



Ohio Materials Marketplace — Year One Report



Division of Environmental and Financial Assistance
Office of Compliance Assistance and Pollution Prevention

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Summary

On April 4, 2017, Ohio EPA Director Craig W. Butler announced the launch of a new online service where Ohio businesses, not-for-profits and government organizations could advertise and acquire potentially useful products and materials that might otherwise be destined for disposal in landfills. The new Ohio Materials Marketplace (OMM) was offered as a free online platform allowing these organizations to connect and find solutions to material reuse and recycling needs.

Actively managed and marketed by Ohio EPA, with support from platform administrative partners, the United States Business Council for Sustainable Development, the Ohio By-Product Synergy Network and Ohio's Solid Waste Management Districts, the OMM has realized steady growth in participation and material transactions. The OMM ended year one (April 4, 2017 – April 4, 2018) with 3,362,000 pounds of material diverted from Ohio's landfills and saved members more than \$153,000 through virgin material substitution costs and avoided landfill costs.

First year OMM membership consists of a wide variety of business and organization types that are actively engaged in continuous transaction conversations through the marketplace platform. Material listings, both available and wanted, are as diverse as the marketplace membership yet are beginning to reveal trends in material management challenges across Ohio.

Following a successful first year, Ohio EPA will continue over the next year to direct marketplace management and marketing toward increasing OMM membership numbers and diversity while improving member participation with the desired outcome of increasing market transactions.

Please visit Ohio.MaterialsMarketplace.org for more information and a pathway to participate in the OMM.

Performance Metrics for Year One (April 4, 2017 – April 4, 2018)

580	695	116
Member Companies and Organizations	Registered Marketplace Users	Marketplace Conversations
169	1,681	11
Materials Listed	Tons Exchanged	Completed Transactions

Background

During the 1990s and early 2000s, Ohio EPA maintained a program called the Ohio Materials Exchange (OMEX). OMEX allowed companies to list available and wanted by-product and waste materials for exchange promotion through print and electronic media managed by Ohio EPA's Office of Pollution Prevention. OMEX was handed off to an external party to manage and eventually ended after a few years under new management. Familiar with the past successful operation of OMEX, and a proponent of Ohio's developing circular economy, Director Butler named reviving this program as one of his key priorities of 2016. Several months later an online exchange platform was licensed from the United States Business Council for Sustainable Development and launched as the Ohio Materials Marketplace (OMM) on April 4, 2017.

Active Design

What differentiates OMM from other online markets is that the platform is active in design and functionality rather than passive. Previous models, such as OMEX and similar services in other states, worked as a simple bulletin board with little or no engagement by the host. Ohio EPA maintains OMM and markets the site to potential users, verifies that users (and items posted) meet qualifications to participate, and actively works to facilitate connections between users. The new platform also allows for remote administrative engagement of materials management experts beyond Ohio EPA to help identify and foster transactions. Furthermore, the choice of a web-hosted platform provides a familiar tool that allows businesses, not-for-profits and government organizations to connect and find reuse and recycling solutions for waste and by-products. OMM includes an interactive messaging system, utilizing a simple texting feature integrated with email. Members may easily find and communicate with each other to investigate potential transactions free from advertising or unwelcomed participants.

Circular Economy

In the circular economy, products and by-products recirculate productively through reuse, remanufacturing, recycling and maintenance. The April 2017 launch of OMM was hailed as a significant step to shift Ohio from a take, use and dispose model to one emphasizing recycling, remanufacturing, reuse and maintenance. OMM's free online materials and waste exchange encourages a dialog between members and provides a forum where they can connect and find reuse and recycling solutions for waste and by-products.

The OMM platform is particularly useful to member organizations that have established organizational goals to participate in the circular economy, achieve zero waste, or otherwise avoid landfill disposal.



Cost Savings

OMM users include recycling processors, manufacturing plant operators, artists, sustainability managers, small businesses owners and construction managers. Successful transactions have included plastics bottle caps, electronic waste, wood pallets, metal and plastic drums and spent lime. For each transaction completed an economic benefit was realized by one or both parties. OMM members can save, or even make money by finding a market for their unwanted materials and avoiding landfill tipping fees. Buyers save money by having access to sellers' discounted (or free) materials, and both Ohio's citizens and the environment benefit by having more material removed from the waste stream. It literally pays to participate in the OMM.

Membership Profile

In the first year OMM grew to nearly 700 members. This steady growth (Figure 1) was the result of multiple outreach efforts and working closely with OMM administration and marketing partners. The Ohio EPA team and partners have made dozens of presentations marketing OMM at conferences and other events, as well as to trade associations, communities and individual businesses. The team also hosted educational webinars, and produced a package of marketing materials for use by our partner solid waste management districts. The diversity of membership reflects our work with many businesses throughout Ohio, with members located across the entire state (Figure 2). Membership also includes several material takers from other states.

