RELOOP KC

Regional Plan for Material Recovery

ReLoop KC Regional Plan for Material Recovery

Background: The State of Solid Waste Management

History

The Mid-America Regional Council Solid Waste Management District (MARC SWMD) serves as a regional solid waste planning agency for local governments in Cass, Clay, Jackson, Platte and Ray counties in Missouri — and works cooperatively with Johnson, Leavenworth, Miami and Wyandotte counties in Kansas. It also serves residents, businesses and non-profits throughout the Kansas City region.

The District represents the overall interest of its members through a 15-member Executive Board and a Management Council made up of local officials. The Management Council provides overall policy direction to the Executive Board.

The purpose of the MARC Solid Waste Management District is to encourage the development of local and regional waste reduction, reuse and recycling programs by providing:

- Grants to public, private and nonprofit sectors
- The Regional Household Hazardous Waste Collection Program
- Technical assistance to local private and nonprofit entities
- Recycling information through RecycleSpot.org and the recycling Hotline at (816) 474-TEAM
- Food waste reduction
- Illegal dumping action planning

Since 1991, the MARC SWMD has engaged in planning beginning with the 1993 Integrated Solid Waste Management Plan that identified the priorities for effectively and efficiently managing residential solid waste. Waste reduction efforts emphasized enhanced collection systems for recyclable materials like aluminum and steel cans, plastic bottles, paper, and cardboard. Grant funds were prioritized for projects that aligned with the plan.

Over the next two decades surveys and studies focused on expanding recycling drop off locations and curbside pickup of recyclables. Efforts on educating the public and working with local government increased diversion as landfills in the region closed. In 2009, the MARC SWMD contracted with Burns & McDonnell/CalRecovery to conduct a Sustainable Solid Waste Management Study to provide a current snapshot of the region's waste management system, a future snapshot if no changes were made in the following 20 years,

and alternative strategies which could improve the region's waste reduction habits, ultimately leading to a zero-waste system.

Implementing an alternative sustainable solid waste management strategy offered the District the opportunity to dramatically decrease landfill disposal at cost competitive rates. The strategy set forth in this study envisioned four, 5-year planning horizons designed to reach incremental 40 percent (2013), 60 percent (2018), and 80 percent diversion (2023) and near zero waste by 2028, and involved sustainable practices around:

- Source reduction
- Recycling
- Composting
- C&D/specific waste materials
- Public education
- Policy incentives
- Household Hazardous Waste (HHW)
- E-waste

Unfortunately, this study did not result in a widespread increase in waste diversion and the goals of 60 and 80 percent were not achieved. The consistent increase in municipal waste generation was escalated in 2020 when work and school from home shifted waste generation from institutional and business locations to residential trash. At the same time drop-off locations closed and other waste diversion strategies faltered.

Increased pressure for closer landfills led to a proposal for a landfill in south Kansas City Missouri that was immediately opposed by residents and municipal leaders in neighboring communities. The question that needed answering was how immediate is the need for a local landfill?

Landfill Capacity Studies

2024 Study Background

In January 2024, MARC SWMD concluded a study, led by Burns & McDonnell, to forecast regional landfill capacity. The study was intended to inform solid waste planning, programming and permitting activities at the state, regional and local levels and to serve as a prelude to a future regional solid waste plan.

The scenarios within the study indicated the region has a range of **19 to 37 complete years of landfill capacity remaining**. At the time of study, there are **seven active municipal solid waste (MSW) landfills** serving the Kansas City region and one MSW landfill in the process of being permitted, Presidio Landfill, which has received approval from the

Missouri Geological Survey Program. There are several area transfer stations that facilitate the transfer of solid waste to the landfills included in the Study. Each of the landfills included in the study are serving or will be serving the study area with waste disposal.

2024 Study Findings:

There is adequate time to plan for a future solid waste management system in a strategic, thorough, and methodological process that considers more factors than landfill capacity alone. Over the next five years, the confidence in scenarios with additional capacity may improve, including the opening of Presidio Landfill or expansion permitting of existing landfills.

Solid waste facilities including landfills and transfer stations involve a rigorous permitting process that requires a minimum of five years but more commonly takes ten years or more. The appropriate amount of time should be allotted to plan, permit, and develop solid waste infrastructure to serve the region.

The region's solid waste management system is reliant on private sector landfills except for St. Joseph Landfill, which is operated by the City of St. Joseph. The community's heavy reliance on private sector landfills makes it challenging for municipalities to take charge of their own waste management system and costs.

As landfills close, the solid waste system will become more reliant on existing transfer stations and new transfer station infrastructure. The region is already accustomed to transferring waste through transfer stations to landfills outside of the densely populated urban areas.

Currently 73% of the region's landfill capacity is in Kansas. As landfills reach capacity and close over time, the region will become more reliant on Kansas landfills, particularly HAMM Landfill, located in Lawrence, Kansas, as it has the most capacity currently available.

Landfill closures will impact communities within the region differently depending on proximity to solid waste infrastructure and reliance upon those facilities.

Landfill Diversion

Primary Responsibilities of the MARC Solid Waste Management District

The MARC SWMD has three primary responsibilities:

- Implement the solid waste management plan
- Oversee District administration
- Secure adequate funding to accomplish goals and objectives

SWMD funding has:

- Supported market-based solutions
- Provided a source for import replacement and local job creation
- Set the stage for further economic development

MARC SWMD Memorandum of Understanding

The MARC Solid Waste Management District (SWMD) executes an annual Memorandum of Understanding (MOU) with the Mid-America Regional Council (MARC) to ensure the effective management and administration of the District. Under this agreement, MARC provides essential staff support and technical assistance.

Fiscal Administration

Additionally, MARC serves as the fiscal administrator for various District funds, including:

- Interest income
- Committee and project funds
- Household Hazardous Waste (HHW) per capita and contingency funds
- District grant funds allocated to city and county pass-through projects

Objectives and Priorities

The SWMD collaborates with nonprofit and private organizations to promote the adoption of waste reduction and recycling practices outlined in the District Plan. Since 2000, the District has hosted annual strategic planning retreats to advance the plan's implementation. Each retreat builds on the progress of previous years, helping to shape and refine the District's long-term goals and priorities.

