 original draft eliminate the requirement that a driver,
14 in-vehicle or remote, oversee the operations of an HAV.
15 And, the draft legislation is ambiguous as to how its
16 provisions to the motor vehicle code apply to HAVs. We
17 recommend solutions to these concerns and additional
18 drafting updates to increase clarity of the legislation's
19 intent.

20 For Section 8510 under "Control," municipalities
21 should retain the ability to set reasonable standards on
22 the operations of HAVs within their jurisdiction.

23 OTIS is concerned that Section 8510 eliminates
24 the reasonable ability for the City of Philadelphia to
25 ensure the safety of the traveling public in the public

1 right-of-way. While we believe that the legislation's
2 intent is to ensure HAVs are not subject to the
3 restrictions that differ from regular driver-operated
4 vehicles, there is too much space in the language as
5 drafted for bad actors to operate while a municipality's
6 hands are tied.

7 The section currently prohibits a political
8 subdivision of the Commonwealth from adopting or enforcing
9 "...a policy, rule or ordinance that sets standards or
10 otherwise burdens, prohibits, limits or regulates the
11 operation of a highly automated vehicle."

12 We believe it is reasonable for the Commonwealth
13 municipalities to set commonsense rules and standards on
14 the operation of automated vehicles within their
15 boundaries. The legislation, as drafted, would constrain
16 Philadelphia's ability to ensure the safety of its
17 residents in the public right-of-way due to its overly
18 broad language proscribing any standards on HAVs. Taken
19 literally, the city would be prohibited from enforcing
20 speed limits or traffic lights, to name just two issues.
21 We recommend the section be amended to state that HAVs
22 shall not be regulated in a manner different from that of a
23 non-HAV.

24 And under Section 8504, "Operation of highly
25 automated vehicles without a highly automated...driver,"

1 oversight by a human driver should be required for HAV
2 operations in the Commonwealth at this time.

3 Additionally, OTIS is concerned that the
4 amendments proposed to Section 8504 now authorize HAVs to
5 operate entirely without a driver. Previously, this
6 legislation referenced either a driver "on board" or a
7 driver "in a remote location." The current draft removes
8 reference to a driver on board or remote, with the effect
9 of allowing HAVs to operate on public roads in this
10 Commonwealth without driver oversight.

11 We believe the prudent approach as this
12 technology still develops is to use the original language
13 requiring oversight by a human operator, whether on board
14 or remote. Requiring oversight by a human operator adds
15 additional protection for the public by ensuring a person
16 has ultimate control over the vehicle as these large
17 autonomous vehicles are tested in the public right-of-way.
18 Allowing the vehicles to operate without any control or
19 oversight by a human operator creates an unnecessary risk
20 to the traveling public.

21 And finally, under Section 8506, "Operation of
22 highly automated motor...vehicles," the legislation text
23 should be amended to more clearly identify what provisions
24 of the motor vehicle code apply to HAVs.

25 8506 as written is unclear as to where certain

1 responsibilities lie with relation to HAV operations,
2 because it excepts HAVs from any provisions of Federal or
3 State laws "...governing commercial drivers and the
4 operation of commercial motor vehicles,...which by its
5 nature reasonably applies only to a driver...."

6 For example, it is accepted that the driver has
7 responsibility to stop a vehicle, whereas the vehicle
8 itself must have headlamps. Our concern is that this
9 language as drafted makes it unclear where responsibility
10 lies when an HAV operates in a way that would be considered
11 negligent, reckless, or illegal if operation was by a
12 driver-controlled vehicle.

13 Speeding and yielding right-of-way are additional
14 examples which, by their nature, are the responsibility of
15 drivers. It is unclear, as drafted, whether these
16 provisions of law are applicable to HAVs under the
17 legislation.

18 Thank you for the opportunity to testify today.
19 We appreciate both the House and Senate Transportation
20 Committees' work on these issues and look forward to a
21 continued partnership on the future of highly autonomous
22 vehicles in Pennsylvania.

23 MAJORITY CHAIRMAN HENNESSEY: Thank you, Kelley.

24 I apologize for mispronouncing your name the
25 first time -- Kelley Yemen from Complete Streets in the

1 City of Philadelphia.

2 Our next testifier -- and thank you, by the way,
3 for the suggestions either on your behalf or on behalf of
4 OTIS.

5 Our next testifier is Kim Lucas, the Director of
6 the Department of Mobility and Infrastructure for the City
7 of Pittsburgh.

8 Welcome, Kim.

9 MS. LUCAS: Thank you.

10 Good afternoon, Chair Hennessey and Members of
11 the House Transportation Committee.

12 I'm going to spend a couple of minutes talking a
13 little bit about the history of AVs in Pittsburgh, because
14 it is so important to our city and we have a lengthy
15 history there. I see a number of friends in the room from
16 the industry itself, because we have a great working
17 relationship and I want to continue that.

18 So as you have heard, my name is Kim Lucas, and
19 I'm the Acting Director of the City of Pittsburgh's
20 Department of Mobility and Infrastructure. The department
21 is responsible for the transportation of people and goods
22 throughout the city, and on behalf of the City of
23 Pittsburgh and Mayor Ed Gainey, I would like to thank
24 Members for holding this hearing on HB 2398, legislation
25 that is important to me personally and to the residents of

1 the City of Pittsburgh.

2 You may not know that in 1979, U.S. Steel
3 announced the closure of 15 steel mills, an event which
4 sent shockwaves through our regional economy and presaged
5 the rapid decline of the industry that put Pittsburgh on
6 the map. In that same year, CMU Professor Red Whittaker
7 built a small autonomous vehicle to help with the cleanup
8 after the 1979 nuclear reactor meltdown at Three Mile
9 Island, beginning our transition from a Steel City to a
10 Robotics City.

11 The importance of autonomous vehicles to
12 Pittsburgh's future can't be overestimated. It's estimated
13 that the global market for the autonomous vehicle industry
14 will reach about \$7 trillion by 2050, with the potential to
15 create countless jobs for workers of all education and
16 skill levels. The manufacturing and tech associated with
17 AVs also occupy and give new life to the massive facilities
18 that were a part of the past industrial economy.

19 "Robotics Row" in Lawrenceville and the
20 Strip District began with the redevelopment and
21 transformation of a former steel mill and chocolate factory
22 and have been home to companies like Uber, Aurora
23 Innovation, Motional, and many others.

24 In addition to the impact autonomous vehicles can
25 and will have on our economy, AVs and HAVs in particular

1 also have the potential to enhance quality of life for our
2 city's residents by helping us to reduce emissions,
3 increase mobility, and just free up time for people who
4 travel by vehicle.

5 We know that our ability to grow this industry
6 for the workers and residents of Pittsburgh depends on our
7 ability to offer an adaptive and integrated environment
8 that supports the communication and data needs of AVs. At
9 DOMI, we invest every day in innovative technology that
10 helps to support and amplify the benefits of automation.

11 We are also supportive of creating a regulatory
12 environment that facilitates research and testing, and we
13 know that means updating our laws to keep pace with
14 innovation in the sector while also protecting the safety
15 of the public, which is our number-one goal at the
16 Department of Mobility and Infrastructure.

17 One aspect of the bill that concerns us, however,
18 is the provision stating that "A political subdivision of
19 the Commonwealth may not adopt or enforce a policy, rule or
20 ordinance that sets standards or otherwise burdens,
21 prohibits, limits or regulates the operation of a highly
22 automated vehicle," much like you heard from the City of
23 Philadelphia. We share that concern.

24 In the first place, we believe that this language
25 is overbroad and could be construed to prohibit regulation

1 of any kind. Our State's motor vehicle code has always
2 recognized the need for municipalities to have the ability
3 to set vehicular policy. Indeed, elsewhere the code
4 explicitly states that the provisions of the motor vehicle
5 title shall not be deemed to prevent local authorities from
6 prohibiting or regulating the use of designated streets by
7 any class or kind of traffic. HAVs should be no exception.

8 The need for a municipal government to regulate
9 the use of streets will, we believe, become more important
10 as time goes on. In fact, the promise of HAVs depends on
11 our ability to do so. For instance, to reap the benefits
12 of HAVs, we will need to pay close attention to the
13 predicted increase in vehicular traffic that HAVs will
14 induce so that we can balance AV usage demand driven by
15 greater vehicular safety and convenience alongside our
16 plans for widened and protected bicycle and pedestrian
17 paths in our right-of-way, another transportation segment
18 seeing rapid demand growth.

19 The people of Pittsburgh are keenly aware that
20 our future depends on the success of new industries. We
21 are committed to supporting the development of the AV
22 industry. But we also know that the effects of any new and
23 revolutionary technology are, by definition, unpredictable
24 and that government must have the ability to adapt these
25 much needed guidelines to local conditions.

1 We therefore respectfully ask that the provision
2 preempting local regulation be removed from this important
3 legislation so that HAVs can be regulated in the same
4 manner as non-autonomous vehicles.

