

Personal Delivery Device Pilot
Meeting Notes by Sam Spearing

Thursday, April 22nd 2021

Presenters: Erin Clark (Department of Mobility & Infrastructure), David Rodriguez (KiwiBot)

1. INTRODUCTION - Christina

- a. Introduces organization
- b. Covers the ground rules
- c. The focus of the meeting is the proposed pilot of Personal Deliver Devices
- d. Introduces Erin Clark and KiwiBot
- e. We'll try to be out by 7:30 but will stay on
- f. We'll continue taking input for a week

2. PRESENTATION by Christina - BP Gas Station Liquor License, 4006 Liberty Ave.

- a. LU & LC also in talks / discussions.
- b. Plan to sell to-go beer and wine, and drink on premises.
- c. Elementary school students across the street. Seating inside
- d. Commitment from BP & Lawyer, adhering to all local & statewide guidelines.
- e. In response to BDC's concerns, they will impose 2 drinks on premises limits. No loitering. Maintaining a banned customer list.

3. PRESENTATION by DOMI / KiwiBot

- a. Introduction by Christina
 - i. This is not a done deal yet. It is a proposed pilot, and BDC will not make a decision until after this meeting is held. Missed by the press coverage. BDC does not take a position.
 - ii. BDC is very aware and concerned about "threat" from PDDs, as noted in the past applications in Oakland, and elsewhere. As well as taking jobs.
 - iii. Legislation from the State has created lots of questions.
 - iv. Purpose is to test the implementation of these robots to get ahead of PennDOT. DOMI does have authority over Kiwibot, while other new robots will not be under DOMI's oversight.
 - v. BDC hopes this will be the first of MANY community meetings to talk about these issues of equity, transparency, etc.
- b. Erin Clark of DOMI
 - i. Erin introduces herself as a policy analyst with the Department of Mobility & Infrastructure
 - ii. Here to talk about ground delivery robots or PDDs
 - iii. What are PDDs? And Why?
 1. PDDs are ground deliver robots remotely operated, self driving or both

2. Delivery and related technology has only expanded over the past year during COVID
3. State legislation has been passed in many states including PA. In November 2020 the state legislature gave permitting and regulating authority to PennDOT
- iv. Devices can be up to 550 pounds and travel up to 12 mph
- v. Shows short video
- vi. During initial deployment a human operator will have to be within 30 feet of the device
- vii. www.penndot.gov/pdd
- viii. Small PDDs like KiwiBot are restricted almost entirely from operating on roadways
- ix. What do we do now?
 1. The city has funding through the Knight Foundation to pilot PDDs
 2. Long Beach, Miami, and San Jose received funding as well
- x. DOMI is proposing a community driven pilot that would allow the community to guide use cases and routes
- xi. We would roll out a maximum of 10 devices during the pilot
- xii. Sidewalks as we know them are for people walking
- xiii. It's obviously concerning to bring PDDs onto sidewalks from a safety and enjoyment standpoint
- xiv. No city funds will be used (only grant funds)
- xv. The grant covers operating expenses for KiwiBot
- xvi. What do we want to learn?
 1. Safety: Can PDDs be deployed safely while maintaining accessibility
 2. Want to consider other use cases that might meet community needs better than food delivery
 3. The pilot will allow us to gather data about existing infrastructure
- xvii. Community involvement
 1. Regular community meetings
 2. Would have open door policy to DOMI staff
 3. Would want to organize a steering committee of community members to hear concerns and evaluation
- xviii. We're in the unfortunate situation of not being able stop this from rolling out
- xix. We'd like to hear ideas of community needs that could be addressed
- xx. We've established a relationship with PennDOT to help think through policies and procedures for these devices
- c. David Rodriguez of Kiwibot
 - i. Have been deployed in San Jose and LA.
 - ii. Looking to serve someone who cannot get out of the house.