Key objectives identified for solid waste planning include:

- Strengthen local and regional engagement and commitment
- Expand education and public awareness initiatives
- Provide enhanced training and support for District members
- Maintain momentum toward achieving waste-reduction targets
- Elevate recycling as a regional priority
- Develop and grow markets for recycled materials

Long-term priorities for solid waste planning include:

- Focusing educational outreach on schools and the general public
- Supporting the development of markets for recovered materials
- Advancing policy and legislation initiatives
- Implementing the District's forthcoming integrated solid waste management plan

Services Offered

The SWMD will continue its current initiatives to advance the vision of sustainable solid waste management by strategically investing in efforts that boost waste diversion, enhance public education, and empower local government action. In alignment with the Memorandum of Understanding with the SWMD, MARC's professional staff will provide the following services:

- Overall administration and management of the District's solid waste program
- Regional coordination through strategic planning, education, and outreach
- Promotion of grant opportunities for local governments focused on waste reduction and recycling
- Technical assistance and support for local governments across the region
- Implementation and oversight of District-led projects and initiatives
- Ongoing planning and reporting as required by the Missouri Department of Natural Resources (MDNR)
- Additional tasks as directed by the Executive Board and Management Council

MARC Solid Waste Management District Signature Programs

Household Hazardous Waste Program:

The Regional HHW Collection Program provides convenient access to proper HHW disposal for all District residents. The MARC Solid Waste Management District encompasses Cass, Clay, Jackson, Platte and Ray counties in Missouri.

Residents of participating communities may take HHW products to the permanent collection facilities in Kansas City, Missouri, and Lee's Summit at no charge. Residents of non-participating communities may access the Lee's Summit facility for a fee.

In 2025, over 20,000 households were served and over 1 million pounds of HHW material were properly disposed of. This program prevents toxic material from entering our landfills, creeks and rivers and helps keep homes safe.

RecycleSpot

Since 2006, RecycleSpot.org has been the Kansas City metro area's one-stop spot for waste reduction information. With over 1,800 service providers and locations, RecycleSpot helps approximately 88,000 thousand users a year find places to recycle, reuse, donate and compost items, while providing educational materials, tips, and information on local events and the latest news.

Every year the District puts together a comprehensive outreach plan to promote its programs and services. It maximizes its effectiveness by utilizing a strategic combination of earned, owned, social, and paid (digital, outdoor, print, radio, and television) media.

The District's recycling hotline, (816) 474-8326, is answered by District staff, Mon. – Fri., 8 am – 5 pm. It's a great way to help people find the information they need by talking to a real person.

Recycle More at Work

The Recycle More at Work partnership is a free program designed to help workplaces start or improve their waste reduction and recycling practices. Partners come in all types and sizes: businesses, local governments, non-profit organizations, schools, and churches. When they join, partners receive a waste assessment which includes a facility walk-through, a recycling recommendation report and a follow-up meeting to lay out next steps. Partners also receive funding information, Recycling 101 presentation, monthly recycling tips, educational materials and promotion through the District's social media. The Recycle More At Work partnership began in 2015.

Kansas City Foodwise

Kansas City Food Wise (KCFW) is a regional effort to reduce food waste, increase access to healthy food and build a sustainable food system that benefits us, our community and our planet.

KCFW originated from a Sustainable Materials Management Grant provided by the U.S Environmental Protection Agency, Region 7 to the Mid-America Regional Council in 2021. While the goal of the grant was to reduce the amount of food that is wasted and sent to landfills in the Kansas City region, it laid the groundwork to address a much broader range of issues that will help make a sustainable food system a vital part of our metropolitan area's future. KCFW receives ongoing support from the Food Wise Advisory Committee, a group of public, private and non-profit stakeholders each of whom play a crucial role in the regional sustainable food system.

Grants

The MARC Solid Waste Management District provides financial support in the form of annual and small project grants. The program provides grant funds for implementing waste reduction, reuse, recycling and composting projects. The primary goal of projects is to increase waste diversion within the District. Projects must be located within Cass, Clay, Jackson, Platte and Ray counties in Missouri.

Since 1993, District grant funds have contributed significantly to the region's recycling and reuse infrastructure. Grantees include Ripple Glass, Flourish Furniture Bank, Habitat ReStores, Sleepyhead Beds, Kanbe's Markets, KC Can Compost, Missouri Organic Recycling, ScrapsKC, Re-Use-Full, City of Kansas City, Missouri, City of Lee's Summit, and the Kansas City Chiefs, to name a few.

Projects have included glass recycling containers, a construction and demolition recycling facility, food waste rescue and composting programs, mattress reuse and recycling, drop-off recycling facilities, and public education.

The District receives funding for its grant program through the Missouri Solid Waste Management Fund. A $2.11 fee is collected on each ton of solid waste disposed in Missouri landfills or transferred to out-of-state facilities. These funds support solid waste management and diversion programs coordinated by the state's 20 solid waste districts, Missouri Department of Natural Resources, and EIERA Missouri Market Development Program.

Consumerism: The system of waste and how we manage it now

Most of us don't consider what happens to things after we've used them. We buy stuff, use it and throw it in the trash. We may even recycle it. We have grown used to this system, but it is time to start thinking of new ways to manage our solid waste, because we create a lot of waste and use much more resources than we need.

Many products are made with the idea of planned obsolescence, a common business strategy. This occurs when some companies design products so that they must be bought repeatedly, even when it is entirely possible to design the product to last longer. When products wear out sooner, people buy replacements more frequently, leading to additional sales and revenue.

The clearest example of this is light bulbs, which have potential lifespans for over twice as long as they are typically used. But many are designed to burn out faster.

Planned obsolescence also encourages consumers to replace existing products with newer versions, despite the original version still being functional. Smartphones are a perfect example of this practice. Many people are persuaded to purchase a new phone due to software updates and discontinuation of support and security updates, which create the need to upgrade from an already functional device.

The fashion industry is also rife with built-in obsolescence. Last year's styles are always designed to be replaced with this year's new trends. This "fast-fashion" industry uses flimsy materials and cheap labor from other countries to create low-quality clothing that must be replaced frequently.

Based on foundational assumptions to the current system, trash has become a troublesome material running into real world limits to its disposal and storage. This is an unfortunate byproduct of production and consumption and an impediment to clean, safe, and healthy neighborhoods.

These factors have led most municipalities in the region to adopt pickup and disposal of trash as a public service. Since the region has plenty of land, the predominant solution for disposal has been transporting and burying the trash in landfills that were established nearby in less populous areas. In the last couple of decades, many cities have added curbside and drop-off recycling services to help divert waste from these landfills.

And so this is how we have wound up in our current scenario, where in our region, landfill capacity is extended and new landfills are delayed.

Over the years, most cities outsourced solid waste services to the private sector. This reduced the capital investment and expense that municipalities bore to deliver the service while maintaining leverage over the quality of hauling, the main touchpoint with the public. As a result, this also relinquished a degree of municipal control over the final disposition of the material and insights into its composition. While many companies hauled solid waste for the region's cities in the past, the private sector has undergone significant consolidation and vertical integration. Four companies now control roughly 80% of the market in the U.S. for hauling, sorting, recycling, and landfilling. That mirrors the market in the KC region, where just a few private players maintain the "flow control" of these materials and the data associated with them.

Bottom line: The Kansas City region sends tons of waste to landfills every year. Much of that waste still has value, such as clothes that could be reused, electronics that could be repaired, or food scraps that could be composted. By putting these materials in the landfill, we lose valuable resources.