5 And one thing I wanted to add in addition to this
6 testimony, which everybody here has a copy of, is just an
7 example of one way that we diverge and as a city have needs
8 beyond what the State requires.

9 So right now, a reportable crash is defined by
10 PennDOT, who is the entity that collects the crash data
11 from the local police departments, is defined as, the
12 threshold for a reportable crash is one where a vehicle has
13 received damage such that it can't be driven away or towed
14 under its own power or any type of injury or death is
15 reported, including complaint of pain.

16 Now, for a State that is looking at a whole State
17 worth of data and crashes, it makes sense to have a
18 threshold that is that high for a reportable crash. But at
19 the city level, we want to know about crashes where maybe
20 there were minor fender benders, because that still
21 indicates that there is an issue within our local network
22 that we would like to address. If we were prohibited from
23 being able to collect that information or to ask the
24 parties that are engaged in those crashes and creating that
25 information from being able to ask that, which is what we

1 MR. MATAYA: Thank you.

2 MAJORITY CHAIRMAN HENNESSEY: Did I pronounce
3 your name right?

4 MR. MATAYA: Mataya. Yes.

5 MAJORITY CHAIRMAN HENNESSEY: Mataya. Okay.

6 MR. MATAYA: Yes. Thank you.

7 MAJORITY CHAIRMAN HENNESSEY: You're welcome.

8 MR. MATAYA: Chairman Hennessey, Chairman
9 Carroll, Members of the Committee, on behalf of 95,000
10 working families across Pennsylvania, many of those working
11 families have a member of the family that drives a vehicle
12 or are behind the wheel for a living. The Pennsylvania
13 Conference of Teamsters asks that you oppose HB 2398.

14 The incorporation of new technologies is nothing
15 new to our union. Our union started in 1903 with the
16 majority of our membership literally driving teams of
17 horses. That had to evolve with the move to motorized
18 vehicles, and we are going to be involved and plan to be
19 involved in whatever the next phase is.

20 But while we oppose this legislation and take
21 great concern that an Oxford study has shown that
22 47 percent of American jobs are threatened by automation,
23 we believe labor organizations must be a key and pivotal
24 part of the ongoing conversation, and we really appreciate
25 the opportunity to be here today.

1 The autonomous vehicle industry is going to push
2 for the broadest and for the least regulated framework that
3 they can get out of this committee and out of the General
4 Assembly. There are a lot of issue areas, some of which
5 have already been discussed, that I have laid out in the
6 written testimony and that I will go through here that the
7 Committee and the Assembly and the Governor have to take
8 into consideration. They have to be thought about when
9 taking into consideration, whether it is this bill, this
10 vehicle, or any other bill on autonomous vehicles that
11 needs to be done.

12 Number one is, 100 percent transparency as it
13 relates to safety and crash data, both in simulations and
14 live testing. Earlier this year in January, the company,
15 the AV company Waymo sued the State of California trying to
16 block driverless crash data under the guise that it was a
17 trade secret. The Committee, the General Assembly, and
18 governments cannot take the excuse that crash data -- I'm
19 not talking about the actual artificial intelligence; I'm
20 talking about the crash data -- be considered a trade
21 secret. There must be 100 percent transparency from the
22 companies on that. That's not in this bill.

23 Number two, the elimination of preemption that we
24 have heard already. Local cities, boroughs, and townships
25 know what is the best fit for their communities. There

1 should be no provisions from the State Government telling
2 local leaders what they can and cannot do on their own
3 streets. All localities should have the freedom to
4 restrict or fully ban autonomous vehicles in their
5 jurisdictions.

6 Number three is appropriate liability, and we
7 heard about this as well. There must be an appropriate
8 evidence-based liability dollar amount for autonomous
9 vehicle companies. There has got to be a comprehensive
10 study to evaluate the damage, depending on the vehicle
11 size, that these vehicles can do. An 18-wheeler is going
12 to be very different than a small sedan that is operating
13 with passengers.

14 And just to give you some context, right now in
15 front of the Kansas House, there is a bill for personal
16 delivery devices, which are already legal in Pennsylvania.
17 Their weight limit down there is 150 pounds at 6 miles an
18 hour. Their liability dollar amount right now in front of
19 the Legislature is \$1 million. That's 150 pounds going
20 6 miles an hour -- the same liability dollar amount that's
21 in this bill. We are talking about vehicles under this
22 bill that are exponentially bigger than 150 pounds and move
23 a lot faster than 6 miles an hour.

24 There needs to be a public-facing website that
25 lists all incidents and accidents. That's not in this

1 bill.

2 There needs to be a thorough application process
3 that includes safety data, where the vehicles will be
4 deployed, a description of the training procedures, a set
5 schedule of maintenance and inspection of the vehicles.
6 That's not in this bill.

7 Number six, we need to address workforce
8 concerns. Given the immense responsibility of operating
9 autonomous vehicles, we feel that the responsibility should
10 be with the companies and that they should not be able to
11 pass it on to third-party independent contractors.

12 We also would say that any autonomous vehicle
13 company that wants to operate in the State should remain
14 neutral in the union organizing campaign, giving workers a
15 choice to freely decide whether or not to form a union.

16 We also think that there should be a human safety
17 operator whether or not there is an actual physical
18 steering wheel or gas pedals in the vehicle, but there
19 should be a safety operator in autonomous vehicles. That
20 is not in this bill.

21 Number seven, there should be some phases of
22 operation and public testing. That is not in this bill.
23 That was brought up by another speaker.

24 Number eight, there need to be appropriate
25 penalties that are enforceable and escalating that must

1 deter the companies from breaking any rules associated with
2 an application process, deployment.

3 And then number nine, the State must have the
4 power to revoke operations. There could be a very real
5 scenario where there is a serious crash or some kind of
6 issue in another State with either an individual company or
7 an individual piece of technology, and the State Government
8 must have the ability, the flexibility, to be able to say,
9 okay, we need to hit the pause button for a moment.

10 All that being said, the Pennsylvania Conference
11 of Teamsters fully welcomes further discussion with any
12 elected official on this issue. Automated vehicles have
13 the potential to completely upend our workforce, our
14 communities, but the potential is also there for them to
15 actually make the jobs of our members and the jobs of all
16 workers much safer and much better.

17 So, we want to be part of that conversation; we
18 will be part of that conversation. Representative
19 Oberlander mentioned being on the cutting edge, and
20 Pennsylvania does have very much the ability to be on the
21 cutting edge of putting together the most responsible
22 legislation on this as possible. But as of right now, that
23 is not this bill as written.

24 And on behalf, again, on behalf of the
25 Pennsylvania Conference of Teamsters and President

1 Bill Hamilton here in the State, I thank you.

2 MAJORITY CHAIRMAN HENNESSEY: Thank you, John. I
3 appreciate your testimony and I appreciate your
4 suggestions.

5 Frank Snyder is our next testifier. Frank, come
6 on up.

7 Frank Snyder is our next testifier. Frank is the
8 Secretary-Treasurer of the Pennsylvania AFL-CIO. I'm
9 sorry, perhaps I should have invited you up at the same
10 time as John, but whatever.

11 MR. SNYDER: That's all right.

12 MAJORITY CHAIRMAN HENNESSEY: Begin whenever
13 you're ready. Thank you.

14 MR. SNYDER: Yeah. Sure.

15 Mr. Chairman, Minority Chairman Carroll
16 virtually, my name is Frank Snyder. I am the
17 Secretary-Treasurer of the Pennsylvania AFL-CIO. On
18 behalf of President Rick Bloomingdale, myself, and
19 700,000 hardworking women and men who make up our
20 Federation, thank you for having this hearing today.

21 The goals and intent behind House Bill 2398 are
22 laudable. Technology is advancing rapidly each year all
23 before us, and we recognize that this will extend to the
24 transportation industry, make no mistake about that, and
25 highly automated vehicles as well. Not EVs as it is

1 sometimes confused, HAVs, highly automated vehicles, rather
2 than electric vehicles. So understanding the trajectory of
3 the future, we recognize that implementation is not a
4 question of "if" but "when and how."

5 As stewards of the labor movement who will be
6 impacted -- make no mistake about this transition -- we
7 appreciate the opportunity to come before you and join with
8 you to discuss the membership, our membership's concerns
9 about how it does impact this fast-track trajectory that we
10 are on with House Bill 2398 and its companion legislation,
11 SB 965, and offer simple solutions on how we can build this
12 future to be as safe and sustainable as possible for the
13 workers and broader community impacted.

14 We want to make clear that we are not simply
15 opposed to automation. We believe it's critically
16 important to have a stakeholder meeting or stakeholder
17 meetings or a series of meetings regarding the impact on
18 jobs and the public safety all across the Commonwealth
19 before moving forward with the steps to enact this
20 legislation.

21 None of us can be experts on everything, to be
22 sure, on that which comes before the Legislature and
23 policymakers, which is why responsible policymakers rely on
24 subject matter experts to craft regulations that fit within
25 the statutory framework and implement laws accordingly.