- iii. Goal is to learn how digital tools can be deployed, listen to the community, be an aide to small businesses, and fulfill missing gaps in terms of accessibility.
- iv. This pilot will allow us to come to the community, study use cases that are beneficial, then develop use cases to better serve the clients and end users in the future.
- v. We've done more than 100,000 deliveries to date with over 300 robots

4. QUESTIONS FOR PRESENTERS

- a. Question: This is cool and interesting. It seems like a cool opportunity. I'm from Garfield. Across my street I have a neighbor who is older and it sounds like this might offer help. Many have steps going up to their house. How would robots interact with steps? **Erin:** None of the devices operating or being beta tested are able to climb stairs. Some devices can climb a curb or one step if needed. We want to have more experience around how they might be more beneficial if they could do things like get up to porches. Or devices may need to be designed so that people are able to get deliveries out of them.
- b. Why can't this money go elsewhere for other mobility needs? **Erin:** This grant from the Knight Foundation is to pilot emerging automated mobility technologies. It's made to run community driven pilots so that cities can keep up with technology better unlike with previous technologies.
- c. I've seen that in other cities there are companies that have sought litigation against community members for allegedly tampering with devices even when it's for public safety reasons. Will that happen here? **Erin:** There are 2 pieces, KiwiBot is taking on liability. The state legislation prohibits policies being set by the city and there are liability questions that we haven't gotten answers on from the state yet. We also recognize that there are concerns about property owners and their responsibility for sidewalks. It's not clear if property owners could be liable for their sidewalks leading to damaged robots.
- d. Did the city join with community organizations and groups such as Pittsburgh Community Reinvestment Group to ask the governor to veto the bill that made these devices legal at a state level? **Erin:** The state transportation committee reviewed the legislation during COVID and municipalities weren't invited to give testimony. We found out after the legislation had passed. We were unable to get the governor to veto.
- e. As a blind person living in the Bloomfield area. Will these robots have sound that is loud enough for pedestrians to hear even on loud busy streets? As a blind person I need to know there's something coming towards me. **Erin:** Yes these devices can emit noise and some have speakers to allow operators to speak. There's no standard for the noise that devices might make and that's something that could be considered in this pilot.
- f. The City has a duty under Title II of the Americans with Disabilities Act to take no action which would REDUCE accessibility for people with disabilities to the

sidewalks. Has the City determined that these devices will not REDUCE accessibility? When and how did they do that? **Erin:** I might need to follow up directly. We haven't made any determination that the devices will not reduce accessibility.

- g. We have concrete examples in Oakland of the devices hampering accessibility so we can't really say we don't have experience. I'm concerned that this pilot is solely about resource extraction from our communities. It's not just harming us but our jobs and our livelihoods. **Erin:** That's a concern shared by DOMI and it has been voiced to us. That's something the city is struggling with. We're expecting these companies to deploy regardless. We want to take some steps to understand what these devices will be like in the future.
- h. **Erin:** From conversation with small businesses we know that many can't afford their own delivery services. They have to use services that take a substantial amount of the money made. They don't make much money on delivery because of expenses. There could be benefits for businesses. We're trying to experience this to see if it actually benefits businesses or customers.
- i. What kind of cost savings could residents expect? **David Rodriguez:** Our general perspective is that the current system for delivery is broken. Customers are paying up to 40% over list price as a fee. Restaurants are paying up to 40% of the cost of their food towards delivery. Delivery partners are seeing less and less compensation. Our solution is building connections with small businesses. We want to make delivery accessible.
- j. During the pilot there's no cost to the businesses. We want to strengthen our relationships with existing businesses.
- k. **Christina: BDC is going to follow up on business projections and cost to customers and small businesses.**
- l. I'm interested in talking about accessibility. I've had direct lived experience with robots in Oakland. I've been trapped on sidewalks and in the street due to robots sitting on curb cuts. This experience has led me to be very interested in the way that accountability works. One question with 2 parts.
 - i. Confused on the status of this pilot and how much of a done deal it is?
 - ii. If it's not a done deal one thing I'd like to see is a lot more accountability for businesses. It lies on someone with more power like an institution such as DOMI to be holding these companies accountable. How will companies be holding companies accountable? If it does happen what do I do if there's a problem? What would be the process internally with as much transparency as possible? Generally interested in accountability.**Erin:** Christina articulated that it's not a done deal. This is a proposed pilot at this point but we do have the funding and do want to understand the operations of these devices. The use case and location haven't been completely decided. In terms of accountability, insight from the community will be important. In the future we may have limited ability to track and regulate these companies, we are not sure what accountability will look like.

