

MassDEP Reduce & Reuse (R&R) Working Group Virtual Meeting

Topic: Repair Panel

Wednesday, August 26, 2020 | 11:00 AM – 1:00 PM | Meeting Summary

The R&R Working Group is a forum for discussion of source reduction and reuse regulations, policies, and programs in Massachusetts. The group was established to help in the development of a MassDEP Strategic Reduce and Reuse Action Plan as outlined in the 2030 Solid Waste Master Plan. To learn more about the working group and find past meeting materials, visit: [MassDEP Reduce & Reuse Working Group](#)

This meeting was held virtually and facilitated by Erin Victor, Environmental Analyst, MassDEP erin.victor@mass.gov. A total 77 people participated in the 8/26/2020 meeting. The discussion sections reflect both written and spoken comments and questions from participants.

Link to Presentation Slides: [Repair Panel Discussion Presentation Slides](#); Link to Recording: [Repair Panel Discussion Recording](#)

Agenda:

11:00 - Welcome & Background on R&R Workgroup

11:15 - Repair Panel Discussion

12:00 - Q&A with Panelists

12:30 - Open Dialogue on Repair

12:55 - Closing Remarks, Announcements & Next Meeting Date

1:00 – Adjourn

Repair Panel Discussion:

The following questions were given to each panelist prior to the discussion.

1. Tell us more about yourself and your organization. Where are you located? What is your mission? Who do you serve? What is your role in promoting repair?
2. What are the major trends you see happening in your field now? What changes do you think we need to be ready for?
3. What's one thing that your organization has done to promote repair that you are proud of?

Meet our Repair Experts



Gay Gordon-Byrne
[The Repair Association](#)
✉: ggbyrne@repair.org



Robin Ingenthron
[Good Point Recycling](#)
✉: robin@good-point.net



Peter Mui
[FixIt Clinic](#)
✉: fixitclinic@gmail.com



Ray Pfau
[Bolton Repair Cafe](#)
✉: ray.pfau@gmail.com



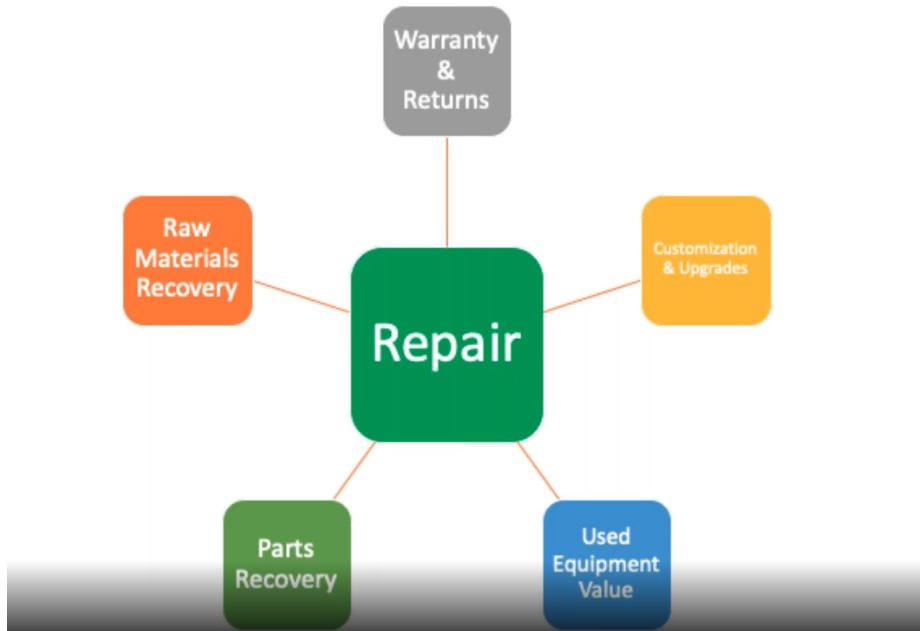
Maryam Kamangar
[Goodwill Industries of the Berkshires & Southern Vermont](#)
✉: mkamangar@goodwill-berkshires.org

Presentations from Panelists:

Gay Gordon-Byrne, Executive Director for The Repair Association

- After success of automotive legislation, have started pushing right to repair legislation for Digital Electronic Products, expect 25 states progressing right to repair bills in 2021.
- Ballet initiative in MA is one to fix loophole in the current automotive law.
- Ownership Rights: When buy something, it becomes your property – patent law, owner controls, unfettered resale.
- But now many products, equipment coming with licenses where author (company) controls, copyright laws, no resale.

