Third R

"There is no such thing as 'away.' When we throw anything away it must go somewhere"
Annie Leonard

Reduce, Reuse, <u>Recycle</u>

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About Third R
Third R is a recycling app that brings together three pivotal components to ensure circularity in materials and improve recycling rates across the United States: recycling education, advocacy for material policy and recycling infrastructure, and recycled material data. We will combine these three features in an app that can be easily used by anyone in the United States with a mobile device, while providing recycled materials data to manufacturers who need reliable recycled material feedstocks, primarily plastic.

The Vision
We envision a world where materials are used, reused, and recycled in an endless loop with minimal loss of quality to the new material. We think it is possible to greatly reduce our impact on the environment in a cost-effective way by recapturing materials that would otherwise be lost to our production systems and found polluting in the environment, in either a landfill or as litter.

The Mission
Our mission is to achieve circularity in manufactured materials, primarily plastics, but also glass, aluminum and other household metals, to reduce and ultimately eliminate material waste in our environment and landfills through education, policy change, and improved reliability of feedstocks for manufacturers.

The Leadership
Third R is managed by founder Ashley Pajor. Ashley is a graduate student at Harvard University studying sustainability, specifically sustainable materials, circularity, and policy. She was an inaugural Research Fellow at the CREO Syndicate, an organization that focuses on venture capital investments in environmentally-focused start-ups and businesses. It was here that she wrote an investment primer on sustainable materials for their members. Previously, she worked as a consultant for the U.S. Census Bureau and the United States Agency for International Development (USAID) where she translated research into strategic action and communication plans for the 2020 Census and created and delivered international trainings to improve USAID's communication techniques through storytelling in their field offices. She has previous experience working in international development on public health and was the Chief of Staff for the Palestinian Ambassador to the United States from 2014 to 2015.

The Challenge
Recycling rates across the United States for all materials average to about 30%, with highs and

lows of 80% (San Francisco) and 7% (Indianapolis, Chicago, Memphis) (Bendix, 2019) (Tufano, 2015). This is quite astounding considering that 75% of American waste is recyclable (Nenkov & Nenkov, 2019). One of the most environmentally damaging materials is plastic, which has an average recycling rate of less than 10%, as of 2015 (Nenkov & Nenkov, 2019). Even if Americans were better at putting recyclables in the bin, recycling infrastructure across the United States is inconsistent and underfunded. It is so inconsistent that sometimes if you drive 20 minutes from your location, what you can and cannot recycle will be different than where you came from. This creates confusion and recycling apathy, leading more useful, and valuable, materials heading toward the landfill or as litter.

Not only are Americans sending recyclable materials to landfills and incinerators, American companies are manufacturing plastic materials at an increasing rate that can be difficult or impossible to recycle or dispose of without harming the environment. They end up in landfills emitting greenhouse gasses (GHG), toxic chemicals, breaking into microplastics, taking up space and generally harming the Earth. This is due to a lack of political support to both invest in improved infrastructure and make policies that reduce the types of materials being produced. While some progress has been made on smaller scales, like plastic bag bans, many other harmful, non-recyclable, or difficult to recycle materials are still being manufactured in the thousands of pounds without a way to properly dispose or reuse them, like styrofoam (polystyrene). While there are advocates for change, their power is limited in the face of apathy, political structures, and the deep pockets of large manufacturing companies who would have to spend a lot of money to change their non-sustainable ways.

Environmental issues aside, the economic value of 95% of discarded plastic packaging is estimated at $80 to $120 billion annually, which is a massive economic loss for society (2016).

Third R's Solution
Third R is designed to address the problem through a three-pronged approach by centralizing three streams of information in one simple, informative app--informing the user if they can recycle the desired object in their present location, easily connect them with a local representative with pre-written materials to demand improved recycling infrastructure or policies, and provide a window into near-future availability of recycled material feedstock to product and packaging manufacturers.

This product is unique in that it ties together three streams that reinforce and propel the mission forward, in contrast to existing similar apps on the market that may focus solely on education or advocacy. It is the reinforcing, circular nature of these three features that not only make it unique, but further perpetuate use of the app. To further increase usage, the app will contain a rewards system of points and badges that users can collect the more they recycle, advocate for change, and share the app and their progress with their friends through social media.