- m. I'm attending as someone who frequents Bloomfield as a pedestrian. If there is an operator within 30 ft of a PDD will the operator be able to control the speed of the device? The average person travels around 3-4 mph. **Erin:** Phase 1 requires the human operators to be within 30 feet of the device. KiwiBots operate at a max speed of 4 miles per hour. We've asked PennDOT if the devices are able to operate at their max speed during the first phase and if not when will they be tested at maximum speeds to test safety. A human operator can't travel at 25 mph so there are concerns about how and when the devices would be tested at those speeds under the supervision of human operators.
- n. Thank you for holding this meeting. There are serious legal questions here that I think should be answered before the pilot could move forward. If I push someone on the sidewalk I can get charged with assault. Could I be charged with assault of a robot? They have cameras and video. These are serious legal questions. If we don't have the answers that ensure the safety of human beings how could we go ahead with this? **Erin:** There are definitely a lot of legal questions. Using grant funding we have a lot more power over what the operation looks like. We can require the operator to contact DOMI rather than the police when there's an incident without injury.
- o. What is the radius of this project and what data is collected? **Erin:** The radius is around the central hub location where the devices are stored and charged. A mile and a half is the max radius. In terms of data collection we will be able to determine data that we want to collect and it can be shared live with DOMI. They don't store video but operators can store still images if there is tampering with the device or some other incident.
- p. I'm concerned about automating jobs without any perceived benefit to people. I take the point that the robots may be coming either way. What are future opportunities to participate and share opinions as a resident? **Erin:** This would be dependent on the deployment location but we would be hosting regular community meetings as often as there is capacity for. We're also looking to form a steering committee that would meet at least biweekly. We're looking to have an EngagePGH survey put up.
- q. Christina: It seems like there's an opportunity for us to work through these issues in a conversation rather than putting these devices on to the street untested? **Erin:** We definitely would like to have more input before a launch. We were hoping to get a full 6 month pilot which would mean a June launch to avoid the winter weather.
- r. What specifically is the city or DOMI doing to push back on this legislation and state level control? There's been discussion about a lot of potential policies and decisions but when will we know what actual agreements will look like and when there will be more opportunities for community engagement. **Erin:** I was referring more to the community's capacity to hold and participate in meetings. I'm here as a full time staff member of DOMI to work on this issue. In terms of data we've worked through various discussions of what we could or would want to collect. We would work with the community to identify the most pressing questions and

concerns because we can't collect all of the data within a short pilot. After this legislation passed we did work with a steering group to get feedback.