A Basic Waste Management System: Where We Have Been

In a traditional system, the focus remains on collection and disposal, leading to reliance on landfills and resource loss. Access to curbside recycling depends on municipal licensing or contracts, and in some cases, on hauler services offered directly to subscribers. Residents pay indirectly through taxes or add-ons to service bills from a municipality or county who contracts with a hauler for disposal services.

Benefits

- A laissez-faire system of market competition, but overwhelming power for the big companies that also own landfills.
- More consumer choice, but little variability in services despite competitive opportunity.
- Residential and commercial trash is picked up regularly in a convenient manner.
- Some recyclable materials are recovered conveniently for residents.

Negatives

- Vertical integration of the industry has produced monopolies and no free market.
- Limited innovation in hauling options for single-source separated materials. Companies' interests are limited to end-of-life activities.
- The private sector profits from landfills, transfer stations and hauling. It does not feel motivated to divert materials from landfills.
- The current regulatory system does not accommodate diversion activities at Transfer Stations.
- Highly dependent on the transportation system and cost for landfills that are increasingly farther away from communities.

Strengths

- Efficient removal of trash to landfills.
- Reliable service and disposal.

Weaknesses

- Few alternatives to landfilling.
- Limited landfill space.
- Cost is determined by the owners of the service with little competition.

Opportunities

- Recover the value.
- Recover methane.
- Reduce hauling distances with Transfer Stations.
- Source separation of recyclables.

Threats

- Increasing transportation costs.
- Increasing demand for more landfills.
- Increased cost to citizens.
- Cost avoidance behavior like illegal dumping.

The Integrated Solid Waste Management System: Where We Are Now

An integrated solid waste management system evaluates local needs and conditions, and then selects and combines the most appropriate waste management efforts. The goals are to prevent waste, minimize material generation, emphasize recycling and composting with an overall goal to reduce landfill disposal.

Many municipalities and counties contract with haulers to streamline waste collection, minimize route overlap, and reduce the number of trucks on the road.

Municipalities and counties take a more active role in this system.

- Some cities directly provide waste hauling services or contract with private haulers, managing billing and service coordination for residents.
- Participation in HHW programs helps divert toxic materials from landfills, prevents illegal dumping, and reduces improper disposal in sanitary sewers.
- Local governments increasingly support and host a variety of waste diversion options, such as:
    - Drop-off locations for recyclables
    - Large item pick-up programs for reuse
    - Repair cafés and Freecycle-style reuse exchanges
    - Community challenges like the Trex plastic film recycling initiative

- More cities are offering targeted collection services for items that are harmful or unsuitable for landfills, including:
    - Batteries, electronics, appliances
    - Vapes and other emerging waste streams

There is, however, potential to include commercial, institutional and industrial generators to integrate into diversion efforts.

Benefits

- There are models around the country with more robust diversion opportunities to enhance recycling and recovery.
- There is a role for not-for-profits and businesses in recovery, reuse and processing which will diversify stakeholders beyond the traditional solid waste industry.
- More aggressive recovery of recyclables from residents and businesses.

Negatives

- Market consolidation (i.e., acquisition of service providers) has introduced greater complexity due to the frequent changes in participants.
- Highly dependent on transportation with longer hauling distances.
- Local governments that contract have some control over performance of haulers.

Strengths

- More local control.
- Diversity of options.
- Local innovation for material recovery.
- Bundled services for yard waste, bulky items, food waste, recycling, etc.

Weaknesses

- No central control.
- The responsibility for the system remains with local government.

Opportunities

- Data collection of diversion.
- Increased access to services in remote locations.

Threats

- Local government disengaged from management and diversion.
- Lack of local education to the public about services.

Time for a new approach: a Circular Economy

Shifting perspective: from liability to asset

Despite the issues with the current system of waste management in the region, Kansas City can lead the way in creating a more sustainable and resilient future by embracing the principles of a circular economy.

The idea of a circular economy presents a different way to think about how we use materials. Instead of producing a product, using it once and throwing it away; the circular economy addresses how we can keep materials in use for longer. This might mean reusing or repairing things, recycling them effectively, or designing products that last longer.

Instead of the traditional "take, make, waste" model, a circular economy approach keeps materials and products in use for as long as possible. That means supporting local businesses that repair, reuse, and repurpose goods, while also creating new jobs in remanufacturing, recycling, and composting. By developing strong end-markets for these materials, the region can reduce long-term costs and cut down on the environmental impact of importing resources over long distances.

Circular economics is already happening at a small scale in the region. Although we've grown accustomed to a lifestyle that encourages fast and abundant consumption, many nonprofits, repair shops, community gardens and reuse centers are providing platforms that tap into the value of resources that would have otherwise been discarded in a modern consumer-driven system.

This system has four primary stakeholders

- **Residents** contribute through subscriptions or government contracts for trash and material collection.
- **Producers** are responsible for designing products that can be recovered and for managing their end-of-life recovery.
- **Consumers** play a role by extending product use and choosing recycling or other alternatives to landfilling.
- **Local governments** support the economic development of businesses that are part of the circular recovery, collection, reuse and manufacturing processes.

Benefits

- Already the standard in Europe and gaining traction in major U.S. cities.
- Extends the life cycle of materials through multiple uses.
- Encourages redesign and procurement of recyclable or returnable products via Extended Producer Responsibility (EPR) programs.
- Promotes local collection, processing, and reuse as feedstock for local manufacturing.
- Reduces transportation needs by keeping end markets close to material sources.
- Drives economic growth through local services for collection, processing, recycling, remanufacturing, and production.

Challenges

- Vertical integration in the solid waste industry has created monopolies, limiting free-market competition.
- Prevalence of single-use consumer goods, excessive packaging, and hazardous materials (e.g., batteries, electronics) entering the waste stream.

Strengths

- Offers opportunities throughout the region.
- Enhanced recovery of materials.
- Availability of materials locally.
- Local economic growth.

Weaknesses

- Little government control except for normal business permitting.
- Data collection too complex with materials moving through multiple steps of recovery/reuse.
- Legislation for Enhanced Product Stewardship (EPR) is necessary.

Opportunities

- Energy capture.
- Expanded layers of business development to collect, sort, distribute, upcycle, repair and manufacture.
- Onshoring of manufacturing.
- Regional capacity to be a destination for recovered materials in the central U.S.

Threats

- Consolidation of the market in nearby regions that might compete for manufacturing and processing.
- Commitment to the old way of doing things.

Building a business case

The opportunity before us requires a paradigm shift. It involves seeing these materials through a new lens and reprioritizing how they are collected, sorted, and circulated within our communities to optimize their highest value. In a region like ours with limited natural resources, we are heavily reliant on imported materials for manufacturing and production.

Even so, we generate millions of tons of discarded material annually. Nearly all of it is imported and most winds up in landfills. To build the business case for a new approach, we commissioned a study to assess the economic impact of retaining and processing those discarded materials.