We will build a lean but effective organization on triple B principals to develop, design, and deploy the app to the target audience in the United States. Once launched, our focus will turn

towards membership acquisition to sell the recycling data to manufacturers who can use it to inform their production lines with sustainable feedstock. We will combine best practices in app development, content management, marketing, and membership acquisition from private sector strategies.

The Cost

Third R is looking to raise $250,00 dollars in the next year in order to hire developers to build the app, round out the staff, and license the initial data needed. With several assumptions detailed below we would expect to see returns as early as year three.

Problem

Despite 75% of discarded materials in the United States being recyclable, on average only 30% end in recycle bins across the US. For plastics specifically, only about 12% is recycled (Hundertmark et al., 2019). Of the remaining plastic, 16% is combusted with regular trash and the majority—70%—are landfilled. Annually, the US uses around 37 million tons of plastic every year, 16 million tons of which are classified as "single-use." These items include things like drink bottles, food trays, milk jugs, grocery bags, plastic films, container lids, yogurt containers, and bottle caps. Despite increases in production and consumption of plastics, recycling rates have remained the same. Demand for plastic for packaging and food service is estimated to reach 20 million to 22 million dons by 2040 (or, an increase of 35%)(Hundertmark et al., 2019).

Not only does the massive production and lack of recycling have negative environmental impacts from producing virgin materials and end of life waste, it represents a vast economic loss of otherwise usable materials. Recovering solely packaging and food-service plastic could represent $2 to $4 billion dollars in earnings, annually (Hundertmark et al., 2019). The challenge of addressing these production, reuse, and end of life issues can be broken down into three specific problems as outlined below:

1. **Low recycling rates across the United States** | As noted above, the United States has poor recycling rates which is a problem for two reasons. First, waste that could be reused instead goes into landfills or the environment as litter. Here they release greenhouse gasses, toxic chemicals, and microplastics that both directly and indirectly can affect human health, especially in those who live close to landfills. They also take up space that should be dedicated to truly non-reusable materials resulting in more and larger landfills. Second, materials that could be recycled but are not represent a huge economic loss of billions of potential dollars a year for plastics. Once we are able to recycle other materials, like textiles, to hold their value through the process, there becomes an opportunity to reclaim even higher dollar values of materials.

2. **Lack of recycling policy and infrastructure** | The United States has inconsistent and generally unhelpful policies around recycling that lead to a lack of widespread and consistent recycling infrastructure. This causes confusion, disinterest, and ultimately poor recycling rates across the country. This also leads to the enablement of high volumes of materials that cannot be recycled being created. For example, between 1990 and 2011 there was a rapid increase in containers and packaging in the waste stream that cost the US government $1.56 billion to deal with (Lasko, 2015). Further the U.S. doesn't have, and is pressured out of, implementing extended producer responsibility (EPR) policies that would require the producers of these materials (especially packaging) to own the responsibility of properly disposing of them. If the backbone of the system is broken, it will not matter how well we recycle as individual citizens, the impact of

harmful materials on the planet will still occur and we will all pay the price for it.

3. **Lack of reliable feedstock to create new materials from recycled ones** | A challenge with recycling materials is that once you've recycled them, they must be made into something else. However, brands and manufacturers can be hesitant to commit to using recycled materials (mainly plastic) like pellets as the basis of materials because they are an inconsistent feedstock. They are dependent on people effectively recycling at high rates and if no one does, or at a lower rate than needed, the incentive remains to use virgin materials. A reliable feedstock of recycled materials can help existing businesses ensure commitments to recycled material use and provide the stability for new businesses based around recycled materials to exist.

The combination of increased production and flat line of recycling rates indicate that the United States is unknowingly facing a near future that is completely covered in plastic and discarded materials. If this issue is not addressed from both the upstream (production) and downstream (waste management) in a systemic way soon, the environmental, health, and social justice outlooks are dire. The environmental consequences of pollution lead to health consequences that have social justice implications. As we are already seeing globally, poorer countries are bearing the burden of these massive amounts of waste. Rich countries ship their waste to ill-equipped poorer countries which results in waste leaking into the ocean as seen in South East Asia. This pollution then goes on to affect the health of already vulnerable communities, perpetuating cycles of low socioeconomic status and poor health.