- s. What about snow? These devices might be most useful in the winter. Why not try to pilot them in those conditions? **Erin:** The robots are actually not equipped currently to function with heavy snow accumulations on the road surface. But might be able to in later iterations. Wondering also if there are opportunities for PDDs to potentially help with snow removal.
- t. What punitive measures will be taken against companies if they violate the restrictions or policies put in place? **Erin:** Each device is required to have a unique ID # that allows us to identify the device. The small provision allowing local authorities to prohibit operations only allows it upon consultation with the authorized entity if it's determined that there's a hazard. Would require a resolution or an ordinance in city council. It appears that we would need a separate ordinance for each entity and location.
- u. As these things move on the sidewalk are they on the right, left, or middle. **Erin:** There's no operating policy that speaks to that other than requiring they yield the right of way to pedestrians. We want to understand how they would yield in practice rather than just going on what the larger companies might have been saying. With this pilot the remote operators would be reacting to things as they happen which might not be the case with future autonomous devices.
- v. If one of these is in the middle of the sidewalk what mechanism exists to ensure that they will maintain accessible clear space for pedestrians? **Erin:** We can consider ways to make operation be located on a specific side of the street or set route requirements, etc....
- w. Will there always be someone operating each device? How many will each person be controlling? **Erin:** The PennDOT policy requires a 1 to 1 operator policy during phase 1 but beyond that, the policy is silent. Kiwibot has a 2 to 3 device per operator policy although while devices are in motion there is a single operator working the controls. There are some larger companies that might have single employees in charge of 20 to 40 devices.
- x. **Christina: Concerns that I'm hearing are, privatization of public space, pushing this pilot rather than fighting legislation, beginning to operate without clear safety and accountability guidelines in place seems irresponsible.**
- y. Resident, why do we have no information from other cities on how things have gone there. I'm puzzled by the lack of information because this has been happening in other states. **Erin:** We have reached out to other cities and entities. StarShip for instance who operate mostly in private spaces. There has been very little data and information gathered by other municipalities. There are really no best practices or best practices for safety and design of the devices.
- z. I'm afraid that there's some confusion over the legislation calling them a pedestrian. Robots aren't covered by the ADA but I am. The city has a duty to protect me and my right to access. KiwiBot doesn't have any right to access the public right of way. It seems like DOMI hasn't done their due diligence. These

can't be put on the street until it can be demonstrated that they don't block access to residents that the city has a duty to protect.

- aa. **Christina: I wonder if we might be able to have more transparency around follow-up instead of following up with individuals.** **Erin:** I'm working on a FAQ document that I hope will follow up on many of the questions that haven't been answered.
- bb. I have concerns about public safety but also about workers issues. I know there were issues with KiwiBot working with operators in Colombia. **Erin:** The PennDOT policy requires a state issued driver's license so operators will be in the US and subject to minimum wage.

5. OPEN DISCUSSION

- a. **Christina, it's hard for the community to give feedback at this moment. There's not enough clear information.**
- b. **Sam, proposes creating a google form survey in order to follow up and get feedback.**
- c. **Next step.**
 - i. **Get notes together.**
 - ii. **Help Erin answer questions.**
 - iii. **Get survey out by the end of the week.**

QUESTIONS FROM CHAT:

Daniel Yablonsky to Everyone (6:05 PM)

Is this a

**Is this a "pilot" or a "proposed pilot"? Has it already been decided that this is going forward without speaking to the community?

matt sandler to Everyone (6:08 PM)

How can we ensure transparency in what data is collected by the robots, how it is shared, and have control/say over what data is shared and have a say in whom it is shared/sold to? Especially worried as a resident about encroaching privatization of our public spaces, and it getting into the wrong hands (ie: ICE).

Paul O'Hanlon to Everyone (6:12 PM)

How wide are these robots? How wide are the sidewalks they'll be permitted to operate on? Who has determined that this can be done without reducing accessibility for people with disabilities? Robots aren't protected by the Americans with Disabilities Act.

Mel Packer to Everyone (6:16 PM)

If a pedestrian refuses to step aside for a robot or stands in the way of a robot, does that become a punishable offense under city statutes given that the State of PA has apparently granted the same rights to robots as to humans?

Larissa Lola to Everyone (6:17 PM)

Will they be delivering food or items? Have you factored how small businesses in Pgh and serving your area will be impacted by allowing robots to replace people for employees? Small businesses that also can't afford robots to complete work? Big box, fat cats - Uber, Amazon, GrubHub vs. small, local Mom&Pops, like HappyBelliesPgh.com, local restaurants and shops?

Daniel Yablonsky to Everyone (6:19 PM)

Do we have data about that increased delivery trend?

Evan R to Everyone (6:21 PM)

So we have something weighing 550lbs going at a 5 minute mile down the sidewalks?

Xander Orenstein (they/them) to Everyone (6:21 PM)

In other cities with self-mobilizing technology or mobile unsupervised technology, citizens have had trouble with corporations initiating litigation against them for tampering with the technology for any unauthorized contact with the technology, including moving them for public safety. How will we ensure that this will not become a similar problem for our community?