Material Flow Analysis

Working in concert with the City of Kansas City, Missouri, and Johson County, Kansas, the MARC Solid Waste Management District (SWMD) helped to fund a Material Flow Analysis (MFA) for the entire KC metropolitan area. The study was conducted by Metabolic and the Foundation for Regeneration. These consultants brought global and local expertise in building circular economies—systems where materials never become waste and nature is regenerated. The goal of the MFA was to determine what materials are being discarded in the region, what portion is being landfilled, how much value could be generated for the local economy by diverting those materials from landfills—including jobs created, which materials to prioritize, and how others around the world are capitalizing on this type of opportunity.

Findings of the study

Each year nearly 3,000,000 tons of materials begin the journey to the landfill. Some commonly recyclable materials, cans, bottles, cardboard, glass, and paper are diverted into the recycling stream. Only glass stays in the region to become insulation or other glass materials. This is a circular success. Unfortunately all other collected recyclables leave the region, some traveling to the coast or beyond to find an end market to process it and turn it into something else. This is a lost opportunity for the local economy. We pay for collection and sorting merely to keep it out of the landfill, but we don't reap the benefits of the local economic development these materials could bring.

Organic materials, primarily food waste are increasingly finding a local home as compost to enrich soil and grow food. Other upstream diversion efforts capture the food and feed people without it entering the waste stream.

The Metabolic study found that the materials entering landfills are worth as much as $250 million annually and if they were collected, processed, and entered local end markets it could create a billion dollar industry cluster. So the challenge of our time is to use these materials for economic growth and jobs creation.

FINISHED PRODUCTS ARE WORTH MORE THAN THE RAW MATERIALS INSIDE THEM

This analysis focuses solely on the secondary market prices for recyclable materials, providing an estimate of their current monetary value. However, the true economic value of a product extends far beyond the sum of its individual material components, as it includes the added value from design, manufacturing, and functionality. Numerous factors influence the ultimate economic outcome of recycling these materials, and many different applications exist to convert these material streams into new products or applications. Therefore, this study limits its scope to the present market value of recycled materials, acknowledging that this represents only a fraction of their broader economic potential.

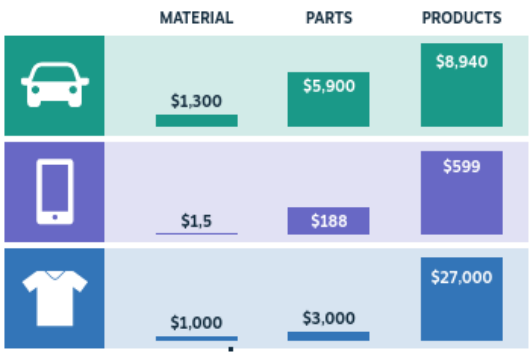

Figure 5 *Difference between value of materials, parts, and products*

Building a Coalition

Community approach

Shifting to a new paradigm takes planning and coordination if it is to take root. With this in mind, MARC SWMD engaged key stakeholders to present the new paradigm, explore the opportunities, and discuss how to overcome the barriers of building out a true circular economy in our region.

Government Leaders

The District regularly convened the SWMD Management Council and an Executive Roundtable of elected officials from the region. Over the last two years, MARC secured buy-in from these leaders by providing an overview of circular economy principles, the results of a regional reuse study and the MFA, real examples of waste transformation opportunities, and a planning retreat to help prioritize action.

Formation of Circular KC

MARC SWMD teamed up with the Foundation for Regeneration and convened four roundtable discussions focused on growing our local circular economy. This group of stakeholders included business, nonprofit, government and academic professionals and others from the community. The gatherings generated such interest and momentum that it spawned a new independent network, Circular KC.

Economic Development Forum

MARC SWMD brought economic development professionals together from cities and counties across the region to learn about the MFA results and the potential value that can be derived developing a local circular economy.

Working Groups

Working groups of local experts were organized to help inform how a materials recovery plan could address barriers to growing a local circular economy. The groups covered topics ranging from reuse and repair to recycling and end markets, and also included privately owned waste haulers and landfill operators.

Local business interviews

MARC interviewed four local businesses that are leading the way on Zero Waste. As a result, case studies were developed to inspire others to follow suit.

ReLoop: A regional plan for material recovery

The ideas that surfaced through our study of material flow throughout the region, the formulation of a business case for a circular economy, and the assembly of a coalition of industry experts has led us to the **12 prioritized strategies** in this report.

RELOOP STRATEGY 1

Support and promote repair, rental and borrowing services to reduce consumption of new goods.

Public libraries lend books and media, and many now offer tools, toys, recreational equipment and entertainment. Repair services have declined as overhead costs for retail space have increased, but pop-up cafes help restore access to fixing durable goods rather than replacing. Commonly repaired items include electronics, bikes, clothing, jewelry, shoes, leather good and household decor.

Increased access to free lending decreases consumption of new items and the need to dispose of them when they are no longer needed. This is especially impactful for one-use items like wedding decorations.

ReLoop Factor	Details	Alignment
Diversion Impact	Reducing the consumption of new goods helps minimize the disposal of unused materials. Choosing to borrow or rent fulfills the need for items that are rarely used, while repairing broken products extends their lifespan. Together, these practices reduce the necessity of purchasing new items, promoting a more sustainable approach to everyday living.	**High**
Community Benefit	Expanding opportunities for people to access items satisfies needs and enables more people to use the same item repeatedly. The availability of shared resources builds community. Repair offers opportunity for intergenerational transfer of knowledge with retirees passing on repair knowledge to younger generation. Repair activities can generate income for individuals and provide community access to services. Repairing items generates 200x more jobs than landfilling them according the Material Flow Analysis for the KC Metro Area published in 2025.	**Impactful**
Value	Using items as they were intended, repeatedly retains the original value of the item.	**Retained**
Ease of Implementation	Libraries are already providing many items through their borrowing services. These can be expanded quickly with little investment. An inventory of borrowing services is needed. Rental services and repair services are also currently available but awareness of these needs to be expanded. RecycleSpot can be enhanced to add these resources to the searchable database.	**Expandable**

How to get started

1. Create a list of libraries and borrowing services and post on RecycleSpot.
2. Meet with library leadership about expanding borrowing services.
3. Create a list of repair services and post on RecycleSpot.
4. Create a list of rental and refill services and post on RecycleSpot.

Stakeholders

Libraries, local governments, thrift stores, rental services, repair services, refill services, ReUseFull, maker spaces, ScrapsKC, Magpie Creative.

RELOOP STRATEGY 2

Support the development of reuse hubs to reclaim reusable materials locally.

A reuse hub empowers people to source reusable materials from within their community instead of importing materials from outside of the region. In addition to offering gently-used second-hand items, these hubs can be expanded to provide repair services to extend the usable lifespan of an item, and creatively "upcycling" unfixable items into newer decorative or functional products.

Many of these craftsmen are currently available to provide their services, and providing a reliable location for people to find them alleviates barriers to these services.