1 Of particular interest to our membership are
2 concerns regarding:

- 3
- 4 • The projected impact of jobs, both immediately
 - 5 and long term;
 - 6 • The lack of proven public and worker safety
 - 7 surrounding current and projected HAVs;
 - 8 • The lack of appropriate infrastructure to
 - 9 immediately support HAVs;
 - 10 • The lack of comprehensive testing;
 - 11 • The lack of comprehensive application and
 - 12 licensing processes; and also
 - 13 • The lack of appropriate penalties for
 - 14 violating safety standards and regulations.

15

16 We need guarantees that highly automated vehicles
17 are legally never deployed without a properly trained
18 operator on board. We must make sure that throughout this
19 process, we are addressing both the safety and the
20 technology as well. And we can project that HAVs will
21 almost certainly impact jobs, make no mistake about it,
22 both in the private sector and public sector.

23 Now, think about this: Currently in
24 Pennsylvania, public-sector workers are not covered under
25 the Federal standards set forth by OSHA, standards

1 mandating the proper reporting and documentation of
2 worker injury or death that do not currently exist for
3 public-sector workers. This means that not only are
4 public-sector workers lacking basic legal protections, but
5 with our current system, we will continue not to be able to
6 track the rate or type of incidents that ultimately know
7 the appropriate data for long-term study and prevention
8 measures.

9 As we consider concerns for HAV safety of both
10 drivers and passengers and pedestrians, we should not
11 ignore the National Highway Traffic Safety Administration's
12 investigation into Tesla's assisted driving autopilot
13 system failure to detect and respond to emergency vehicles.
14 NHTSA's investigation focused on a series of at least
15 11 separate incidences where Tesla's autopilot crashed into
16 parked emergency vehicles, resulting in 17 people injured
17 and 1 woman killed.

18 We have a once in a generation Federal economic
19 investment coming into Pennsylvania through President
20 Biden's Infrastructure Investment and Jobs Act, and there
21 are some parameters that must be considered to make this a
22 win for all concerned.

23 First, it is imperative that any build-out be
24 completed by qualified union professionals.

25 Next, having stakeholder meetings on jobs and

1 public safety, which includes the appropriate labor unions,
2 academics, manufacturers, and policymakers, including the
3 public safety and HAV safety experts, city representation,
4 the Pennsylvania Department of Insurance, independent legal
5 expertise with State law expertise, and representation from
6 constituents that would be most exposed to testing.

7 Everything works until it doesn't. Being
8 prepared to address these issues before they happen is what
9 safety is all about.

10 Realistically speaking, the technology will
11 experience failures. This is because the point of testing
12 is to find those surprise failures and to work to correct
13 them.

14 The baseline of common ground between HAVs and
15 safety is jobs and training. The technology needs to be
16 safe for vulnerable road users, and consumers need to be
17 informed on what is responsible.

18 The Society of Automotive Engineers, SAE, is a
19 leading organization on industry safety standards. I
20 mention this in reference to SAE J3018, which is a safety
21 standard from SAE that provides guidance for driver
22 training programs but also addresses on-road testing of the
23 prototype HAVs that we have seen on the road today.

24 The standard was written by companies like
25 General Motors, Ford, Toyota, and Aurora, and Argo AI

1 already conforms to this. New York, Massachusetts, and
2 other States are already adopting it as well. It's a
3 no-brainer that this is an industry-supported solution to
4 bring the conversation to explore how HAV operations will
5 be safe.

6 The Department of Transportation should consider
7 the following:

- 8
- 9 • Following the American Association of
10 Motor Vehicle Administrators road testing
11 guidelines, plus some additional key
12 practices, including the Voluntary Safety
13 Self-Assessment reports from vehicle
14 manufacturers and testing organizations.
 - 15 • Defining how safe testing should be when
16 considering the safety of a driver and a
17 vehicle as a whole.

18

19 And finally, of no less importance, we have
20 decades of history data and empirical fact-based evidence
21 that a promise of a "just transition," if you have heard
22 that term before, has failed workers time and time again.
23 As we move forward, we must ensure that hardworking
24 Pennsylvanians are given adequate and are given
25 opportunities, fulfilling opportunities, to have just that

1 type of just transition, not to lose the jobs that have
2 created a good livelihood for them over their lifetime.

3 Make no mistake that the HAV bill is about
4 infrastructure and not worker shortages. We cannot use the
5 current COVID-19 pandemic as yet another excuse of why we
6 cannot move freight. The salaries of truck drivers have
7 been stagnant for 30 years with limited cost-of-living
8 adjustments compared to the time and sacrifice on the job.
9 Additionally, deregulation has made this one of the most
10 unattractive careers in logistics, which this is just
11 simply unsustainable for many working families.

12 As a matter of personal privilege, Mr. Chairman,
13 I came out of a localized union steel mill about 80 miles
14 northwest of where we're sitting at today. In the last job
15 that I had before I left that factory was as a truck driver
16 30 years ago, and 30 years ago I earned what the average
17 truck driver today is earning. The average truck driver
18 today earns about \$47,000 a year. So it is not realistic
19 to believe that this is somehow creating a void that has
20 been caused because of the pandemic and we can't get
21 drivers to do the job.

22 But anyway, I come from this area. I understand
23 how sexy it is that some of this technology and the folks
24 at CMU and all the other folks and the industry folks that
25 are over there are really doing some cutting edge stuff,

1 but there's no hurry for this. There is absolutely no
2 hurry for highly automated vehicles to be pushed through,
3 which is why we stand in opposition to this, with all due
4 respect, and hope that you will consider to continue to
5 have even more hearings and more meetings just like this
6 and not rush this legislation through, Mr. Chairman.

7 Thank you.

8 MAJORITY CHAIRMAN HENNESSEY: Thank you,
9 Mr. Snyder. Frank, can you stay?

10 MR. SNYDER: Sure.

11 MAJORITY CHAIRMAN HENNESSEY: Good.

12

13 PANEL 5

14

15 MAJORITY CHAIRMAN HENNESSEY: Our next testifier
16 will be James Murphy, Vice President of Government Affairs
17 for Locomation. Locomation was kind enough to host us
18 yesterday, and we appreciate that, at your facility.

19 MR. MURPHY: The pleasure was all ours, sir.

20 In the interests of time, I'm going to deliver a
21 condensed version of my submitted statement since everyone
22 has it available to them.

23 Chairman Hennessey, Ranking Member Innamorato,
24 Representative Oberlander, other distinguished Members of
25 the Committee, my name is James Murphy, and I'm the

1 Vice President of Government Affairs for Locomation, a
2 Pittsburgh-based autonomous technology company located in
3 the Lawrenceville neighborhood. I have also held a Class A
4 CDL for 20 years.

5 I am here today to speak in support of HB 2398
6 and offer my perspective as an industry expert on truck
7 platooning and as a member of the Pennsylvania Motor Truck
8 Association. We appreciate the opportunity to speak in
9 support of this legislation.

10 Locomation's Autonomous Relay Convoy, or ARC
11 system, is a human-led convoy of two trucks that are
12 electronically tethered. Our Human-Guided Autonomy
13 solution enables one driver to operate the lead truck while
14 a second driver rests in the following truck.
15 Periodically, the trucks swap places to allow each driver
16 to take turns leading and resting in compliance with the
17 U.S. Department of Transportation hours-of-service
18 regulations. Locomation will enable carriers to safely
19 operate two trucks for 20 to 22 hours per day, delivering
20 twice the cargo, twice as far, twice as fast, within the
21 speed limit.

22 In 2018, the Commonwealth of Pennsylvania adopted
23 Act 117, which allowed for platoons to operate on public
24 highways in the State. This initial step was paramount to
25 ensuring Locomation was able to test on public highways in

1 Pennsylvania and continues to be critical to perfecting the
2 technology.

3 I would like to take the opportunity to thank the
4 Pennsylvania General Assembly and the Pennsylvania
5 Department of Transportation for their continued leadership
6 and commitment to working with companies like Locomotion
7 and others to unlock the benefits of autonomous vehicle
8 technology. And while Act 117 was instrumental to getting
9 the autonomous vehicle sector to where it is today in
10 Pennsylvania, it does need to be updated to reflect the
11 advancements in the technology since it was enacted back in
12 2018.

13 In September 2020, Locomotion became the first
14 autonomous truck company to secure a purchase order for
15 1120 trucks equipped with our Autonomous Relay Convoy
16 technology. This historic agreement was made with
17 Missouri-based Wilson Logistics. And in June 2021,
18 Locomotion secured a second autonomous truck purchase order
19 with Pennsylvania-based PGT Trucking for 1,000 ARC-equipped
20 tractors.

21 Customers like PGT Trucking want to use our
22 technology in Pennsylvania, and legislation enabling them
23 to do so is critical. What we are discussing here today is
24 updating a statute to keep pace with the technology and the
25 continued support of Pennsylvania businesses.

1 The Commonwealth must remain competitive and
2 foster an environment for innovation and support
3 Pennsylvania-based companies like Locomotion and PGT
4 Trucking that are working together to make this homegrown
5 technology a reality, built right here in the Commonwealth.