Repair is Central to Useful Life



- Manufactures have monopolized repair:
 - through contracts which limit your property rights (hidden, don't get to see or negotiate)
 - Physical design – glue and solder parts in, less design for repair, paired parts (tied to motherboard, if don't have original part need to bring to manufacture to repair)
- Material is discarded randomly, difficult for solid waste and recyclers to process without the info
- S.107 H.218 – Legislation in MA (2020) Legislative Requirements: Same as OEM Authorized. Need all of these for repair:
 - Parts & Tools
 - Service Documentation & Schematics
 - Firmware Patches & Fixes
 - Diagnostics
- How to push:
 - Personal Advocacy – [Massachusetts.repair.org](https://massachusetts.repair.org)
 - Organizational Advocacy- send memos of support to senator Paul Feeney
 - Join Repair.Org – membership dues are tax deductible business expenses, NGO memberships are free

Future-Proof Our Right to Repair: Robin Ingenthron, Good Point Recycling

- New Brockton, MA location opened a couple years ago
- 20 years, currently have over 40 employees, expect to be at 50 by end of year
- Repair & Reuse Creates Jobs
- The 4 Big Barriers to Increased Reuse?
 - Big Shred –Several legislative initiatives for CRT recycling have pushed shredding electronic equipment vs. reuse. This means that the labor for reuse goes away, just have big shredding machine that once you’ve invested in, you have a financial interest in continuing to shred material vs. reuse.
 - Planned Obsolescence by OEMs – i.e. printers pretty much giving away for free , make money on Ink and Toner Cartridges. When realized people were using (reusing) other cartridges they added killer chips into printers so that these other cartridges couldn’t be used.
 - 1960s, Planned Obsolescence term first appeared in “The Waste Makers” by Vance Packard
 - Magnuson-Moss Warranty Federal Trade Commission Act, put breaks on manufacturers getting more creative with their warrantees
 - 1990s-2020: OEMs started finding other ways to decrease reuse/repair
 - Branding repairers overseas as “primitive”
 - “Killer chips” to prevent ink cartridge reuse
 - Constant changing of parts and cords
 - Firmware “bricking” of devices
 - Bribes to foreign governments to stop scaled refurbishing
 - Legal cost intimidation of mom and pop resellers
 - Charitable Industrial Complex – allegations against tech sector for dumping electronics overseas via export market. Has been proven false. (misconceptions were funded by OEMs and Big Shred businesses).
 - Raw Material Subsidies – General Mining Act of 1872 – federal land leased to mining companies at \$5 per acre, no royalties on the extracted materials go to taxpayers but taxpayers pay for the superfund cleanup from toxic waste left by mining companies.
- Future Proofing
 - Need to think not just about the things limiting repair now, but what is likely to come. Technology exists already for GPS tracking devices when sent overseas to be refurbished, RFID chips and blockchains that prevent secondhand part sales (equipment would only work with original parts from manufacturer), auto-lock devises sold to secondhand/thirdhand consumers, etc.
- 4 Steps for Massachusetts:

- Pass the Right to Repair Law
- Power of Procurement – state procurement that requires repair-friendly computers (via language in contracts)
- Fair Trade Recycling Offsets
- Recognize Implicit and Systemic Racial Profiling of poor and “third world” techs
 - Now doing it here in the USA. See the attack ads against independent repairs, making people afraid of repair.