ReLoop Factor	Details	Alignment
Diversion Impact	Local accessible hubs for the collection and redistribution of durable goods could greatly expand the life of items.	**Significant**
Community Benefit	Reuse hubs would operate as community workspaces where people can repair, upcycle and repurpose unused items. These vibrant, collaborative spaces would provide access to materials for reuse projects and create opportunities to earn income through the resale of refurbished goods.	**Impactful**
Value	Used items can be recovered before they reach the trash, preserving their value—and even increasing it—through repair and upcycling. According to the 2025 Material Flow Analysis for the KC Metro Area, repairing items creates 200 times more jobs than landfilling them.	**Retained**
Ease of Implementation	Securing neighborhood spaces where residents can participate in reuse activities will require initial support from local governments or nonprofits. Over time, the economic value these hubs create can help them become self-sustaining.	**Removable barriers**

How to get started

1. Create a list of reuse facilities and post on RecycleSpot
2. Visit and discuss expansion
3. Encourage local government to provide space, operational support and communication with public

Stakeholders

Circular KC members, thrift stores, Flourish Furniture Bank, ReUseFull and other nonprofit organizations, full-service junk removal companies, local government bulky item pick-up services

RELOOP STRATEGY 3

Support use of reusable food serviceware to reduce single-use plastic waste at large public venues and events.

Sports arenas, concert venues and public events feature food service and drinks that are often served in plastic cups, trays and utensils. Replacing these single use plastics with durable and reusable plastic or degradable fiber will reduce plastic in landfills and also enhance food waste collection without plastic contamination.

ReLoop Factor	Details	Alignment
Diversion Impact	Food and drink service at entertainment venues and public events rely heavily on single-use plastic cups and containers, most of which are not recycled. These events create a strong opportunity to recover and reuse durable items instead.	**Important**
Community Benefit	Collecting food waste for composting is more effective, and results in less contamination when less food waste and plastic is going to landfills. These practices also give attendees a model they can easily replicate at home or in other settings.	**Inspiring**
Value	Using items repeatedly values the virgin materials used to create these food service goods and extends the use beyond one time. Jobs are created in the reuse of materials.	**Jobs**
Ease of Implementation	Bold Reuse offers a commercial washing service and rental of food service goods. This cost was initially subsidized by a SWMD grant for events in 2026.	**Expandable**

How to get started

1. Partner with KC Can Compost, who is already working with venues to compost and add reusable food serviceware.
2. Future expansion to add durable silverware to the cups, plates and bowls.
3. Add silverware manufacturing to the wishlist for local industries we want to grow.
4. Incentivize reuse at events and venues.

Stakeholders

Bold Reuse, pro sports teams and venues, local government, event planners, catering companies

RELOOP STRATEGY 4

Establish Food Waste Bites program for food service sector

The goal of Food Waste Bites (FWB) is to eliminate food waste in the Kansas City region's foodservice sector. FWB will help the industry implement comprehensive food waste rescue, diversion, and prevention practices. These practices will, in turn, enable foodservice businesses and organizations to save money and time, improve customer service, boost employee morale, reduce food insecurity in our community, and help the planet.

ReLoop Factor	Details	Alignment
Diversion Impact	Expands existing food recovery and diversion efforts in the region and implements sector-specific food waste prevention practices. Has the potential to reach all food service and retail sectors.	**Significant**
Community Benefit	Recovered food helps feed people who are food insecure, providing families in need with higher-quality, nutritious options they may not otherwise access. Food that is diverted via animal feed benefits local livestock and animal rescue operations. Food that is diverted via composting benefits local food production and soil health. Preventing food waste also reduces pollution of the air we breathe, the water we drink, and the soil where we grow our food.	**Impactful**
Value	Food retains its highest value when it is consumed by people. It also retains value when it is diverted to animal feed or compost. Food waste reduction efforts create local jobs. and benefit our local economy and community health.	**Retained**
Ease of Implementation	Organizations already exist to recover and divert food that would otherwise go to waste. Expansion requires increasing their capacity and the number of businesses and organizations actively reducing food waste.	**Expandable**

How to get started

1. The SWMD will hire staff to implement the program.
2. The Food Waste Advisory Committee (FWAC) supports the program.
3. The program will work with existing partners, food trade associations, and health departments to increase participation in food waste reduction efforts in the region.

Stakeholders

FWAC, food recovery and diversion organizations organizations, food trade associations, health departments, food service sector

RELOOP STRATEGY 5

Establish a regional home composting training program

Reduce landfilling and transportation of organic waste by teaching residents how to compost. This approach applies to both yard waste and food waste.

ReLoop Factor	Details	Alignment
Diversion Impact	Provides a hyperlocal alternative to commercial or community composting options.	**Important**
Community Benefit	Empowers individuals to choose an environmentally friendly alternative to throwing away food scraps while also providing free compost they can use in their home gardens.	**Inspiring**
Value	Enhances the value of yard waste and food scraps by returning their nutrients to the soil, improving soil health. Gardens that use this enriched soil help strengthen local food production.	**Enhanced**
Ease of Implementation	A pilot train-the-trainer composting program launched in 2025 with support from SWMD grant funding. Expanding the number of trained instructors will allow the program to reach more communities across the region in 2026.	**Expandable**

How to get started

1. The SWMD will hire staff to implement the program.
2. Track and promote home composting training activity.
3. Support educational materials and content for train-the-trainer workshops.
4. Map community composting locations to encourage resident participation.

Stakeholders

Program staff, Missouri Organic Recycling, KC Can Compost, Compost Collective KC

RELOOP STRATEGY 6

Promote material recovery from construction waste and advocate for the "deconstruction" of buildings.

Diversion of construction and demolition (C&D) waste is most valuable when the recovered materials are used in new buildings or facilities. Remanufacturing these materials can produce lower-carbon construction products, and practices that supply materials immediately ready for reuse -- called "deconstruction" -- is less wasteful than demolition practices that destroy a material's reuse.

ReLoop Factor	Details	Alignment
Diversion Impact	Construction and demolition waste can be diverted from both sanitary and C&D landfills, and estimates suggest these materials make up as much as 20% of what is landfilled.	**Significant**
Community Benefit	Recovered construction materials can be used in new housing and accessory buildings. Local collection, sorting and repurposing efforts also create meaningful income opportunities for the community.	**Impactful**
Value	Using diverted materials in new construction represents their highest and best use, with rebuilding delivering the greatest overall value.	**Retained**
Ease of Implementation	Educating city staff, builders, and demolition contractors is essential for identifying opportunities to increase material diversion. Developing the capacity to recover, process, and reuse materials will require sustained effort over time.	**Long-term effort**

How to get started

1. Prepare a guidebook for local government to share with permit seekers.
2. Post an RFI (request for information) to identify businesses and individuals offering services necessary for C&D recovery.
3. Convene stakeholders to identify barriers and opportunities for material recovery and reuse.