Further, plastic comes from oil. Virgin plastic is created by mining and processing oil which is a pollution heavy process and creates health problems in the, generally poor, communities that live near these refineries. It is a gross injustice that already vulnerable communities are continually exposed to these problems created by wealthy organizations and countries. By leaning into recycled materials, and biobased and compostable materials, we are able to turn away from oil and help improve health outcomes at the upstream of plastic production. The planet, vulnerable communities, and global health are dependent on this part of the materials puzzle being solved, and soon.

Alternatives & Competition

Landscape
There are some alternatives and competitors that address these issues, but very few if any that address all three problems in a central location. Below is a breakdown of competitors or alternatives organized by problem.

Alternatives to improve recycling include:
- **Local education** | cities like Denver or Fort Collins have public education information on what can and can't be recycled, and try to educate the public on good recycling

practices. This looks like information on their websites, signs on public recycling bins, and messaging on the lids of recycling bins in certain areas.

- **Apps** | There are other apps on the market like iRecycle, Gimme 5, and Recycle Nation, that allow the user to scan or look up an object and learn if it can be recycled. Some features do not have geolocations meaning they may note an item is possible to recycle but may not confirm that it is recyclable in the area where they are trying to recycle it.

Alternatives to lack of feedstock for recycled materials include:

- There are very few, if any, widely accessible platforms that allow manufacturers to see the upstream volume of available recycled materials, namely plastics. According to one interview with product manufacturer Jadex, they will sometimes have to frantically call around the day before or morning-of to other recycled material suppliers if their usual supplier has less material than expected or none at all, which they can never fully guarantee.

Alternatives to policy and infrastructure changes include:

- There are many lobbying and advocacy groups in this space working to improve existing policy and infrastructure. However, these small groups have limited power to make change, and are competing against the lobbyists of large manufacturing companies who have a very limited interest in seeing this become more circular because it could require large investments from themselves. Similar for local municipalities, who would need to dedicate more funding to improving these systems, which neither are apt to do without high levels of pressure that existing lobbyists and advocates are not able to generate at high enough amounts, generally speaking.

Shortcomings in the Landscape

The main shortcoming of these solutions is that they are not integrated with one another. Recycling rates cannot be improved without policy and advocacy improvements because the volume and type of materials being produced are not conducive towards this model of circularity. With current rates of production and types of materials being produced, even if we as individual citizens recycled perfectly, materials would still be impacting the environment negatively.

The recycling apps have great databases that they leverage, however the information they are pushing out are news updates and ways to share recycling information with friends. This does not address the greater systemic needs around recycling because it does not engage the user with any other calls to action besides simply recycling the object they were intending to try to recycle anyway.

Because there are very few solutions to monitor the pipeline of reclaimed and reprocessed materials, I think there is a huge market for Third R in the recycled feedstock category, especially as textiles begin to enter circular models.

Lobbyists and advocacy groups who are working to address the needed policy changes to improve recycling lack power to push legislators to act, especially in the face of the large

corporations and businesses that are pushing in the opposite direction. What this app provides is a loud, collective voice specifically targeted at local municipalities. It provides the numbers that can create pressure to enact change starting at the local level. Plastic bag bans, single-use plastic bans, and similar laws were enacted by a greater public voice and body rising up to demand change on the pathways that these niche lobbyists had created. The collective power this app can generate can volume to push forward the changes they are already working to create.

Solution

Third R works by centralizing the three streams of information in one simple, informative app--can you recycle the desired object in your current location, easily reach out to a local representative demanding improved recycling infrastructure or policies, and collecting information based on the user's input of what product they intend to recycle that can be used to identify near-future feedstock that can be sold to manufacturers. By combining these three components, we are addressing the materials problem along the value chain to create change that perpetuates itself to create truly systemic change. This sets it apart from the competitors in this space who try to address these issues in silos. Each component of the app contributes towards solving one of the three problems outlined above, though ultimately each component works together to solve each problem. Below is a breakdown of how each component of the app will work:

Recycling information | Existing apps in this space have created massive databases of what can and cannot be recycled based on a barcode scan of the product or a quick search. This saves us the time of trying to collect and clean up this data for our system. We will leverage the open-source databases and look into licensing non-open source databases to create a single, centralized materials database to inform the user about the material or object they are looking to recycle. The main purpose of this information is to give the user a simple "yes you can" or "no you can't" recycle indicator so they can quickly deal with the object and move on with their day. More information will be available however if they are interested in learning more. For example, if you can't recycle the object, perhaps you can compost it at home. As such Third R would indicate a negative for recycling, but a yes for composting and link to a page with further information on how to do so. For each item, there will be click-through information to learn more about that type of material and why it can/can't be recycled if the user is interested in learning. In later iterations it could link ways to upcycle the object. There are opportunities to gather this information by crowd-sourcing it through the app. Ex. "No, you can't recycle this, care to try to upcycle it? Share your upcycle project with us using #MyUpcycle" or something similar that can then be aggregated for upcycling projects as an alternative to throwing it away. Additionally, to keep people using the app for this purpose, there will be a points and reward system. The more you recycle and the more you send emails to local politicians, the more points and badges you can earn, gamifying the recycling process so that users continue to use the app and to improve their recycling habits. This part of the app will help address immediate recycling needs leading to improved recycling from reduced contamination and help reduce the

environmental impact of materials that end up either in the local environment as litter or in the local landfills taking up space.

Advocacy & Policy Change | Leveraging the structure used by many online petition sites, the app will have pre-written responses that the user can fill in with their information to send to the local representative of where they are when they are trying to recycle. This will happen in several ways. The first way is if the user looks up an item to recycle and finds that the area where they are doesn't recycle it. Depending on the reasoning (a. This material cannot be recycled b. This material is difficult to recycle c. this material used to be recycled but they are no longer accepting it) beneath the "No" indicator there will be a "do something about it" button that will generate a pre-written email that, depending on if they made a profile with the app (they must enable location for it to work), will autofill their personal information (name, contact info, email address) into the pre-written letter to the local representative of the area they are trying to recycle in. The letter contents will vary slightly depending on if the situation is an a, b, or c as described above, but will be the same throughout in that it addresses the representative, explains that they tried to recycle this bottle/can/object (to be autofilled based on what it is they scanned) and discovered they could not recycle it in this community due to a, b, or c reason, that will be autofilled. As such, they are formally requesting that the representative consider making a change, again dependent on if the situation is a, b, or c. The user can send this message through the app, or edit it further by opening it as a draft in their email app on their mobile device. The idea is to make it as simple as possible for the user, ideally so they don't have to fill in any information themselves, they can just view the autofill to ensure we got it right, and then click send. The more emails sent to representatives, the more it becomes clear that these policies and infrastructure are important to their constituents, and the possibility of making real change is that much closer to being achieved. While this section of the app will pop up upon scanning, it will also be housed in the app menu so if the user wants to simply send messages to their own local representatives pushing for policies that ban non-recyclable materials, ban certain products (like single use plastic cutlery or bags), or demand infrastructure improvements, they can do that directly without needing to first scan an item.

Feedstock | Instead of sharing their personal data to be sold to advertisers the way Facebook does to make money, Third R will be selling the data generated by what they are scanning into the app. For example, if someone scans their plastic water bottle to see if it can be recycled, we will gain information on the type of plastic, the volume of the plastic, where it will be recycled, adn based on collection and processing times, be able to provide an estimate of when, if properly recycled, this material would be pelletized and ready for production. This data will be aggregated based on recycling routes and processing centers and available to manufacturers in need of recycled materials. We would use this for plastic, glass, and metal containers. This data would allow manufacturers to effectively track when and at what volume recycled materials would be available for them to use and where it will be available from. For example, if I am a manufacturer in Maine that makes shampoo bottles from recycled pellets, I could purchase access to this data and see that a facility in Delaware will have approximately 300 lbs of pellets by Friday, a facility in New Hampshire will have 600 lbs by Wednesday, and a facility in

California will have 1200 lbs by Saturday. If I am in need of 800 lbs by Monday, I can make arrangements to get the materials I need from the most convenient locations providing a longer lead time than the day before or day-of. This will help to address the problem of unreliable feedstocks that industry professionals have noted is a barrier to creating products that are made from higher amounts, or entirely, of recycled materials. When the user successfully recycles that water bottle, the screen will change congratulating them with positive reinforcement and a quick animation showing that by recycling that bottle, it now has the opportunity to be turned into something else. Studies show that emphasizing that this material can be turned into something else, and specifically providing an example of what that could be either the same product or a different one, greatly improves recycling rates (Nenkov & Nenkov, 2019).