Peter Mui, Fixit Clinic

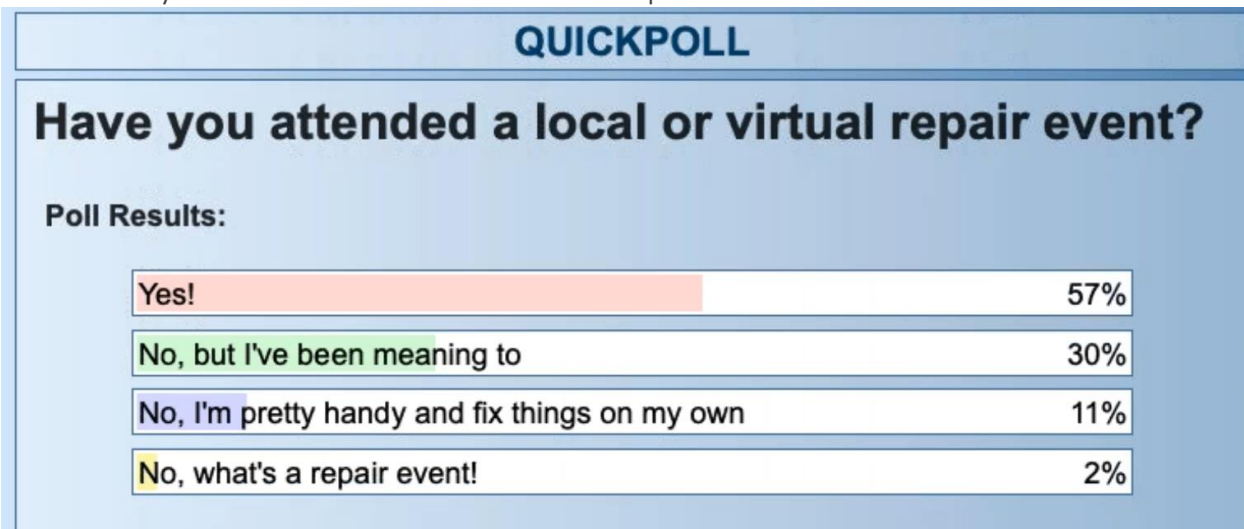
- With COVID, transitioned to virtual events. Works because the goal was always to teach people how to do their own repairs.
- Goal is to lay groundwork for durable, sustainable, resilient future where repair is the norm.
- Any person or organization that moves away from understanding the equipment they rely on is fundamentally at systemic risk. For example:
- NYT Article highlighting how Marines can't repair their own equipment – raising barriers to repair as a threat to national security.
- See the same thing in hospitals where they need to repair ventilators, but manufacturers are making that impossible (Vice News). Fixit Clinic launched a rapid response unit to help with this. Makerspaces stepped up to learn how to make PPE, get feedback, make changes (continuous improvement) – local feedback loop.
- Revitalizing MA skilled and semi-skilled labor through employment in this space. What if there were various micro-factories around the state where people could use digital files to make the different parts/tools right here rather than shipping in?
- Colleges and technical schools are starting to teach advanced manufacturing and mass customization, manufacturing on demand. What better way to design for the future then look at what works/doesn't now – durability, repairability, etc.
- We are also complicate and participate in obsolescence; we believe new is better than used/repair. Think it's free to throw things out. What if instead of being proud of recycling that car seat, we were proud us reusing the car seat?
- Price is not a reliable indicator of quality, durability of an item
- Need to add to government procurement requirements the diagnostics, tools, parts so that can make repairs
- As school systems moving to online learning, what about having student learn how to maintain/repair their own equipment
 - Digital inclusion, equity, literacy

Ray Pfau, Bolton Repair Café

- Since September 2013, help other communities get these events started

- Repair Café: Allow people to keep using things so they can be used for longer – saves people money and less raw materials/energy making new things
- Set up in cafeteria, library, etc. Guests bring broken object and have volunteers who can help them with repairs at no cost –
- Not competing with professional repair shops, do simple repairs and make referrals to repair shops for more complicated repairs
- First Café was in the Netherlands during the Fall of 2009, started spreading model around world in 2010 with Repair Café
- Sharpening, Furniture, Sewing, Computers, Bikes, Outdoor Power Equipment, Jewelry, Knitting/crocheting
- 15-35 volunteers, 3x per year. Success rate for repairs depends on 60-80%
- Similar to Fix-it Clinic (except the Repair Café doesn't require guests to do/help with the repairs) and independent events if didn't like the name Repair Café or Fix-it-Clinic.
- Online repair events and online recorded webinars about how to fix your sewing machine, etc.
- Drop off model also being tried. (Match item to available fixer). Prefer in person events and hoping they can get back to these with health guidelines in place.