6 HB 2398 will help Pennsylvania keep pace with
7 autonomous vehicle technology and allow companies like
8 PGT Trucking to deploy our technology by allowing the
9 second truck in the platoon to be operated by an automated
10 driving system with or without a human driver.

11 Pennsylvania has the unique opportunity to be one
12 of the first places in the United States to see autonomous
13 truck technology deployed in daily operations in the form
14 of two truck-linked convoys. The linked convoys represent
15 the first phase of autonomous truck technology that
16 harnesses the unmatched ability of human drivers with the
17 safety and efficiency of computers. Locomotion's phased-in
18 approach will ensure that this technology is deployed
19 safely and responsibly, but in order to do so, we need the
20 continued support of the Legislature.

21 One issue that continues to arise in the
22 discussion around autonomous vehicles is the impact to the
23 workforce. Until recently, there was not a lot of
24 research available on this subject. But in 2021, the
25 U.S. Department of Transportation sponsored a study looking

1 at the impact of automation on truck driver jobs
2 specifically. The study examined fast, medium, and
3 long-term adoption rates of the technology and the impacts
4 on the workforce. Under the most optimistic adoption rates
5 of medium to long term, the study found that there was no
6 impact to the workforce. This study was conducted even
7 before Locomation's human-centric model was widely
8 understood.

9 The bottom line is this: If you're a truck
10 driver today, you can retire as a truck driver. If you
11 want to enter the profession, that will always be available
12 to you. Human-guided convoy technology being developed by
13 Locomation will create premium truck driver jobs that will
14 pay better and increase at-home time for drivers. And
15 across the various AV models, new jobs will be created and
16 are already being created to give workers more options.

17 As previously mentioned, a recent study by the
18 Regional Industrial Development Corporation of Southwestern
19 Pennsylvania found that roughly 6500 new jobs are already
20 being created and then an additional supporting 15,000 jobs
21 as part of this sector.

22 I hope my appearance here today reassures Members
23 of the Committee that we are committed to deploying this
24 technology in a safe and transparent manner. Autonomous
25 trucking technology is coming, and HB 2398 will help ensure

1 that Pennsylvania will be at the forefront of this
2 evolutionary shift in how goods are moved.

3 Again, thank you for the opportunity to appear
4 before the Committee. I would be happy to answer any
5 questions at the appropriate time.

6 MAJORITY CHAIRMAN HENNESSEY: Thank you, James.
7 I appreciate that. Thank you for your testimony.

8

9

PANEL 6

10

11 MAJORITY CHAIRMAN HENNESSEY: We will now hear
12 from Mark Kopko, who is the Director of the Office of
13 Transformational Technology for PennDOT.

14 Mark, you can begin whenever you're ready.
15 Thanks.

16 DIRECTOR KOPKO: Good afternoon.

17 MAJORITY CHAIRMAN HENNESSEY: Good afternoon.

18 DIRECTOR KOPKO: As was mentioned, my name is
19 Mark Kopko, and I am the Director of Transformational
20 Technology at the Pennsylvania Department of
21 Transportation. On behalf of Secretary Yassmin Gramian,
22 thank you for the opportunity to speak to you today about
23 the proposed automated vehicle legislation.

24 Although there may be some debate about what
25 extent, almost all experts believe that automated vehicle

1 technology holds tremendous potential for improving safety,
2 increasing mobility, and enhancing accessibility in
3 Pennsylvania. PennDOT understands that some individuals
4 may feel uneasy about this technology and its use.
5 However, hearings such as this are an example of the
6 critical outreach needed to develop an understanding of the
7 technology, its potential benefits for the future, and our
8 mutually shared commitment to safety.

9 PennDOT applauds both the House and the Senate
10 for making automated vehicle legislation a priority, and we
11 are committed to working with the General Assembly and
12 stakeholders to advance and, if needed, make
13 recommendations to modify the proposed legislation.

14 Pennsylvania is home to a robust automated
15 vehicle industry that has been testing on public roadways
16 for over a decade now. What started with Carnegie Mellon
17 University has expanded to multiple automated vehicle
18 developers and an extensive industry cluster that has
19 resulted in Pennsylvania being recognized as a global
20 leader in automation.

21 Although testing and development is currently
22 occurring in Pennsylvania, there are limitations. It is
23 PennDOT's interpretation of the Pennsylvania Vehicle Code
24 that the driver of any vehicle is a natural person who is
25 in actual physical control of the vehicle. As a result,

1 automated vehicles with safety operators are permitted, but
2 unoccupied or remote operations on trafficways is
3 prohibited. PennDOT recognizes this limitation will
4 eventually hinder the advancement of technology, including
5 preventing Pennsylvania from experiencing benefits from
6 deployment.

7 It is also worth mentioning that in 2018, PennDOT
8 published our initial Automated Vehicle Testing Guidance.
9 The guidance took a unique approach to evaluating safety
10 through the required submission of a Safety and Risk
11 Mitigation Plan. As a result, the guidance has been
12 recognized by multiple organizations, including the
13 National Transportation Safety Board, NTSB, as a national
14 best practice. However, our guidance is voluntary. There
15 is no legal requirement for a tester to complete it.

16 We have been very fortunate. To the best of our
17 knowledge, all active testers and developers in
18 Pennsylvania have complied with the guidance, but we
19 recognize that might not always be the case as the
20 automated vehicle industry continues to expand and new
21 companies emerge. Ultimately, automated vehicles are a
22 gray area in the law that need to be addressed.

23 PennDOT recognizes that the development of
24 automated vehicle legislation is not an easy undertaking.
25 That is why last year, the Highly Automated Vehicle

1 Advisory Committee, created through Act 117 of 2018,
2 developed the Automated Vehicle Guiding Principles.
3 Knowing the difficulty of getting every stakeholder to
4 agree, the principles can be used by elected officials as a
5 foundation for developing automated vehicle legislation.

6 The principles are broken down into six
7 categories: safety; promote growth; workforce impacts;
8 equity, accessibility, and quality of life; government
9 responsibilities; and collaboration and engagement.

10 PennDOT is pleased to see that HB 2398 either
11 directly addresses or provides the ability for PennDOT to
12 address most recommendations through regulations and
13 guidelines. We believe it is worthwhile to highlight some
14 recommendations.

15 The first recommendation out of the guiding
16 principles is that AV operators should self-certify to
17 PennDOT that automated driving systems comply with Federal
18 standards, align with best practices and/or standards,
19 including those related to cybersecurity, and meet criteria
20 as established by the Commonwealth.

21 In the proposed legislation, PennDOT has the
22 authority to develop the review process for automated
23 vehicles. Based on a 2021 public survey conducted by the
24 Advisory Committee, this aligns with public sentiment where
25 over 75 percent of respondents said that the State should

1 be involved or very involved with evaluating the safety of
2 automated vehicle testing and deployment.

3 The second principle it addresses: Any statute
4 or policy should be flexible and agile enough to address
5 industry advancements and/or new best practices.

6 As important as safety is, we need to have the
7 flexibility to ensure it. Technology is rapidly evolving,
8 and allowing PennDOT the flexibility to establish the
9 details of authorization outside of what is prescribed in
10 legislation is critical.

11 For example, referencing national standards in
12 statute would require the law to be amended every time
13 those standards are updated. In addition, having the
14 ability to create guidelines in place of regulations allows
15 for more flexibility until there is clear direction and we
16 can begin the regulatory process.

17 The third principle I want to highlight is,
18 Pennsylvania should enact neutral and platform agnostic
19 policies to promote both a diverse set of AV use cases and
20 a level playing field across the industry.

21 Unfortunately, due to unbalanced media emphasis,
22 most citizens only consider highly automated passenger
23 vehicles such as those being developed by Argo or Cruise or
24 Motional or Waymo or other testers here. However, it's
25 important to not lose sight of other use cases such as

1 automated delivery vehicles and automated shuttles.
2 PennDOT supports the neutral approach in the proposed
3 legislation.

4 The next principle I want to touch on is, steps
5 should be taken to ensure consistency and interoperability
6 throughout Pennsylvania and neighboring States.

7 Anyone involved with automated vehicle policy has
8 heard the concern of a patchwork of 50 different States.
9 What is worse is a patchwork of 2,560 municipalities. In
10 a public survey conducted by the Advisory Committee,
11 76 percent of respondents said State Government should be
12 involved or very involved with ensuring consistency and
13 interoperability between local jurisdictions. After all,
14 consistency and interoperability is critical to the
15 successful deployment of this technology.

16 In addition, there should be consistency on how
17 automated vehicles are treated. PennDOT supports local
18 governments maintaining their existing roles and
19 responsibilities such as parking and curb-space management.
20 However, an automated vehicle, an automated delivery
21 vehicle, should have the same access and limitations as a
22 mainly driven vehicle utilized by companies such as FedEx
23 or UPS.

24 The last principle is that a pipeline should be
25 created to make connections between workforce development,

1 industry, and educational institutions, including K through
2 12, career and technical institutions, and undergraduate
3 institutions. PennDOT is pleased to see a requirement of
4 the proposed legislation is to evaluate the benefits and
5 implications to the Commonwealth's workforce.