Intellectual Property

The idea for a recycling app is not new, but one that ties together recycling, policy and advocacy, and feedstock information is and will be protected in several ways. First, the brand itself, Third R as a name and associated branding, will be trademarked. We will also consider trademarking the service associated with our app once the copy is finalized, for example "Third R, the modern way to recycle and make change" if appropriate. We will also copyright the app at several levels. First, we will copyright any unique source code created to ensure functionality. Because we will hire app developers, this will be explicitly stated in their contract that Third R owns all unique code created to ensure our copyright stands. Second, we will also copyright specific unique information we create and input to enhance the app. Pictures, diagrams, additional background information on materials or products that we have specifically written in to educate the user. We will not copyright the letters to politicians since we want users to freely use and send them. We will strive to have our app operate in a unique but still user-friendly way that will enable us to get patents on the way it looks and works as well. This will help to ensure that apps that may have one similar component to ours are not able to update or modify themselves to be similar to ours, ensuring our app as the only one who can operate in this way in this space.

Business Model & Finance

Market Research Phase (Years 0-1)
During the market research phase, Third R will be financed through a VC model to get initial funding to build the app, develop the overall product, and pay the team. We will target VCs that have a specific interest in environmental issues, like Patagonia's Tinshed Ventures. Ashley will further leverage the CREO Syndicate network to find these venture capitalists, as the entire 100+ membership of CREO are VCs and family offices who specifically invest in sustainable or environmental tech. We expect the cost of developing the app itself to be between $30,000 and $50,000 based on initial estimates from app developers for iOS. Once in use, we will begin collecting data to sell and reinvest towards initial operations. There may be a need for an additional VC round depending on how quickly we can generate informative data. Once we are operational with consistent users generating consistent data, we will shift into beginning our primary and secondary revenue streams.

Initial Operations (Years 1-3) Phase
The primary revenue stream comes from selling recycling data generated by the app to plastic-product or packaging producers through a monthly membership or subscription fee that can be purchased in yearly memberships at a discount. While charging for the app itself was considered, the majority of apps in app stores are free and users show a strong preference for free apps. Since we need users recycling data to sell, it becomes prudent that we have as many users as possible. Monthly memberships will be market tested but projected to be between $900-$1,200. With this revenue stream, we will reinvest to create further opportunities for income generation in the expansion phase.

Expansion Phase (Year 3+)
The secondary revenue stream will activate once we have consistent use from businesses and will occur through a brokerage model. If a plastic product manufacturer wants to ensure they get a specific weight of recycled plastic pellets from a specific location, they can note interest and reserve the needed volume with the plastic pellet producer through the app. Opportunities for in-app advertisements will also be explored at this time as a tertiary revenue stream, as well as development of an Android version of the app and an accompanying website for further information, account access and management, and opportunities for advertising and additional membership fees for paywalled information.

Users & Customers

Users
There are several target audiences for users of this app. The primary audience will be people who are already recycling but have room for improvement. Therefore we will be targeting areas that have the best existing recycling rates. Remember, recycling is at most 30%, despite 75% of the waste stream being recyclable. Therefore, our goal will be to target people who are already aware and interested to push them towards achieving increased recycling rates. Since they are already interested, they will be more likely to use the app for the recycling information and policy components. The profile of people who are already actively recycling are those in urban areas, with curbside collection infrastructure, in cities or towns with over 125,000 people, in either California, Maine, or Washington State, which have the highest rates of recapturing in the country (NW et al., n.d.). We will target users who fit this profile, with mobile devices, who are in high school (ages 14-18) and junior high school (11-13). We will also target broader age groups who have noted interest in environmental issues and recycling as indicated by their Facebook and Instagram data that we can use to target through advertising. The reason we are targeting pre-teens and teenagers is because they exert pressure on adults around them to "do the right thing," like recycling. Research indicates that a cultural norm of recycling leads to improved recycling rates, and kids are great at putting pressure on others to create these sorts of cultures (NW et al., n.d.). Further, these ages are high social media users, which will feed into the point and badge system well to further spread the app to their peers. Gen Z is especially active on social media for social justice issues, and we hope to leverage their fervor to use and help

popularize the app through the advocacy component. The other audience for those who have noted interest in environmentalism or recycling will also be targeted to reach a wider group of people who have a highly likelihood of interest in recycling and therefore are more likely to use the app as well.