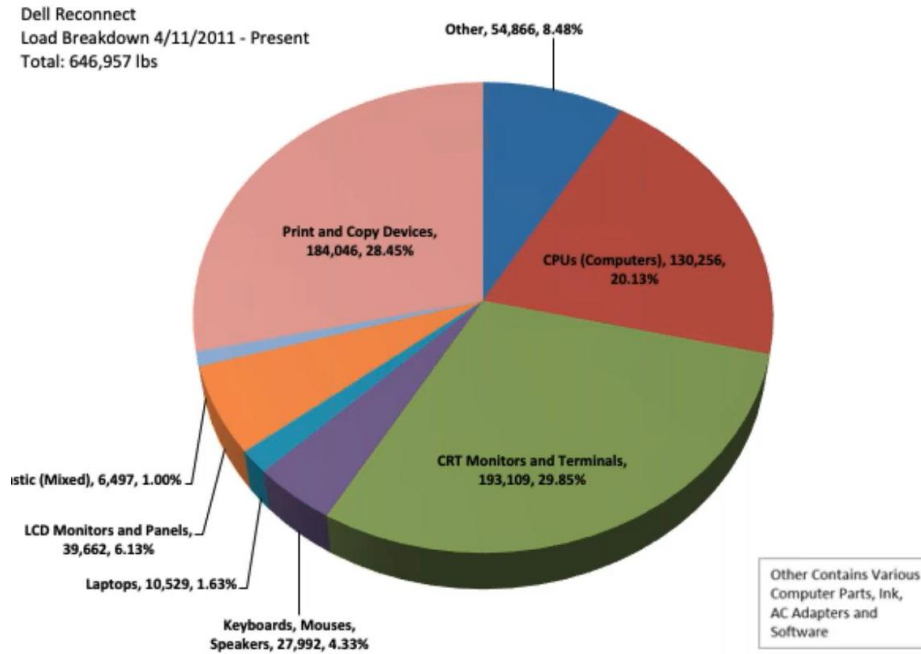
Poll: Have you attended a local or virtual repair event?



Maryam Kamangar, Goodwill Industries of Berkshires & Southern Vermont

- Founded in 1902 in Boston by Methodist Minister, noticed wealthier residents leave items outside their households to be taken away.
- Hired people to repair furniture and resell. “Hand up, not hand out”
- Incorporated as 501(c)3 in 1910, 175 independent territories in US and Canada. Donated, stays in territories, employees local people. Aim to recycle anything not sold. 6 stores in the Berkshire/Vermont territory, always looking to add new stores or donation centers

- Partner with Dell Reconnect in 2011. 87 partners in 44 states. 500 million computer/electronics recycled. (Program takes Monitors, Scanners, Mice, Printers, Keyboards, Laptop Batteries, Ink/Toner Cartridges, Computers, Hard drives, Speakers, Cord & Cables)
- Breakdown of electronic items received at Goodwill Berkshires:



Since July of 2018 to June of 2020, Goodwill Industries of the Berkshires and Southern Vermont Inc. has recycled the following items away from landfills in our territory:

RECYCLING DATA

Categories	July 2018 - June 2019	July 2019 - June 2020	July 2018 - June 2020
Thrifty Rags	11,441.00 Lbs.	10,457.00 Lbs.	21,898.00 Lbs.
Electronics	7,746.00 Lbs.	17,829.00 Lbs.	25,575.00 Lbs.
Card Boards	158,692.00 Lbs.	116,543.00 Lbs.	275,235.00 Lbs.
Textiles	1,042,744.00 Lbs.	916,163.00 Lbs.	1,958,907.00 Lbs.
Combo	115,577.00 Lbs.	34,907.00 Lbs.	150,484.00 Lbs.
Books	376,204.00 Lbs.	325,842.00 Lbs.	702,046.00 Lbs.
Metals	79,546.00 Lbs.	87,366.00 Lbs.	166,912.00 Lbs.
E-Cycle	24,634.00 Lbs.	16,684.00 Lbs.	41,318.00 Lbs.
Dell-Reconnect	34,689.00 Lbs.	38,689.00 Lbs.	73,378.00 Lbs.
Total	1,851,273.00 Lbs.	1,564,480.00 Lbs.	3,415,753.00 Lbs.

Total: 3,415,753 lbs. are equivalent to 19 planes w/ passengers or 17 trains w/ passengers

Panel Discussion:

What do you see as the major hurdles to expanding repair?