6 Automation will impact the workforce, both
7 positively and negatively. That is a certainty. However,
8 based on the state of the current deployments in other
9 States and countries, it will take some time. The Advisory
10 Committee will be able to pull together critical
11 information from advanced deployments enabled through this
12 proposed legislation and use that information to make
13 recommendations on what Pennsylvania should be working
14 towards.

15 PennDOT recognizes that automated vehicle
16 technology is under continued development. However, the
17 oversight authority awarded to PennDOT in the proposed
18 legislation will allow the Department to ensure that every
19 effort is made to address public safety and operational
20 concerns, while being flexible enough to adjust for changes
21 and advancements in the technology.

22 The Commonwealth is poised to continue to be a
23 hub of automated vehicle innovation, and when you consider
24 the potential that automated vehicle technology holds, we
25 cannot afford to be complacent. Pennsylvania needs to

1 address these gaps in our Vehicle Code and allow for our
2 continued advancement and eventual deployment. We believe
3 it is better to be proactive now and have a mechanism for
4 deployment in place versus rushing in the future and
5 potentially missing out on some initial benefits.

6 We at PennDOT appreciate the Legislature's
7 proactive approach to innovation and technology while
8 ensuring public safety is its top priority. We look
9 forward to continued coordination with the General
10 Assembly, and I'll be happy to answer questions then when
11 the time is appropriate.

12 Thank you.

13 MAJORITY CHAIRMAN HENNESSEY: Thank you, Mark,
14 for your testimony, and the time, I assume, would be
15 appropriate to answer questions.

16 I'm going to ask the witnesses, the testifiers,
17 to come up. By my count, I think we have six. If somebody
18 would just grab those two chairs and bring them up here.
19 I'll have to ask you to share those two microphones.

20 Also, let me take a moment to thank Josiah Shelly
21 and James Bowes. Josiah is the Executive Director of the
22 Republican side of the House Transportation Committee.
23 Meredith Biggica and Kyle Wagonseller, I want to thank you
24 guys for your help in setting this up and making things
25 flow well and quickly.

1 For those of us who are joining virtually, if you
2 have a question, please use the "Raise Hand" feature on
3 your computer and we will, I think James will keep track of
4 those and will try to take everybody's questions.

5 Let me just kick off the questioning, if I can,
6 in that, I don't have a question, but James, James Murphy
7 and Frank Snyder, you guys painted slightly different
8 pictures of what it's like to be a truck driver. Frank,
9 you seemed to be thinking that the wages are, you know,
10 rather low. James, I think at one point you said you could
11 raise a family and retire as a trucker in your testimony.

12 So I'm not going to ask you to give us any facts
13 and figures now, but can you accept that invitation to
14 provide the Committee with more information, more details,
15 flesh out that skeleton, if you will, so that we know
16 whether or not, you know, the \$47,000 that you mentioned is
17 really, how you react to that -- all right? -- on behalf of
18 your association.

19 I don't need you to do it now, because I think we
20 need detail, but, you know, I'm just going to invite you
21 both to do that so that we know and we can compare apples
22 to apples in terms of our considerations of this bill.

23 MR. MURPHY: Absolutely.

24 MR. SNYDER: Yes, absolutely.

25 MAJORITY CHAIRMAN HENNESSEY: Okay. Thank you.

1 Representative Oberlander, go ahead.

2 REPRESENTATIVE OBERLANDER: Thank you,
3 Mr. Chairman.

4 MAJORITY CHAIRMAN HENNESSEY: Sure.

5 REPRESENTATIVE OBERLANDER: And I thank all of
6 you for your testimony. I appreciate it very much.

7 I do have two questions. The first one is for
8 Ms. Lucas. And you had mentioned in your concerns about
9 local ability to make decisions. One of the things that
10 you talked about was the reporting of even the minorest of
11 fender benders. Do you have that ability to do that now,
12 and if so, how do you do that?

13 (Microphone being passed down.)

14 MS. LUCAS: Thank you. See, working well with AV
15 companies.

16 Kim Lucas, the City of Pittsburgh, DOMI.

17 We do. So right now for the testers that are
18 operating within the City of Pittsburgh, we request, on an
19 annual basis, certain information about the number of miles
20 they have traveled on our roads, crashes, and things like
21 that, and we make that information available in a report.

22 Today the way this works is that those testers
23 send it to a third party, an attorney, who then anonymizes
24 that information so that we get the information we need
25 about the safety incidents and miles traveled. But it's

1 anonymized so that individual companies are not implicated
2 in any of the reporting.

3 REPRESENTATIVE OBERLANDER: Okay. So I'm just
4 going to ask a further question.

5 Let's take out the HAVs. Are you getting those
6 same reports from the locals who are not driving HAVs on
7 their minor fender benders? And I ask that question
8 because I just heard of someone ripping their mirror off.
9 How do they report that? They don't call the cops, right?
10 So how does that work now.

11 MS. LUCAS: So it is for any AV tester within the
12 city. It is self-reported, so it is possible that there
13 are incidents that are not reported. But at this time, we
14 are able to request that of them and technically require it
15 of them, and we do have a process in place to receive that
16 information.

17 REPRESENTATIVE OBERLANDER: So I'll finish with
18 this.

19 It seems to me that you want separate and
20 different information from the AV companies than you do
21 from manned driving, and I think that that is a concern,
22 and I will look forward to having more of a conversation
23 with you about that.

24 MS. LUCAS: I'm wrapping my head around that
25 question to make sure I understand it.

1 We want as much information as possible from
2 anybody who is using our public space, and we use every
3 avenue possible for people using our public space. Any
4 business, any utility company, anybody that is operating on
5 our streets, they have to get a permit from us. We have
6 to, we are able to require information from them, and we
7 have specific rules that they need to comply by, through
8 our right-of-way manual, for example, on ways we want our
9 streets to be restored if you cut them open.

10 We would like to, given that there's a higher
11 opportunity when it's a fleet vehicle and it's a company,
12 to have the heightened opportunity to get information from
13 them in a way that is more difficult from an individual
14 motor vehicle operator.

15 REPRESENTATIVE OBERLANDER: Thank you.

16 My second question, if you don't mind, Chairman,
17 is for Mr. Mataya.

18 MAJORITY CHAIRMAN HENNESSEY: Sure. Go ahead.

19 REPRESENTATIVE OBERLANDER: You had talked about
20 100 percent transparency on both simulations and live
21 testing, and as we work through this development, I'm
22 curious where you think the start point should be for that
23 transparency. So should it be at the very beginning when
24 they're literally in the shop working on how this should
25 look and feel and work, or is it when they get to the point

1 where they say, we could fully deploy this as an HAV
2 manless driver completely?

3 MR. MATAYA: Well, I would say that one starting
4 point here -- and this is just a suggestion; this is not an
5 official policy position from the Pennsylvania---

6 REPRESENTATIVE OBERLANDER: Come on.

7 MR. MATAYA: I have to cover myself.

8 But I think, you know, I also had mentioned
9 phased testing or phased implementation. So if this is
10 something where if, for example, something was rolling out
11 where there was a safety driver initially, that there would
12 be, you know, the reporting is every time that safety
13 driver had to manually intervene. Because every time that
14 happens, that's a potential accident, whether that's in a
15 simulation, you know, the company is behind the scenes
16 testing, or public testing.

17 But I understand your question and the concern,
18 that, you know, your concern is if you go too far back, it
19 doesn't really make sense and we're being intrusive. But I
20 think the more information the better, and I think that is
21 one way to think about it, right? If there is a phased
22 implementation of all this, that could be one way, too, one
23 way to do it.

24 REPRESENTATIVE OBERLANDER: Thank you.

25 Thank you, Mr. Chairman.

1 MAJORITY CHAIRMAN HENNESSEY: Thank you,
2 Representative Oberlander.

3 Representative Nelson.

4 REPRESENTATIVE NELSON: Thank you, Mr. Chair, and
5 I appreciate everyone's testimony.

6 I want to, if I can, ask a little bit of a deeper
7 dive from a workforce shortage standpoint.

8 I also serve on the Labor and Industry Committee.
9 We have had, just within this last month, several meetings
10 with local employers, and the shortage of CDL drivers is
11 significant. The wages are much higher, at least in this
12 region, than what was mentioned earlier.

13 But nationally, it seems we are about 80,000
14 drivers short. Feedback from some of the CDL drivers in
15 this region, the opportunity to implement that platooning
16 type strategy where there are drivers in the trucks but,
17 you know, when they're on the highways and then the drivers
18 take control as they travel through the local cities seems
19 to be a good step forward in bridging the shortfall.

20 In your testimony for driver shortfall, I know
21 higher wages is always a great thing to say, but we are
22 offering free classes for CDL drivers. I mean, companies
23 are offering scholarships and hiring bonuses, and that
24 shortfall has not been able to be addressed. Can you touch
25 on the platooning element and the opportunity to recruit

1 without the autonomous option?