Customers

Customers are plastic packaging suppliers based in the United States who may already be using any percentage of recycled materials in their production lines and resin suppliers who can turn the recycled material into resin (pellets) that the plastic packaging suppliers can use. Here is a list of 50 resin suppliers we will be targeting and here is a list of ~100 packaging suppliers we will be targeting to start.

Marketing & Communications

We will have a robust, integrated communications plan to reach our potential users and customers. We will begin by prioritizing user acquisition through targeted social media ads on Facebook, Youtube, Snapchat, and Instagram. Gen Z is active on Instagram, Snapchat, and Youtube, which is where we will focus to reach them. Video content is obviously key here, so creating creative, relatable content on our owned channels and advertising back to them and the app will hook the interest of this audience who are interested in "real" representations (as opposed to Millennials who trend toward polished/unrealistic lifestyle content). We will primarily use Facebook targeted advertising to reach the secondary audience, who will tend to be older (young boomers, older millennials) who continue to primarily use Facebook and Instagram. We will target them with ads based on their age, location (California, Maine, and Washington state cities with higher than 125,000 populations), and interests (environmentalism, ocean conservation, recycling, interests in outdoors, etc.). In addition to our owned media channels and paid advertising, we will do email collection for newsletters and updates to continue the conversation, draw them back to the app, and keep them engaged through advocacy. We will be dedicating between 10% to 12% of our budget towards these marketing campaigns to grow our brand awareness and audience.

We will also establish a robust partnership acquisition strategy and management operation. Partnerships are a great way to get our brand and app in front of other audiences that may have a common interest and can be established at a low, or even free, cost. We will establish these partnerships prior to our official launch and leverage them during launch to reach a wider audience and lend legitimacy and credibility to our product.

To launch, we will host a digital event that will live stream across our platforms (Youtube, Instagram, and Facebook) that we will then post permanently and grab clips from for additional content moving forward. The digital event will focus on the need for recycling, establish a unique, fun (not guilt or shameful) culture highlighting the necessity of recycling and that it turns used materials into new, high-quality materials we all can use. Leading up to the event we will work to establish partnerships with brands that are passionate about environmentalism (Ex.

Patagonia, Impossible Foods, Lush Cosmetics, and smaller brands that are also in their early phases to help each of us grow) to help cross-market and promote our launch and app in general.

An in-person event is not something that we think will provide a high return on investment, especially with COVID-19 so we will not be pursuing that route.

Cost Structure

Key Figures and Assumptions

In the initial start-up phase of collecting the team, building the brand, and building the iOS app the estimated cost is at $200,000 from 2020 through 2021. While staff will be on-deck, most will not yet be full time except for the app developer with the UX/UI designer billing hours as they are used (expecting 10 hrs/week). As time progresses towards launch, an additional $50,000 will be needed for the launch of the product, this going towards the marketing, partnership, advertising, with room to hire a secondary developer if the timeline is looking tight for launch. Staff will roll on and off tracking hours for payment as we ramp up towards full operation. We expect to be making profits from the app one year after launch by signing on 10, year-long memberships at a price between $900-$1200/month. We used an average of a $1000/month membership as an assumption, which results in an income of $120,000 in year three. We aim to grow the membership by five more members in year four, raising income to $180,000 and enact the brokerage fee income stream charging 5% of the cost per transaction. Because the price of secondary materials can vary depending on the market and based on the type of material (ex. PET is different than HDPE which is different than color HDPE etc.) it can be difficult to estimate what the revenue will be because it can be so variable. We took a middle-ground assumption between the highest (25.88 cents/lb for HDPE) and lowest (Grade B film at 4.63/pound) as of September 2019 and used 15.255 cents/lb of a generic plastic to estimate revenue. As such we calculate that someone in need of 1 ton of this generic plastic could purchase it for approximately $30,510. With Third R's 5% take, that single transaction would result in $1,525 in revenue. Assuming even a low amount of transactions, 3/month, the brokerage stream could generate $4,757/month or $54,900 in the first year. As we continue to market and grow, we aim to increase the transaction and membership numbers to further increase revenue over time.