- Gay Gordon-Byrne: The manufactures! They are making it impossible; it starts with them.
- Robin Ingenthron: Was hard on manufactures, only like 5% wearing black hats. Many would just prefer that a law would be past, sigh of relief after warranty bill because had been an arms race. (Wanted to balance)
- Gay Gordon-Byrne: Manufacturer have vested interest in selling more product. Their profit motive is in conflict with people holding onto and using products longer. Once a bill passes, people will likely be compliant with the law, but currently the manufacturers are fighting against legislation and the industry will continue to be dominated by those 5% that Robin was referring to that are monopolizing repair.
- Maryam Kamangar: Would like to make donating easier for people. More stores, more attended donation centers, more resources for community to donate so they don't have to travel as far and are more likely to choose to donate for reuse and recycling rather than simply throw goods away. Right now they will partner with community centers and park trucks on a set day in a community for donation days. Always looking for grants and different ways to make donation more accessible.
 - Education for donors is critical– why it's important to donate vs. throwing out. i.e. Cotton t-shirt, even if it can't be resold could at least be turned into rags which is more sustainable than landfilling the item. Ultimately people need to think about what buy, how many items they buy, and how to properly dispose of. Think twice before ordering online.
- Erin Victor: seems like we could tie this to repair – sometimes simple repairs can help keep the item used longer before it would even end up in a donation center, i.e sewing on a button, replacing a part, etc.
- Peter Mui, Fix-it Clinic: Yes, an item has the highest value when it's still in the hands of the original owner. Even fully working things that are donated may not get reused, for example a nice juicer with all the components and parts. Once thrown into the donation pile, the parts are no longer all together and that juicer without a plug or TV without the remote are far less likely to get a second life.
 - There are many upstream and downstream costs not factored into the purchase price. Until we get a true perception of the costs, it is hard for people to fully realize that these are valuable items that we need to keep in service as long as possible.
- Ray Pfau: We need to educate consumers as well that it's sometimes worth paying more upfront for items that are more durable, repairable then the cheapest version online.
- Peter Mui: Has seen a weak correlation between purchase price and quality of item.

- Erin Victor: So without price as an indicator how do you compare if price is not an indicator. Critical thinking and inquiry skills. All toaster has 3 common failure modes.
- Gay Gordon-Byrne: The correlation between price and durability has fallen apart. Very few options these days. "Smart TV" spy device wrapped in. Finding something durable based on price. Go online, can you go buy parts for this current model? Model numbers change so often, don't know how many patches released, if local repair folks could help you.
 - \$60 nice toaster fried itself. Anything with a chip, avoid it like the plague. Don't need a screen on your fridge. Highest failure point. Go as Low tech as possible, reduce number of opportunities for failure and often cost. Replacement toaster \$18 and still around many years later.
- Comment from Deb Beatty, Boston Building Resources: Another reason to advocate for a rating system for durable goods. Similar to the energy use sticker on each item, can we have an "expected useful life" sticker?

Questions from Participants:

- Question from Janice Paré: Gay, have you seen the latest commercial opposing our Right to Repair bill? Prop 1. (S.107) The manufacturers are using scare tactics about people being able to hack into your garage door code and track you to your house and hurt you. Can you comment on the reality of this issue?
 - A: Gay Gordon-Byrne: Having a diagnostic tool that you are supposed to have anyways does not make being a stalker any easier. These ads are insulting. Will share Paul Roberts who is a cyber security expert's piece responding to this: [Top Cybersecurity Experts stand up for Digital Right to Repair – securepairs.org](https://securepairs.org)
 - A: Ray Pfau: Reality is that even though it is not accurate (independent repair shops having access to diagnostic tools is not a security threat), these ads are effective in spreading fear which is unfortunate. We may need a counter ad to get through to people, although the auto industry is spending millions on these so it may be difficult to break through the noise.
- Question from Don Fick: Does goodwill attempt any repair on donated items prior to moving to a sales floor or recycling?
 - A: Maryam Kamangar: No, this is not operationally feasible (capacity, resources) at this point. Would be wonderful, potential in future- great opportunity for job training. We are one of the smallest Goodwill territories in US.
 - A: Peter Mui: This is why we need to keep these things in service with original owner longer. At Fix-it Clinic we have a 70% success rate with repairs, in large part because the person is right there with you and can provide a narrative about how they used the item and when/how it failed. Repairs in the back of a Goodwill would be less effective since you wouldn't have the original owner

right there. This is why we need to get repair to happening more in the community. It could also be a good idea to ask people at point of drop off for donations the backstory on whether the item works, what happened to it, what it needs (if they know) for it to work, etc.