2 MR. SNYDER: I think that we're being naïve if we
3 believe that the industry is going to be content with
4 platooning two vehicles, because that's really not the
5 intent. Their intent long term is -- imagine this, and all
6 of us should imagine this -- you know, while it might be
7 two today, what about when it's three trailers and four
8 trailers and five trailers? That's the industry, and
9 that's where they want to take this.

10 As far as the profession, because I did do this,
11 as I said. I can speak absolutely. I cannot speak
12 directly as our brothers and sisters of the Teamsters. My
13 plant was organized by the steelworkers, and, you know,
14 number one, that would be probably the first way to attract
15 drivers, is a union driving job. And I say that with all
16 the sincerity I can muster, because think about this, it's
17 a tale of two cities.

18 Drivers often find themselves paying for a truck
19 payment that is much more than their mortgage payment, and
20 in order, because of deregulation and the amount of hours,
21 think about this, the amount of hours that a driver can
22 actually be on the road, because we want safe drivers and
23 safe highways, that they are oftentimes pulled over on the
24 side of a road when you see them on a turnpike or whatever.
25 Look at the loading docks. Drivers sometimes have to sit

1 at loading docks for hours or days and not being paid at
2 all in the nonunion trucking profession.

3 How do we attract drivers in a profession that
4 really has, because of deregulation -- and \$47,000, and
5 I'll be so happy, Mr. Chairman, and other distinguished
6 Representatives, to provide the information. But that is
7 the average salary of a driver today, you know.

8 So it's just they, and when I say "they," we
9 can't get caught up in the pandemic and the shortage of
10 everything else. This has been an issue for years. It
11 didn't just happen 2 years ago. It has been happening for
12 many years, for 30 years, and I think that that's
13 important, that we take a look at that, and I would defer
14 to my brother from the Teamsters, John.

15 MR. MATAYA: And I think that Frank is right to
16 draw the distinction between union and nonunion. And just
17 as another example to provide more, you know, clarity and
18 context on this, our biggest contract is UPS. Now, this is
19 package delivery. But we don't see a workforce shortage at
20 UPS. FedEx is facing a workplace shortage. FedEx,
21 nonunion; UPS, union. And there has been articles written
22 on that that I can share with the Committee on that.

23 So, I mean, the fact that when you are a worker,
24 if you have a negotiated contract with your employer that
25 you sat down and bargained, that's a big incentive, having

1 that voice on the job, for longevity.

2 REPRESENTATIVE NELSON: And kind of building
3 on---

4 MAJORITY CHAIRMAN HENNESSEY: James, did you want
5 to weigh in? Briefly, please.

6 MR. MURPHY: Yes. Thank you, sir.

7 Regarding Mr. Snyder's comments on the platooning
8 issue about wanting to grow it past two vehicles, I can
9 tell you as a company and an industry expert on platooning,
10 we are focused exclusively on the two-vehicle model for the
11 foreseeable future.

12 And I think I agree with many of the comments
13 that have been made here about truck driver wages, but I
14 think it's bigger than that. Different sectors of the
15 truck driving field are more challenging than others,
16 though the over-the-road long haul segment of trucking has
17 the highest rate of turnover for drivers where a lot of
18 the driver shortages exist. So models like ours help
19 address those real pain points, which are larger than wage
20 issues. It's about quality-of-life issues. It's about
21 raising pay for drivers. It's about getting them home more
22 often.

23 And the number that was cited earlier, the
24 80,000 truck driver shortage that we have currently, which
25 is projected to grow to 130,000 as soon as 2030, a big part

1 of that as well is an aging workforce. The average truck
2 driver is around 46 years in age, and that is often a
3 second profession that they enter later on in life. So we
4 don't even have enough drivers entering the field to fill
5 the gap that already exists.

6 And I think, you know, as the gentleman next to
7 me was talking about, these are issues that have persisted
8 in the transportation sector for a while. And I'm not
9 going to sit here and tell you that truck platooning is
10 going to solve all of it, but what I will tell you is that
11 it's going to be a contributing factor to addressing the
12 challenges that have plagued the sector over many years,
13 and I think it's going to take a holistic approach to
14 address these systemic issues that have existed for quite
15 some time.

16 MAJORITY CHAIRMAN HENNESSEY: Okay. Thank you.

17 REPRESENTATIVE NELSON: And---

18 MAJORITY CHAIRMAN HENNESSEY: Eric, do you
19 have any---

20 REPRESENTATIVE NELSON: Yes.

21 The next portion of this question is from the
22 technology integrated on the vehicles themselves. You
23 know, I did previously, I mean in past legislation, have
24 concerns and opposed the automated package delivery of
25 500 pounds, 25 miles an hour on sidewalks and bike lanes.

1 It was concerning for me there was not a limit on the
2 amount of those that would be there.

3 But as we look at the automated technology on
4 highways and a human's ability to look at one mirror at a
5 time or a human, even when they are driving a vehicle, to
6 simultaneously monitor all those mirrors, whether it's
7 from, you know, the Autonomous Association or for PennDOT,
8 it seems like some of this newer technology for slowing
9 down and reading traffic, bad visual, like, there's some
10 real safety improvements to be gained through the
11 integration with operators driving. Can you touch on some
12 of those? As well as the Autonomous; yeah.

13 MS. MARSHALL: Sure. I'd be happy to.

14 Yeah. I mean, that's a great point. As you
15 know, my testimony hit on, the overwhelming majority of
16 crashes that we have today are due in part to human error.
17 You know, humans get distracted. People text when they
18 drive. They speed. AVs don't do that. AVs don't speed.
19 They don't text while driving. And to your point, there's
20 a full suite of sensors on AVs that are able to view the
21 surrounding area with precision that a human driver simply
22 just can't.

23 So to respond to your point, we totally agree,
24 there are so many safety benefits associated with AVs due
25 to the technological advances.

1 REPRESENTATIVE NELSON: What's PennDOT's position
2 on that? So, I travel during the snowstorms and ice
3 storms, and, you know, that technology, how do you see that
4 on our major highways?

5 DIRECTOR KOPKO: Certainly.

6 I mean, PennDOT's stance is any fatality over one
7 is one too many. So any technology that we could have in
8 the toolbox here made available to try and, you know,
9 reduce that number is well worth pursuing and looking into.

10 We understand that safety is also a balance with
11 innovation, and we have to look at this from a critical
12 lens and have that safe evaluation to make sure that what
13 we are allowing on the roadway is appropriate to be there.

14 So that's why we were happy to see that there are
15 protocols in place for allowing us to have the review
16 process in place for both testing and deployment. But we
17 know that as that technology improves and increases, it's
18 only going to improve public safety. It's going to improve
19 mobility. We can find efficiencies from fuel savings, from
20 other areas with that, with accessibility within urban
21 environments and suburban environments. We know that
22 there's going to be environmental benefits with that fuel
23 efficiencies, too.

24 So we think that this technology has a lot of
25 potential here that we would like to see Pennsylvania have

1 that, you know, ability to utilize. And we think that one
2 of the ways that that helps that is also early adoption,
3 early exposure to it.

4 So that's why we're very happy that there's an
5 industry here. It gives us those lessons learned. It
6 gives us that ability to experience that technology now and
7 start to make our determination on what's the appropriate
8 policy approaches to take to this technology.

9 So, you know, there's definitely a lot of
10 benefits this technology offers. It's about, how do we
11 make sure we get there safely.

12 REPRESENTATIVE NELSON: Thank you.

13 Thank you, Mr. Chair.

14 MAJORITY CHAIRMAN HENNESSEY: You're welcome.

15 Representative Eric Davanzo.

16 REPRESENTATIVE DAVANZO: Thank you, Mr. Chair.

17 Is Kelley Yemen still on? I have a question for
18 her.

19 Hi, Kelley. Thank you for sticking around here.
20 I want to touch on Representative Oberlander's questions.

21 Right now in Philadelphia, you guys don't pull
22 over for minor traffic violations anymore. Will these HAVs
23 be given the same treatment?

24 MS. YEMEN: That legislation pertains only to six
25 minor violations. We, in general, still pull over for most

1 violations. Yes, all of that would apply. And we do have
2 reporting for minor traffic incidents that come through
3 PPD. So if, as the other Representative was requesting, if
4 somebody's mirror is hit and it's not a reportable PennDOT
5 crash, it is still reported to PennDOT, and there's a
6 separate tracking system -- or not PennDOT. Within PPD, it
7 is still tracked and reported. We have systems for that
8 within our police department.

9 REPRESENTATIVE DAVANZO: All right. Thank you.

10 In Section 8506, you mention the word
11 "responsibility" four or five times. I just want to make
12 it clear that, you know, you're going to hold the HAVs to
13 a certain responsibility, and yet there are six or seven
14 instances in Philadelphia that you're not holding these
15 drivers responsible. I just want to make sure that we're
16 on the same page and we're transparent across the board.