Stakeholders

Habitat Restore, Ric Lutz (green deconstruction business owner), city planners, local builders and architects

RELOOP STRATEGY 7

Encourage use of scrap tires in asphalt paving

Asphalt paving includes petroleum products, binders and polymers. Scrap material from used tires can provide the same properties and has been proven to provide added durability to roads. The excess supply of used tires provides abundant resources, and the transition to use them as an ingredient in asphalt paving is already underway.

ReLoop Factor	Details	Alignment
Diversion Impact	Tires are banned from landfills, but are commonly illegally dumped because of the low value and lack of end markets for recycling.	**Significant**
Community Benefit	Capturing used tires for a material use will reduce illegal dumping and mass accumulation, which is a health and safety issue.	**Inspiring**
Value	Increasing local end markets for waste tires helps reduce disposal costs. Many solution providers in the region have already reached capacity, forcing major tire aggregators to seek disposal options outside the area and absorb higher hauling expenses. Research shows that rubber-modified asphalt, which incorporates crumb rubber from waste tires, offers several advantages. It is more durable and flexible than conventional asphalt, reduces vehicle tire wear and can improve fuel efficiency.	**Enhanced**
Ease of Implementation	The JM Fahey Construction Company currently has the equipment to process and deliver asphalt containing chipped tires to the region. ABC Tires already chips tires for use in asphalt, but exports almost all material out of the region. Getting local, county and state offices to revise their specs for roads can be challenging. It involves changing paradigms, educating civil engineers on the benefits and test results of including this new ingredient into asphalt, and expanding the number of paving companies who are open and willing to change their process and incorporate tires into their asphalt mix.	**Expandable**

How to get started

1. Look at where there has already been success: City of KCMO already implemented a “trash to roads” concept in 2025 in partnership with Live Green and the University of Missouri.
2. Share case studies like this and their outcomes. This is a great way to begin de-risking similar decisions for other cities and counties.
3. MARC SWMD has an opportunity to convene transportation planning officials in a wider exploration of circular inputs that can be incorporated into the region’s roads.

Stakeholders

State, county and municipal-level transportation officials, asphalt paving companies, Live Green, University of Missouri, Lee’s Summit Resource Recovery Park

RELOOP STRATEGY 8

Encourage the creation of businesses that process recovered materials for use in manufacturing new products locally

Today, most materials recovered in the region are sold to brokers as commodities and exported out of the region. New local businesses could take those resources and process, refine and use them to manufacturing fully-formed parts and products, increasing local value for material recovery.

ReLoop Factor	Details	Alignment
Diversion Impact	Establishing more local end markets for recovered materials strengthens the economic incentives to divert waste from landfills. As regional demand grows, recovering and selling these materials becomes increasingly cost-effective by reducing or eliminating disposal expenses and by creating new opportunities for revenue. Local end markets also help lower transportation costs, since materials don't have to be hauled long distances for processing or resale.	**Significant**
Community Benefit	For the producers of waste material (whether industrial or residential), the benefit is more abundant, convenient and affordable than recycling services. For the larger community, benefits include more new jobs, increased workforce development, and a greater tax base. It also includes more affordable products (since recovered local materials can generally be acquired for less than imported virgin material). It also adds greater resilience to disruptions in the global supply chain, and an increase in community ties and hometown pride.	**Impactful**
Value	The value of exporting recovered materials pales in comparison to the value created with additional collection. The Material Flow Analysis (MFA) for the KC Metro Area published in 2025 illustrated the difference between value of materials, parts and products. For example, parts and finished products manufactured for apparel bring 3x and 27x the value of the material used to make it, respectively. For electronics, those numbers jump to 125x and 400x, respectively. Retaining materials and using them to manufacture parts and products locally will exponentially increases value for our region.	**Enhanced**
Ease of Implementation	Requires an extension of the region's existing entrepreneurial ecosystem, increased awareness of existing financial support, and prioritizing the purchase of products containing locally recycled material. Transitioning economic development from producing products for export to producing for local consumption is termed "import replacement". It will be necessary to introduce and promote a different economic growth model to the region.	**Long-term effort**

How to get started

1. Widen the aperture of local entrepreneurial ecosystem to include focus on circular manufacturing.
2. Support organizations like KC Social Venture Studio who support local circular ventures like Kanbe's, KC Can Compost and SendBack.
3. Increase awareness of EIERA Missouri Market Development Program assisting manufacturers with purchasing equipment for utilizing recovered materials.
4. Encourage local cities and counties to prioritize procurement of locally manufactured products that contain recovered materials.

Stakeholders

Critical Material Crossroads, Foundation for Regeneration, Missouri EIERA, Economic development professionals, EDCKC, Keystone Innovation District, Lee's Summit Resource Recovery Park, city and county staff involved with procurement.

RELOOP STRATEGY 9

Engage with economic development specialists to identify opportunities for material recovery business development and growth

A circular economy thrives when economic development efforts are focused on scaling existing material recovery businesses in the region, supporting local entrepreneurs who are starting new circular ventures, and attracting material recovery companies from outside the region to bring operations here that fill in the gaps. Finding business opportunities in growing end markets for regional recovered materials is the goal.

ReLoop Factor	Details	Alignment
Diversion Impact	Expanding the capacity of existing solution providers, supporting the growth of new ones, and attracting proven models from outside the region will significantly improve landfill diversion rates—especially when these efforts are paired with the development of local end markets.	**Important**
Community Benefit	The benefit to our community is as varied as the businesses themselves (e.g., Bold Reuse enabling stadiums to embrace reusable serviceware to Missouri Organic, expanding access to rich compost and soil amendments). The main throughline with each is increased job creation and workforce development. Economic growth will happen at all scales: neighborhood, community, city, county and region.	**Hidden**
Value	Material flow analysis for the region shows that if we redirect the roughly $250 million in valuable materials currently being landfilled each year into local circular ventures, we could create more than 5,000 new jobs and build the region's next billion-dollar industry cluster. Prioritizing **import replacement** offers the highest economic value for locally manufactured goods.	**Jobs**
Ease of Implementation	The MARC SWMD made initial inroads in 2025 by convening the first forum of economic development professionals in the region focused on the circular economy. Maintaining that focus, building an increased understanding of economic potential of material recovery and prioritizing the circular economy alongside other industry clusters will take ongoing effort.	**Removable barriers**

How to get started

1. Continue to convene the region's economic development professionals and elected officials on annual/semi-annual basis to showcase success stories in other cities and highlight potential opportunities.
2. Create experiential opportunities for delegations to travel to other regions to see those circular economies in action.

Stakeholders

Economic development professionals and elected officials (local, county and state), KCADC, Port KC, Chambers of Commerce, circular entrepreneurs

RELOOP STRATEGY 10

Promote integration of the ReLoop regional recovered materials plan with transit, disaster, water quality and other regional planning efforts

Historically, solid waste management initiatives in the region have operated in a silo. Public works departments provide the service to keep the city clean, with little coordination between that department and others within the city. Equally, there is little coordination between municipalities in the region. Compounding the issue, many cities have outsourced their solid waste management to private companies.