Once the iOS app is created in the first year the Android and web versions will launch in year 3. These are the main costs and once complete will only need minor maintenance and updates to keep running meaning the ROI begins at year 3 and increases steadily thereafter. A detailed breakdown of the first four years of cost information can be found in Appendix 1.

Financial Projections & High Level Action Plan

	Market Research	Launch	Initial Operation	Expansion
Timing	<-2020-2021->	<-2022->	<-2022-2023->	<-2024+->
Objective	Establish and prepare for launch	Successfully launch	Gain paying customers	Activate additional revenue streams and expand
Key Actions	-Gather funding -Develop app -Finalize team -Establish partnerships	-Launch plan -Get as many users as possible -Begin packaging up data for selling	-Market to customers -Gain memberships -Maintain memberships	-Develop Android App -Enact Brokerage stream -Build website
Budget	$200,000	$50,000	$200,000	$300,000
Earnings	$0	$0	$354,900	$348,000

Revenue will be generated through two streams, a membership structure for plastic resin producers and manufacturers and a brokerage fee to connect the two. Until data can be generated to enact those streams, we will fundraise for the first $250,000 in two rounds to build the app and run a skeleton crew to get the other pieces in place until launch in 2022. Based on our assumptions listed in the previous section and illustrated in Figure 1 above, we expect to begin making a return on investment beginning in year 3.

Visual Timeline & Milestones

THIRD R

Key Activities

	-Develop app -Continue to raise funds as needed		-Launch app		-Continue expanding
SEPT 2020	**2020**	**2021**	**2022**	**2023**	**2024**
-Create Business Plan -Formalize Team -Form LLC		-Finalize App -Plan for launch		-Launch Android App -Build Website -Activate other funding streams	

Conclusion

Third R is designed to address the modern issues we are experiencing with materials: overproduction, production of harmful materials, and lack of recycling to reduce end of life waste. We address these issues through a three-pronged approach of citizen advocacy, citizen education, and connecting the dots in the recycled materials supply chain that are currently not connecting well. We are looking to raise our first round of funding to begin designing the app, and are looking to raise $200,000 for our first round from a VC or family office. Our idea builds on existing successes and has a high chance of creating initial returns on investment within a three year timeframe. We look forward to making the world a more circular, waste-free place, and we invite you to invest and join us on this journey.

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Appendixes

Appendix 1 | Detailed financial breakdown by year and assumption

Revenue	Assumptions	2020	2021	2022	2023	2024
VC Fund Round 1	Cover start up expenses for first year (2020-2021)	200,000	0	0	0	0
VC Fund Round 2	In prep for launch	0	50,000	0	0	0
Membership Income	Assuming 10,15, and 20 members; 1 year @1K/membership/month	0	0	120,000	180,000	240,000
Brokerage Fee Income	Assuming 3 transactions/, month with 5% fee for a $30K purchase	0	0	0	54,900	108,000
Total Revenue		200,000	50000	120000	234900	348000
Payroll	**Assumptions**					
Salaries	Early phases: hours will be tracked and billed vs. salaried	60,000	32,000	75,000	75,000	75,000
Taxes	10% of salaries	6000	3200	7500	7500	7500
Employee Benefits	15% of salaries; Only once employee is full time	0	0	0	0	
Total Payroll Costs		66,000	35,200	82,500	82,500	82,500
Non-Labor Expenses	**Assumptions**					
Marketing	Keeping marketing between 10% and 12% of budget in first year		5000	2,500	2,500	2,500
Administrative costs	Cost of having app on app store, servers, other IT/tech needs	2000	2000	2000	2000	2000
App Development	Estimate for development and maintenance	45,000	2,000	2,000	2,000	2,000
Fixed Costs	Remote staff; license for virtual	$1,500	$1,500	$1,500	$1,500	$1,500

	collaboration tools				
Variable Costs	Cost of protecting intellectual property	$3,000			
Recycling Database Licensing	Purchase a licence from existing apps if not open sourced		5,000	5,000	5,000	5,000
Total Non-Labor Expenses		51500	15500	13,000	13,000	13,000