- Question from Veronique Blanchard: How does goodwill protect personal data in donated products?
 - Maryam Kamangar: The flyer that goes out to communities about the program explicitly tells people to clear all their private data on their computers/electronics before they donate. We make sure people understand this when they donate. We ship directly to Dell ReConnect (Our Goodwill does not sell electronic devices in our stores).
- Comment from Peg Hall: Actually, e-waste does not go to a landfill from many communities if you throw it "away"; it goes to waste-to-energy, for better or worse.
- Question from Susan Cascino: In terms of public education on repair, You Tube is an excellent tool. Can someone talk about how they view You Tube demo repair videos and how these work together with the fix-it-clinic events?
 - Peter Mui: They are great. We point a lot of people to these resources and the videos can be very helpful in successful repairs. However, there are folks who are uncomfortable using tools, doing repairs on their own and need more one-on-one support which is where the in-person or online fix it events are so critical.
 - Ray Pfau: Depends on the quality. Need rating system – repair café has discussed this, help filter out the good ones.
 - Comment: Can curate good quality videos on YouTube by creating a channel and adding videos you like to it.
 - Robin Ingenthron: Another thing on YouTube is the opportunity to share films of the talented repair sector around the world to address systemic racism. CA destroyed billions of dollars of CRTs because they were afraid to sell back to factory originally made the devices because the factory was in China. Robin has traveled around the world and documenting the “geeks of color” who are doing incredible work. Great way to reach others with the true story – like academic researchers, journalists.
 - Basel Convention spelled out that export for repair and refurbishment is legal. The definition was changed behind closed doors where many voices were missing so that it’s now export of fully functional electronics.
 - Ray Pfau: Has heard CRTs are hot again because they have a faster response time for gamers.
 - Gay Gordon-Byrne: Personally checks out YouTube all the time for repairs. However, some manufactures are saying they don’t need to provide repair manuals because people can just find on YouTube which is just ridiculous. If they create repair documentations for their specific products then should be the

highest quality repair documentation and not hidden. It's not safer to guess. It's a very bad excuse to not provide documentation.

- Robin Ingenthron: Excellent use of procurement. For example, if DEP were to put language right in RFP that the repair documentation must be provided online when purchasing new computers.
- Gay Gordon-Byrne: The power of the purchase order is very big. Municipal buyers don't get it, always under pressure to buy low. Powerful weapon that is underutilized.
- Comment from Veronique Blanchard: [ifixit](#) is a virtual resource for repair manuals.
- Amy Goldberg: Would like to get clarity from Peter: "Highest utility with original owner"...was there a specific data point that I can use and refer?
 - Peter Mui: No, this is just anecdotal from my own experience working with repair events and observing electronic recycling events in MA and CA.
- Peg Hall: At the risk of sounding like a broken record, a way to internalize the externalized costs is EPR/Product Stewardship, so that true costs can be reflected in the purchase price.
 - Peter Mui: Disagrees. Manufacturer having control from the cradle to grave encourages product churn. First, a manufacturer is not going to be able to get back all the product for proper disposal and it also allows for "lazy" design ie. putting in non-replaceable batteries, because it does not matter if it they know the product comes back to them.
 - Gay Gordon-Byrne: Agrees, she also is not a fan of EPR for electronics, it ignores the secondary market, interferes with an individual's ability to repair, re-sell items. It does not make sense to give more control over to the manufacture to determine what is a useful life for an item when they do not have a vested interest in the item staying in circulation.
- Jan Parke, Volunteer at the Lester MA Recycling Center: Fix-it clinic, repair café folks-how do you get the word out there about repair events? How can I help better promote repair? I see a lot of Facebook groups for selling new items sale in community. Are Repair organizations on social media?
 - Peter Mui: Yes, all the community repair groups I know of have social media presence to spread word about events.
 - Ray Pfau: Currently there are not fix-it/repair café events in your area (Lester, MA) but I've been working with Jonathan Krones and Peter Mui to get more community repair events up and running across MA. If you connect with me, I can help support Lester. In the meantime, would encourage attending/supporting/sharing the virtual repair events. An open list of upcoming virtual repair events is available at <https://repaircafe.tv/>
 - Repair Café locator map: <https://repaircafe.org/en/visit/>

- Jonathan Krones – partners with a number of different institutions to bring repair to communities. i.e Public Libraries which can provide access to space, tools, network of repair volunteers. Encourage people to look for these community spaces/networking opportunities in own community.
- Erin Victor – On this note, MassDEP does encourage/incentivize community repair events through our [Recycling Dividends Program](#) (RDP). Great opportunity if you are with a municipality.

Announcements:

- Reuse Directory
 - Tell us about the reuse/repair/share retailers in your city, town or neighborhood: <https://airtable.com/shritqRieYZI54YQ5>
- Next Meeting:
 - Date: September 23, 2020
 - Time: 11AM - 1PM
 - Location: Virtual.
 - Meeting topic: Single Use Packaging & Food Service Products
- Networking Resources
 - [R&R Workgroup Contacts](#)
 - To join the R&R workgroup or update your information using this [form](#) or by emailing erin.victor@mass.gov