Waste has been viewed as a troublesome liability. Through the lens of the region's new material recovery plan, it is viewed as an asset. Recovered materials can expand the economic engine of the region, reduce our reliance on imports and increase our resilience and self-reliance. It impacts all aspects of regional planning.

ReLoop Factor	Details	Alignment
Diversion Impact	The more other regional planning efforts see solid waste as a resource that can benefit the future of our region, the swifter we combine efforts to divert those resources from landfills.	**Important**
Community Benefit	Food waste capture can benefit disaster planning. Gleaning can provide greater food reserves, and composting can improve food production and soil health for local urban farmers. Both increase local capacity to feed the region when disasters impact the supply chain. Likewise, when disasters impact the energy grid, waste-to-energy operations can provide much needed sources of locally-derived backup energy. Transit, water quality, land use, housing, job creation and other planning efforts can all benefit by retaining recovered materials and increasing our capacity to use them regionally.	**Inspiring**
Value	While the full scope has yet to be explored, the region's intermodal capabilities can certainly be leveraged for our future benefit. By developing a strategic plan to attract waste materials from cities across the Midwest, we can use our competitive advantage in transportation to aggregate materials for recovery. The KC region can become a major destination for any company that is seeking a large, reliable, domestic supply of secondary materials for manufacturing and more.	**Enhanced**
Ease of Implementation	Interdisciplinary regional planning is fairly straightforward. However, most regional planning is done in topical silos. Collaboration across disciplines is not the norm, and up until now, few have seen the potential that material recovery can generate for the region. Given that starting point, it will likely take time to establish joint planning exercises.	**Expandable**

How to get started

1. Build inroads and establish relationships with other regional planning groups.
2. Share the merits of viewing recovered materials as a regional asset.
3. Develop a shared vision of what can be gained by planning with a wider lens.

Stakeholders

Elected officials, city and county staff, MARC, other regional planning groups

RELOOP STRATEGY 11

Support statewide Extended Producer Responsibility (EPR) laws for the recycling of paint, batteries and mattresses

Extended Producer Responsibility (EPR) laws establish manufacturer- and retailer-funded systems for collecting and recycling specific materials. For example, in Missouri, it is illegal to landfill lead-acid batteries. Retailers are required to take back an old battery for every new one sold and must collect a small fee ($0.50) on each new purchase to support recycling. Although this program is not considered full EPR legislation, it still delivers significant benefits by ensuring the recovery of a highly recyclable material. As a result, Missouri maintains a 99% recycling rate for lead-acid batteries.

ReLoop Factor	Details	Alignment
Diversion Impact	Expanding EPR legislation to recycle paint, batteries and mattresses would divert materials from landfills in Missouri and Kansas. Diverting paint and batteries from landfills reduces health and safety risks. Mattress diversion conserves dwindling space in current landfills that have a limited lifespan.	**Significant**
Community Benefit	In addition to mitigating risks and conserving landfill space, the benefits of EPR legislation include: material recovery (e.g., paint for reuse, critical materials from lithium-based batteries, and wood, metal, textiles and more from mattresses), behavior change that results in high levels of recycling, funding to help launch and/or subsidize recycling operations, and local job creation.	**Impactful**
Value	Recycling items generates fifty times more jobs than landfilling them, according to the Material Flow Analysis for the KC Metro Area published in 2025. EPR also encourages producers to begin redesigning products for circularity and reducing their harmful effects.	**Jobs**
Ease of Implementation	Collection points and recyclers/processors for these waste streams already exist. However, the challenge will be getting buy-in from the state legislature to pass a statute that places additional responsibilities on corporations. It's important to highlight the benefits for job creation, national defense, critical infrastructure, import replacement and local resiliency that will come as a result of the new EPR legislation.	**Long-term effort**

How to get started

1. Provide sectors with information about additional pathways to landfill waste diversion through product stewardship and extended use.
2. Highlight successful models of EPRs adopted in other states across the country.

Stakeholders

Missouri Product Stewardship Council, MO Department of Natural Resources, MO Coalition for the Environment, Circular KC, Circular STL, operators of landfills, MRFs and transfer stations, current solution providers, relevant manufacturers and retailers

RELOOP STRATEGY 12

Expand energy production from solid waste including biochar processing of biosolids and anaerobic digestion of organics.

Until behavior changes and new recycling solutions are widely adopted, solid waste will continue to be generated. Several technologies in the current marketplace can recover energy and, in some cases, valuable materials from this waste stream. Anaerobic digestion converts organic waste into renewable natural gas (RNG) and digestate for composting. Pyrolysis produces energy sources such as electricity, biodiesel and biochar, and it can also convert discarded tires into crude oil, carbon black and steel. Other systems can sort metals, glass and other inorganics from municipal solid waste and turn the remaining material into cleaner-burning fuel pellets with a BTU value similar to coal. Landfill gas emissions are also increasingly captured for energy, either used directly or refined into RNG.

ReLoop Factor	Details	Alignment
Diversion Impact	Waste-to-energy solutions can achieve high landfill diversion rates. One such solution, introduced in 2025 to elected leaders in the KC region, touts the ability to divert up to 90% of municipal solid waste (MSW) from landfills.	**Important**
Community Benefit	Using solid waste to generate energy can significantly extend the life of current landfills and alleviate pressure on local communities to determine where new landfills will be sited. Nearly all of the solutions either sequester associated carbon emissions, or provide alternative fuel that generates fewer carbon emissions than traditional sources. It also provides a locally sourced supply of energy and other products that enhance community resilience and sovereignty.	**Impactful**
Value	Producing energy from solid waste generates value, but it should be viewed as a last resort prior to landfilling. Biochar is a marketable commodity and is more valuable than energy alone. Preferably, resources will be recovered and used for their original intent. Whether it's biosolids or used furniture, the ultimate goal in the region's recovered material plan is to always keep waste circulating at its highest value.	**Enhanced**
Ease of Implementation	These operations require capital, infrastructure, permitting, land development and, most importantly, long-term agreements for waste feedstock. Besides landfill gas, whose supply is assured and easily forecasted, it's not worth the investment for these solution providers to operate unless they have a guaranteed, consistent stream of the desired waste. Landfill gas, however, has its own limiters such as proximity to natural gas service lines or off-take operations and the capital required to further plumb and extract the gas. In terms of timing, some of the solutions mentioned can be operational within a year, and some can take over ten years.	**Long-term effort**

How to get started

1. Highlight current success stories in the region: Systech Environment's WTE plant in Sugar Creek; GFL's landfill gas reformation plant in Sedalia; Cirque Renewable's pyrolysis operations; City of KCMO's Blue River biosolids facility.
2. Showcase new technologies that could be deployed in the region like those from Wastaway and ZrO Waste Group.