17 Thank you.

18 MS. YEMEN: Thank you. We are looking to hold
19 responsibility across the board in a similar manner.

20 MAJORITY CHAIRMAN HENNESSEY: Okay. Eric, are
21 you finished?

22 REPRESENTATIVE DAVANZO: Yeah.

23 MAJORITY CHAIRMAN HENNESSEY: Okay.

24 REPRESENTATIVE DAVANZO: Thank you.

25 MAJORITY CHAIRMAN HENNESSEY: Sure.

1 Representative Mustello.

2 REPRESENTATIVE MUSTELLO: Thank you,

3 Mr. Chairman.

4 MAJORITY CHAIRMAN HENNESSEY: Sure.

5 REPRESENTATIVE MUSTELLO: My question is about
6 the job losses that were mentioned by Mr. Snyder and Mr. --
7 I'm sorry.

8 MR. MATAYA: Mataya.

9 REPRESENTATIVE MUSTELLO: Mataya. I apologize
10 for that.

11 You know, the first testifier talked about the
12 creation of 6500 jobs here in this region. We heard from
13 another testifier that I was alive back then in 1979 when
14 the steel mills closed around here, so there are a lot of
15 job losses.

16 We also have 18 other States that are putting
17 into practice this legislation. Where do you see the job
18 losses? How many job losses have you seen with this
19 legislation in these other States, and what is it that you
20 predict for Pennsylvania?

21 MR. MATAYA: Well, I don't think there is a
22 prediction that can be made yet aside from kind of the
23 common sense of it, right? So if we take a look at some of
24 the most common jobs that are out there right now and good
25 middle-class jobs, I mentioned UPS earlier. So that's a

1 good middle-class job. They make good salaries, decent
2 salaries. They can raise a family on that salary. And if
3 that were to be automated, especially without a safety
4 driver in the vehicle, what does that look like? Yes,
5 there may be 6500 jobs created on the periphery here, but
6 what does that take away from somewhere else?

7 And that's why, you know, it's not just about the
8 -- you know, I work for a labor union. I know sometimes we
9 come in here and we talk about workforce issues and people
10 kind of roll their eyes sometimes and say, okay, well,
11 they're just trying to, you know, protect people who, you
12 know, the technology is outmarching them, and that's not
13 entirely accurate. We want to protect working people,
14 definitely our members for sure, but we are trying to put
15 something out there to plant a flag to say that if this is
16 not done responsibly, we talked about the cutting edge
17 earlier, Pennsylvania has the opportunity to be on the
18 responsible cutting edge here.

19 And we testified in opposition to this bill
20 because this bill, as written, is not that. It's not that.
21 But I, unfortunately, don't think that there is a
22 prediction that can be done right now, aside from looking
23 at, and we can probably get these numbers, how many people
24 operate a vehicle for a job every day in Pennsylvania and
25 subtract that, adding, you know, again, these jobs in the

1 periphery.

2 MR. SNYDER: And if I could add to it.

3 My question is, what's the 6500 jobs? What are
4 they?

5 REPRESENTATIVE MUSTELLO: Well, actually, when we
6 were touring around yesterday and today, there are jobs
7 everywhere from high school graduates the whole way to PhDs
8 that we just learned today. So the jobs are in all
9 different facets.

10 MR. SNYDER: I mean, specific to this topic.

11 REPRESENTATIVE MUSTELLO: Well, we toured
12 facilities that are specific to AVs. Is that what you're
13 talking about?

14 MR. SNYDER: Right.

15 REPRESENTATIVE MUSTELLO: Yes.

16 MR. SNYDER: Exactly.

17 REPRESENTATIVE MUSTELLO: Yeah.

18 MR. SNYDER: So what would those jobs be, for
19 example?

20 REPRESENTATIVE MUSTELLO: Well, you could ask
21 somebody from the industry.

22 MAJORITY CHAIRMAN HENNESSEY: I was going to say,
23 yeah.

24 MS. MARSHALL: I'd be happy to respond.

25 REPRESENTATIVE MUSTELLO: She has the specifics

1 on it.

2 MAJORITY CHAIRMAN HENNESSEY: I think we heard
3 there were a lot of software jobs, a lot of, you know,
4 manufacturing and equipment.

5 MS. MARSHALL: Yeah, jobs from a wide array of
6 backgrounds. So varying levels of expertise, varying
7 levels of educational backgrounds, fleet support
8 specialists, administrative jobs, engineers, PhDs. But
9 many, many, many jobs -- people that are supporting fleets.
10 So there's a wide array of jobs. We're happy to provide
11 more information on specifics, if you want a full list.

12 But I'll also note that companies that are
13 testing in the area today have about 200 jobs open today in
14 the Pittsburgh region, so not only are these companies
15 creating new jobs in the area but they are continuing to
16 create new jobs.

17 MR. MATAYA: If I may.

18 MAJORITY CHAIRMAN HENNESSEY: John, go ahead.
19 Yeah.

20 MR. MATAYA: Yeah.

21 And, you know, just thinking about this, you
22 know, we have talked about the importance of a safety
23 operator in a vehicle, whether that's a stand-alone vehicle
24 or every vehicle in a platoon. But also, this was not
25 something we mentioned in the testimony, but making sure,

1 through legislation, that if we get to the point, if we get
2 to the point where autonomous vehicles are being remotely
3 monitored somewhere, that it's not one person looking at a
4 wall of screens, that if we're looking at one large truck
5 per human monitor, that that person is focused on that,
6 focused on that vehicle -- right? -- as opposed to
7 50 different, you know, 50 different vehicles at the same
8 time that are operating. Those are the kinds of things
9 where you can really start to see the exponential danger of
10 job loss if you have 50 autonomous vehicles and only one
11 person monitoring them, not to mention the obvious safety
12 concerns with that.

13 REPRESENTATIVE MUSTELLO: And may I just have a
14 follow-up, Mr. Chairman?

15 MAJORITY CHAIRMAN HENNESSEY: Sure. Go ahead.

16 REPRESENTATIVE MUSTELLO: Just real quick.

17 That is the one thing that I learned in going to
18 the companies that we toured in the past couple of days.
19 Safety has always been number one and always will be
20 number one when they are developing this technology.

21 So I would encourage anybody to visit any of
22 these facilities that we went to to learn about the safety
23 standards that they are all holding themselves to. I mean,
24 they are doing it on their own because they want to get
25 their product out.

1 And I can't remember who said it, but, you know,
2 we should take a look at this further; there should be no
3 hurry with this. I think there is an urgency with this
4 that we have to get it passed. When we have got our
5 neighboring State kind of eclipsing us on this, I think we
6 need to move forward with some legislation to keep
7 Pennsylvania kind of in the field of play with this.

8 So that's kind of my final comment, but thank you
9 all, ladies and gentlemen, for coming out today.

10 MAJORITY CHAIRMAN HENNESSEY: Yes. Thank you,
11 Marci. I appreciate that.

12 Our ranking Member on the Democratic side,
13 Representative Sara Innamorato. Go ahead.

14 REPRESENTATIVE INNAMORATO: Thank you, Chairman.

15 And I have three sets of questions. So the first
16 is for PennDOT, Mr. Kopko.

17 When you were referring to the flexibility that
18 PennDOT was requiring, are you referring to the reference
19 to SAE J3016, which kind of freezes the definition as it
20 stands from April 2021?

21 DIRECTOR KOPKO: So, in general, any type of
22 reference to a standard in statute, because we would have
23 to reference the specific year of that standard by, I
24 believe it was the Supreme Court that ruled that, and as a
25 result, we would have to require the General Assembly to

1 update that first. If it was regs, we would have to go
2 through the regulatory process, or if it's guidelines,
3 there's more flexibility to update that.

4 Also, as we start to look towards larger scale
5 deployment, having that ability to have guidelines until
6 there's clear direction, knowing how the regulatory process
7 goes and how time-consuming it is, we appreciate the
8 ability to go through temporary regs. On average, a
9 typical reg, standard reg, is a year and a half to 2 years
10 to update, as everyone here is probably well familiar with.

11 So knowing the speed technology is, and it could
12 be good and it could be bad. There could be an incident we
13 would want to address. We want to have that ability to
14 rapidly address that. Or it could be a positive that maybe
15 there's a growth in the industry, something we didn't
16 anticipate. Then we would like to have that ability to
17 address to it.

18 It has always been the Department's stance since
19 we have been having these conversations about legislation
20 since 2016 is, safety and flexibility are essential to
21 making sure that we are positioned appropriately to ensure
22 safety and to ensure innovation without jeopardizing that
23 safety.

24 So going back to the SAE reference in the
25 legislation, it is definitely one that we go back and forth

1 on in the Department. We understand why it's there.
2 There's a lot of references in other States to that. That
3 standard, you know, it is what it is. It's not necessarily
4 the best. We don't have a better necessarily solution
5 right now without us coming up with our own solution. And
6 then once again, if you go a different route, then you have
7 to change that as well.

8 It's definitely an area we would like to have
9 discussion about, you know, seeing if there's a better
10 solution. We are open to that. But any time we reference
11 a specific standard in statute, we potentially open this up
12 to go down a dead-end that we would have to update
13 legislation.