Dan Barrett to Everyone (6:21 PM)

Agreed, Dan and Mel. And why would increased food delivery demand automatically necessitate automated delivery robots owned and operative by private companies, for profit?

Olivia Ciotoli to Everyone (6:21 PM)

I am a small business owner and also deliver food as a side job to help make ends meet. What are the benefits of these robots to the community? From what I can tell, they are just taking over my source of income.

Maura Bainbridge to Everyone (6:23 PM)

what does "restricted" mean- how is that enforced?

katherine vargo to Everyone (6:26 PM)

How was Bloomfield identified for the pilot?

Evan R to Everyone (6:26 PM)

What guarantee is there that these companies operate at slow speeds? Is that a municipal legislation we can pass that overrides state legislation?

Abhishek Viswanathan to Everyone (6:26 PM)

Who asked for this?

Olivia Ciotoli to Everyone (6:27 PM)

Is Kiwibot a local company?

Paul O'Hanlon to Everyone (6:28 PM)

Have these devices been pre-tested with people with disabilities on the target sidewalks . . . first?

Evan R to Everyone (6:28 PM)

What enforcement would there be for companies who violate local policies? With big companies like Amazon, who have shown they can view fines as 'cost of doing business', moving these in to the area what power would the neighborhood be able to use?

David Maynard to Everyone (6:29 PM)

What community needs are not being met by couriers currently?

Jennifer Haven to Everyone (6:30 PM)

How was Kiwi Bot chosen? Is this a public private partnership?

Abhishek Viswanathan to Everyone (6:31 PM)

How is this "community-driven" if no community members asked for this, the meetings come in AFTER deployment, and there is no route for veto-ing this?

David Maynard to Everyone (6:31 PM)

I think the baseline question is clear, what purpose do these machines serve other than resource extraction from our communities?

Olivia Ciotoli to Everyone (6:32 PM)

Yes the PDDs can do all these deliveries, but so can humans on bikes or even on foot. And those humans can be paid money. During a global pandemic when so many people are facing unemployment, why are we giving that job to robots?

Dan Barrett to Everyone (6:32 PM)

Why in the world would residents spend time dreaming up uses for private, for-profit robots to make money for corporations by using our public rights-of-way?

DJ Stemmler to Everyone (6:33 PM)

Could we do the same thing with Grant money that goes to homeless, unemployed or disabled?

Nina Gibbs to Everyone (6:34 PM)

I know there were issues with these in Oakland with them blocking intersections and being difficult for those with disabilities. What has been changed to fix that?

Evan R to Everyone (6:37 PM)

How does introducing delivery robots that do the job that could be done by Pittsburghers help small businesses?

Nina Gibbs to Everyone (6:37 PM)

What will be the delivery radius of these vehicles in the first stage?

Paul O'Hanlon to Everyone (6:38 PM)

How many people with disabilities have been / will be hired to test to see if these things are sidewalk-worthy?

DJ Stemmler to Everyone (6:39 PM)

Question: Can you be clear who funded the grant and who got the grant.

Daniel Yablonsky to Everyone (6:39 PM)

Is Erin the only City staff person in this meeting?

Jennifer Kiley to Everyone (6:41 PM)

Prior to implementing a Pilot here, are there any best practices in place for the use of these devices?

Paul O'Hanlon to Everyone (6:43 PM)

Who applied for that funding?

Dan Barrett to Everyone (6:43 PM)

There are thousands of grant opportunities from foundations in the US available every year, along with state and federal grant opportunities. Why did the City apply for this opportunity?

David Breingan to Everyone (6:44 PM)

Did the City of Pittsburgh or DOMI specifically join with PCRG and many community groups in Pittsburgh in (unsuccessfully) asking the Governor to veto the state bill that made this possible?
- Dave, Lawrenceville

Nina Gibbs to Everyone (6:48 PM)

What sort of data is collected by the robots?

Maura Bainbridge to Everyone (6:48 PM)

Why are these meetings not subject to sunshine laws like other state agencies?