Stakeholders

Elected officials, public works, landfill operators, large generators and aggregators of organic waste or high-BTU waste, economic development experts

Zero-Waste Case Studies:

Barkley OKRP

BarkleyOKRP, a significant independent ad agency in the U.S., stands out for its sustainability efforts as a Certified B Corporation, reflecting its commitment to high social and environmental standards. Aiming for zero waste to landfill by 2025, the agency has already achieved a 91% waste diversion rate in 2024 through strategic recycling and donations. Partnering with local vendors, BarkleyOKRP recycled over 62,000 pounds of materials and donated 20,000 pounds of furniture, demonstrating their dedication to reducing environmental impact. The agency's waste reduction initiatives began with a comprehensive audit to establish a baseline, leading to a cultural shift in the office environment. Employees were gradually engaged through familiar practices like recycling, which later expanded to composting by reorganizing waste disposal systems and collaborating with local catering vendors to reduce waste.

BarkleyOKRP's success in sustainability is rooted in empowering passionate employees, known as B Keepers, who manage the B Corp assessment and facilitate cultural change across offices. By fostering partnerships with innovative local businesses, they have enhanced their waste management strategies. For example, the agency's collaboration with The Russell, a local restaurant, led to a swap program that minimizes catering waste without compromising the experience. These efforts are part of a broader strategy to uphold B Corporation standards, which hold businesses accountable for their environmental impact and encourage continued improvement. BarkleyOKRP's approach shows how certification, employee engagement, and strategic partnerships can drive meaningful change in sustainability practices.

Boulevard Brewing Co.

Boulevard Brewing’s commitment to sustainability, rooted in founder John McDonald’s values, emphasizes resourcefulness and respect for nature. This ethos is evident in their operational practices, like repurposing spent grains for animal feed and composting hops. Boulevard's on-site wastewater treatment plant reduces the city's cleanup burden, earning tax credits, while their zero-waste campus utilizes recycled materials. The company’s dedication extends to consumers, offering durable packaging from post-consumer waste and pioneering local recycling through Ripple Glass. This initiative successfully connects with manufacturers to repurpose glass, bolstering community recycling efforts.

In pursuit of efficiency and market share, Boulevard is shifting towards aluminum packaging, which offers advantages over glass, such as improved freshness and higher recycling rates. Despite initial resistance due to consumer perceptions, they adapted to market demands, allowing sales in venues prohibiting glass. Lessons from Boulevard

highlight the impact of leadership on company culture, the importance of customer trust, community involvement through recycling initiatives, and strategic partnerships that enhance waste reduction and resource efficiency. This holistic approach positions Boulevard as a leader in sustainable brewing practices.

Henderson Engineers

Henderson Engineers is making strides in sustainable design by integrating a Design for Manufacturing, Assembly, and Disassembly (DfMAD) approach, particularly in HVAC systems. This proactive strategy emphasizes the reuse, repair, and recycling of products to reduce waste. In collaboration with U.S. Engineering, Henderson developed a modular 16x16-inch duct module, which saves 25% in costs and 30% in installation time. The modular design aligns with circular economy principles, offering economic benefits by creating a secondary marketplace for reused products. Despite challenges in shifting traditional engineering mindsets, engaging younger engineers and showcasing the tangible benefits of standardization are key to overcoming resistance and promoting sustainability in the industry.

The development of modular ductwork not only supports sustainability but also drives economic efficiency. Henderson's interest in optimizing ventilation systems for zero waste was matched by U.S. Engineering's desire to maximize their machine shop's output. By standardizing production, they allowed for automated manufacturing, reducing labor and material costs. This innovative approach has already been implemented in projects, demonstrating significant time and waste reduction, such as a major retailer's health clinic construction. While modular design remains an edge case, Turner and his team aim to increase adoption, emphasizing the potential for significant cost savings and faster project delivery. Turner advises industry leaders to engage clients in open discussions about the benefits of circular design, advocating for a shift from traditional practices to more sustainable and economically viable solutions.

Posty Cards

In 2007, Posty Cards, a custom greeting card manufacturer, embarked on expanding its operations, aiming for LEED Gold certification to highlight its commitment to sustainability. Partnering with Turner Construction, the company achieved LEED Platinum certification in 2012, enhancing its competitive edge. Posty Cards also pursued various third-party certifications, using FSC-certified paper and 100% Green-e certified renewable energy, becoming the only TRUE Platinum zero waste facility in the KC metro area. The company implemented waste reduction strategies, such as diverting over 90% of solid waste from landfills, composting, and collaborating with vendors to create custom paper sizes, eliminating 65,000 pounds of waste annually.

Key to Posty Cards' success was collaboration, working with local companies for waste aggregation and energy recovery. Erick Jessee, the company's president, emphasized that sustainable practices can differentiate businesses, highlighting the importance of trusted advisors and vendor partnerships. Posty Cards advises others to embrace sustainable products, engage suppliers for waste reduction solutions, and involve employees in sustainability efforts. Lessons learned include the significance of environmental responsibility, vendor collaboration, and the use of secondary materials to reduce costs and waste.

Implementation Plan:

Implementation of the Reloop Plan

1. Create waste reduction playbooks for multiple sectors.
    a. The first set will focus on businesses that obtain permits from local government.
    b. The playbooks will be brief tips for waste reduction appropriate for their activities and will include a list of resources that could assist with new or expanded efforts.
    c. Playbooks will be made available to local government to share with permit seekers.
    d. The first set will target waste reduction at restaurants, bars, and events.
    e. The second set will target construction and demolition.
2. Publish a Request for Information (RFI):
    a. to identify entities involved currently and proposing new operations that divert, collect, process, or utilize organic materials.
    b. to identify entities involved currently or proposing new operations to divert, collect, prepare or utilize waste materials from construction or demolition.
3. Convene a gathering of RFI respondents to discuss:
    a. Enhanced organics management in the region
    b. Enhanced construction and demolition materials use
4. Engage and support regional efforts to develop a processing and manufacturing industrial hub to divert and utilize recovered materials.

Implementation initiatives

The MARC SWMD has adopted a set of initiatives for 2026 that advance District goals and also support the ReLoop Strategies. Continued engagement with all our regional partners will encourage and support local efforts to implement the 12 strategies.

A. Identify and expand repair, rental and borrowing services.
B. Realign Recycle More at Work program to proactively address specific sectors.
C. Expand waste reduction efforts at arenas and large venues.
D. Expand food rescue, diversion and waste prevention activities throughout the District.
E. Reduce construction and demolition waste by facilitating deconstruction and material reuse.
F. Engage with local industry and business development to expand local end markets for recovered materials.
G. Expand drop-off recycling centers in the District.
H. Support extended producer responsibility (EPR) laws in Missouri.
I. Identify and document local activities that produce energy from solid waste streams.
J. Work with MDNR staff about ways that Transfer Station operators can expand material diversion.
K. Engage with public bodies such as Chambers of Commerce and City Councils to elevate material recovery efforts.
L. Promote membership in the Regional Household Hazardous Waste (HHW) program with the goal of 100% membership in the District.