14 REPRESENTATIVE INNAMORATO: That makes sense.

15 My next question is for folks who represent the
16 industry today. Can you speak to the relationship that you
17 have, existing relationships you have with unions?
18 Obviously not in this State, but in other States.

19 MR. MURPHY: Thank you for the question.

20 In regards to our relationship with unions, I
21 don't personally know Mr. Snyder and Mr. Mataya, but we
22 have had discussions at the national level with
23 associations, labor unions, and the conversations are
24 ongoing. And I certainly can empathize that they are
25 looking out for the best interests of their members, but

1 what we are discussing here today in terms of improving
2 pay, higher quality of life for workers, as well as a safer
3 work environment are all things that I think that labor
4 organizations would want to get behind, because it is in
5 the best interests of their members. But that's a long way
6 of saying that the conversations are ongoing, and we are
7 more than willing to continue the discussion whenever
8 anybody would like to.

9 MS. MARSHALL: And I would echo that.

10 Conversations have been robust at the Federal level, and I
11 think we are very open to having conversations on the State
12 level, too.

13 REPRESENTATIVE INNAMORATO: Yeah. I think we
14 have clearly illustrated that we need to have those types
15 of meetings with stakeholders.

16 And my final question is geared towards labor. I
17 want to first thank you for reminding us that prosperity
18 that is achieved through technology doesn't naturally
19 filter down and benefit everyone. It is because of the
20 work of unions and policy that we can actually all share in
21 prosperity that is created through these types of
22 innovation.

23 Now, there is laws like this in 18 other States.
24 Is there anything that you have pinpointed in these other
25 laws that you think would be appealing to the people that

1 you represent, your members?

2 MR. SNYDER: Here's -- and thank you for your
3 acknowledgment and comments. And by the way, I was here in
4 1979 working in that factory, so that will tell you, when
5 they started to close.

6 We are not opposed to automation, and we said
7 that and I said that from the very beginning, but it's, how
8 does it impact us and affect us. So we look at these other
9 States.

10 The reality of it is, and these other States,
11 make no mistake about it, you know, we do not have highly
12 automated vehicles crisscrossing our highways and byways.
13 We just simply don't have it. And someone would be
14 disingenuous if the industry wants you to believe that
15 there are 50,000 vehicles on the road today all over
16 America that do not have a driver. It's just not the case.

17 You know, are there platooning in instances?
18 Yes, there are. Are there some vehicles in States like
19 Arizona where you have hundreds and hundreds of miles of
20 straight highway? Absolutely there are.

21 Look, I have toured CMU so many times, myself and
22 President Bloomingdale and so many of our folks, and every
23 time I go to Carnegie Mellon, I always say that I'm smart
24 enough to know that I'm not smart enough to go to CMU.
25 There are some brilliant people there coming up with some

1 of the most brilliant technology that we can't even
2 imagine.

3 So when folks believe that there's an urgency
4 that, oh, we have to like act on this, it's all in
5 Pittsburgh. And, I mean, it really is for a reason. It's
6 there because that's the center of technology. Whether
7 it's CMU or Argo or Tesla and on and on and on have all
8 located there because that's where these folks that are
9 creating this technology are at. Preparing ourselves as we
10 look at the legislation that is out there, the legislation
11 is clear that it does just this, that we continue to have
12 ongoing stakeholder hearings and meetings before we pass
13 any said legislation.

14 Pennsylvania is a difficult State. That's why
15 we're here. That's why the industry has located here --
16 right? -- because of the comments that were made earlier in
17 your report that, you know, the typography is unlike
18 anywhere else, you know, and how does that--- At some
19 point, it's going to be not necessarily in trucking --
20 right? -- it will be in smaller vehicles as well, and we
21 know that's coming next. And how does it know that that
22 lawn chair that is protecting your snow removal area --
23 right? -- is actually, you know, something we can't hit.

24 So, Representative, there is no good reason to
25 rush this legislation. There simply is not, from any

1 standard. And the legislation isn't going to deter the
2 industry any more than it is going to enhance it.

3 Now, just because there are not laws on the books
4 right now does not mean that as this evolves -- because
5 that's what this is going to be. And sometimes, in hearing
6 some of the comments, are we treating them a little bit
7 differently than we are treating other incidents or
8 accidents that we find throughout our cities, well, yeah,
9 and maybe we need to be, the same way that you treated
10 folks differently in air travel, you know, and other new
11 technologies. This is new. This is new, and I think that
12 you all are very responsible Representatives and you are
13 doing your due diligence here, and what we ask from the
14 Pennsylvania AFL-CIO is to please continue your due
15 diligence and let's come up with something with the
16 industry, with labor, with stakeholders, with government
17 officials, that could all come up and agree with something
18 and look at those other States. And, you know, maybe we
19 can be the pioneer. We are the pioneer in technology.
20 Nobody disagrees with that. It's happening here in western
21 Pennsylvania. So hopefully we can continue to do these
22 things.

23 John?

24 MR. MATAYA: And I would just say to all the
25 Representatives here, you know, please don't get caught up

1 in the race to the bottom with other States just because
2 legislation got passed somewhere else that may be more
3 irresponsible than what you are looking at. Pennsylvania
4 has the opportunity to do something more responsible, and
5 then that, for those of us who work at the national level
6 can go to those States and say, look, you need to raise
7 your standard; look what Pennsylvania just did. They did
8 this. They have this liability dollar amount. They have
9 this kind of protection. They have this that you don't
10 have. And that's the kind of real value that if something
11 is to move forward, that you, I think with some of the
12 suggestions that we had testified on, some of the things we
13 are thinking about that you can really do to help not only
14 Pennsylvania but the rest of the country on this issue.

15 MAJORITY CHAIRMAN HENNESSEY: James.

16 MR. MURPHY: Yes, if I may, just for 30 seconds.

17 You know, I think it's being painted unfairly
18 here that this has been an overnight process and rushed
19 through. Even here in Pennsylvania, autonomous vehicle
20 technology in its infancy has existed since the 1980s.
21 Given, it was very basic back then, but this has been a
22 progression that has been happening over the last 40 years.

23 And even on the legislative front, the first
24 autonomous vehicle bill was passed over a decade ago in the
25 United States. Here in Pennsylvania, the Legislature has

1 been looking at this issue as far back as 2016. There was
2 legislation in 2018. So I think that it has been a
3 phased-in approach considering its 40 years that have led
4 up to where we are now, and all we're discussing now is the
5 next phase of that deployment and conversation.

6 MR. MATAYA: If I may.

7 MAJORITY CHAIRMAN HENNESSEY: Okay. Yeah, go
8 ahead. Please.

9 MR. MATAYA: I would just say that having
10 nonhuman safety operators in a vehicle is a big leap. I
11 think a lot of this other stuff has been more gradual. I
12 think this bill is a big jump. Having nonhumans or having
13 no humans in the vehicle, no matter the size, is a big
14 leap.

15 MAJORITY CHAIRMAN HENNESSEY: Okay.

16 Okay. Seeing nobody else seeking to ask
17 questions, let me thank all of our testifiers for being
18 here today and for the information you have provided to us.
19 You have given us a lot of things to think about.

20 I think it's probably fair to say that House Bill
21 2398 will be changed substantially. You know, just how
22 far, I don't know, or how much, you know. But you have
23 given us issues to think about in terms of our committee
24 level discussions and also when it hits the House Floor and
25 it goes through the same or similar processes in the

1 Senate.

2 That's why we came here, to, you know, we're
3 really in the hub of the automated vehicle experimentation,
4 if you will, and innovation, and our desire is to make sure
5 that this bill or whatever bill that ultimately comes out
6 of our committee and the Legislature is the best bill, you
7 know, and it's a practical bill. It's one that people can
8 live with economically and practically and also in terms of
9 the standards that we set. And you have helped us with
10 that, and I appreciate that.

11 And there will be ongoing discussions about this.
12 And I don't know that we'll invite all of you back
13 necessarily, because quite frankly, we'd be hearing the
14 same thing from you all. But there will be a lot of
15 deliberation that goes into the bill.

16 That doesn't mean that we're going to be slow in
17 that, because we are hearing about other States nearby,
18 you know, passing legislation really within the last couple
19 of weeks. And, you know, we have a leadership position now
20 in terms of our technology and the innovation that we have
21 been undergoing here in the western part of Pennsylvania.
22 We don't want to lose that momentum to West Virginia or
23 Ohio or anyplace else. We would like to keep it here
24 because we're pretty proud of what has been accomplished
25 here in Pittsburgh and the area.

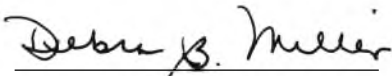
1 So thank you all again for your testimony, and we
2 appreciate it, and the meeting is now adjourned.

3 Thank you.

4

5 (At 2:20 p.m., the public hearing adjourned.)

1 I hereby certify that the foregoing proceedings
2 are a true and accurate transcription produced from video
3 on the said proceedings and that this is a correct
4 transcript of the same.

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6
7 

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