Paul O'Hanlon to Everyone (6:48 PM)

The City has a duty under Title II of the Americans with Disabilities Act to take no action which would REDUCE accessibility for people with disabilities to the sidewalks. Has the City determined that these devices will not REDUCE accessibility? When and how did they do that?

Jennifer Haven to Everyone (6:51 PM)

Do the bots have "license plates" so the community can file formal complaints regarding a certain bot or bot operator?

DJ Stemmler to Everyone (6:52 PM)

The devices have been tested in Oakland so ...
What do you mean hasn't been tested?

Bonnie Fan to Everyone (6:53 PM)

Did the city learn anything from their FedEx urban freight cargo bike delivery pilot?
Why put people in harm's way with this pilot when the classification of robots as pedestrians make residents liable to companies as Xander mentioned? Shouldn't the priority be advocating against this pre-emption at the state level? And has documented effects of reducing accessibility?

Evan R to Everyone (6:57 PM)

Do we suspect Amazon will take less money than what the Market has dictated?

Cian Pallasch | Office of Rep Innamorato to Everyone (6:59 PM)

Question for Erin and David: what has been done so far to engage the elderly and people with disabilities in modeling the pilot program?

Olivia Ciotoli to Everyone (7:04 PM)

I may have to jump off before I can ask my question. I am a bloomfield resident. I'd like to ask if the robots have cameras on them, and what will be done to respect folks' privacy/avoid surveillance concerns? For example, Ring doorbell cameras have partnered directly with hundreds of police forces. What is the likelihood of this happening with the food delivery robots?

Paul O'Hanlon to Everyone (7:07 PM)

Before Space X put humans on the top of rockets, they tested them. Why hasn't the City tested them before this pilot?

Alex Benamy to Everyone (7:08 PM)

What **exactly** is DOMI looking to learn from KIWI that makes this pilot beneficial to the Community?

Cassandra Masters to Everyone (7:17 PM)

Along with Maura's point, how fast can DOMI respond if it's causing a major accessibility issue?
311 requests for blocked sidewalks can take days

Jennifer Kiley to Everyone (7:17 PM)

What if one of these devices just stops in the middle of an intersection, such as the Main. Liberty, Bloomfield Bridge?

Maura Bainbridge to Everyone (7:20 PM)

and what will they do with the data they collect?

David Maynard to Everyone (7:20 PM)

What kind of data would point to future deployments of these vehicles? What are the KPI's?

Jodi Lincoln to Everyone (7:22 PM)

Shouldn't there be an engage page for public feedback?

Maura Bainbridge to Everyone (7:23 PM)

How will you hold them responsible to answering questions?

David Maynard to Everyone (7:25 PM)

How can community members get access to the schematics and capabilities of these machines so we can stay informed about their deployment?

Maura Bainbridge to Everyone (7:25 PM)

Does that mean that the robots won't operate when it's snowing? snow is a large reason why some folks might need a delivery

Nicholas Trombola to Everyone (7:26 PM)

When is the pilot set to begin and end?

Daniel Yablonsky to Everyone (7:30 PM)

Can the grant pay disabled people and seniors for sharing their valuable expertise on solving mobility issues?

Nina Gibbs to Everyone (7:30 PM)

But what are the limits to that data collection once the tight relationship isn't there? Can they collect anything they want?

Jennifer Haven to Everyone (7:35 PM)

DOMI keeps stating, "if they are going to come here regardless..." but what is the Mayor, DOMI and the city solicitor doing to represent us at the state level?

Nina Gibbs to Everyone (7:39 PM)

How will it be decided and when if Bloomfield is the location?

Jennifer Kiley to Everyone (7:45 PM)

Where else has Kiwibot operated? What have they learned?

Jennifer Kiley to Everyone (7:50 PM)

Does Kiwibot have any information to share about their operations?

Nina Gibbs to Everyone (7:52 PM)

Will Erin provide answers in writing to the questions in the chat that can go on the website?

Nina Gibbs to Everyone (7:58 PM)

Can the city go ahead and launch a engage agh page on it?