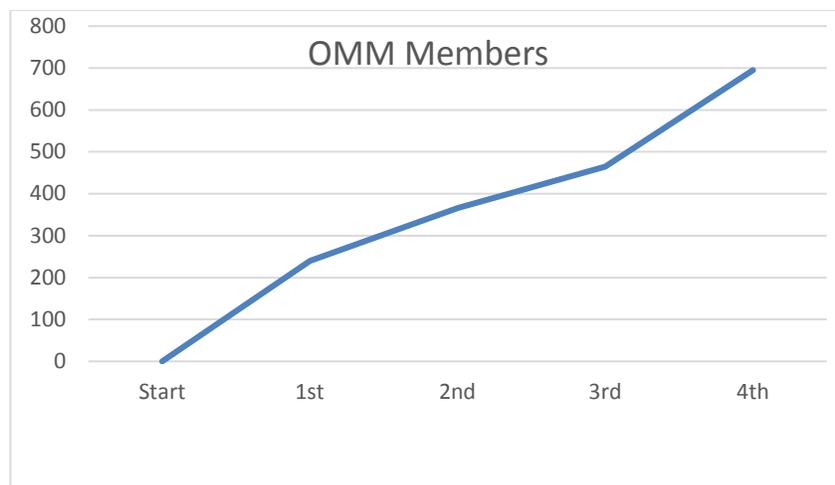


Figure 1 — Steady growth of marketplace participation during the four quarters of year one (April 4, 2017 – April 4, 2018).

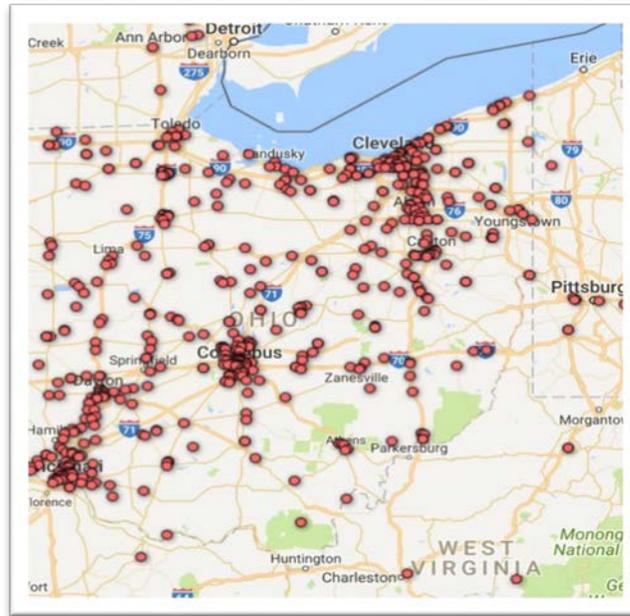


Figure 2 — Map illustrating marketplace member locations throughout Ohio.

An analysis of OMM membership reveals a diverse mix of business and industry. More than two dozen different industries, organizations and businesses are represented, illustrating the many resources available and material needs within Ohio. The three largest categories are: Waste Industry; Public and Community Service; and Business Services (Figure 3). The Other category includes: Food Services; Recreation; Furniture Manufacturing; Wood Products; Fossil Fuel Manufacturing; Water Utilities; Paper Manufacturing; and Non-Metallic Mineral Manufacturing.

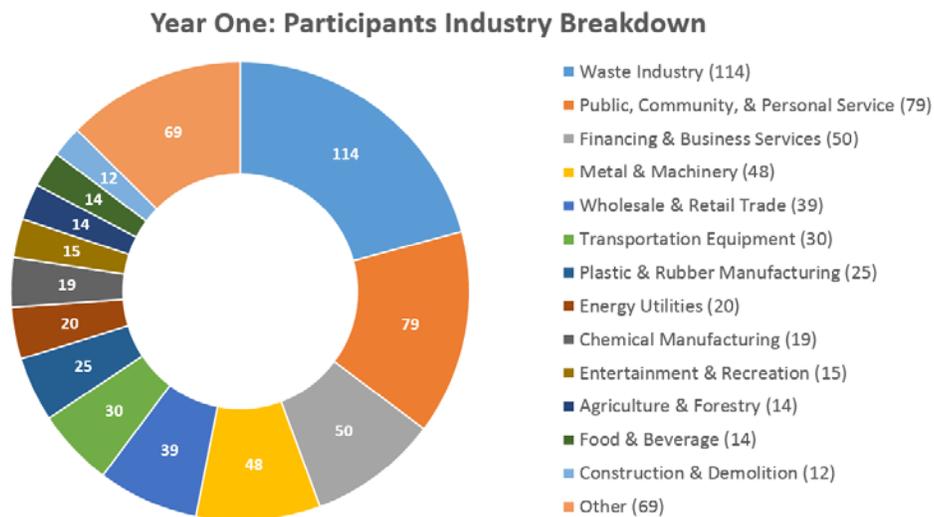


Figure 3 — Year one marketplace member makeup based on business type.

Material Listing Profile

OMM has demonstrated consistent growth in the number and variety of postings for materials available as organizations join the platform and post the material they wish to offer. While material listing numbers change over time as new materials are added, transactions occur or materials become unavailable, at the end of the first year of operation 125 material listings were posted representing 23 general material categories. The diverse materials offered range from industrial magnets and furniture to pallets and spent lime. Quantities range from single units to more than a thousand tons of material.

The most frequently posted items include excess packaging and wood materials. By volume, organic materials such as spent lime lead all others. A common trend that emerged in the first year was an ongoing struggle for many Ohio businesses to find reuse and recycling opportunities for wooden pallets and cardboard/polymer packaging materials.

Figures 4 and 5 provide a summary of the categories of materials available and wanted at the end of the first year of operation. Ohio EPA regularly produces and distributes a member's update that highlights certain new material listings and suggests reuse opportunities. Similar updates are posted for public access on the OMM landing page.

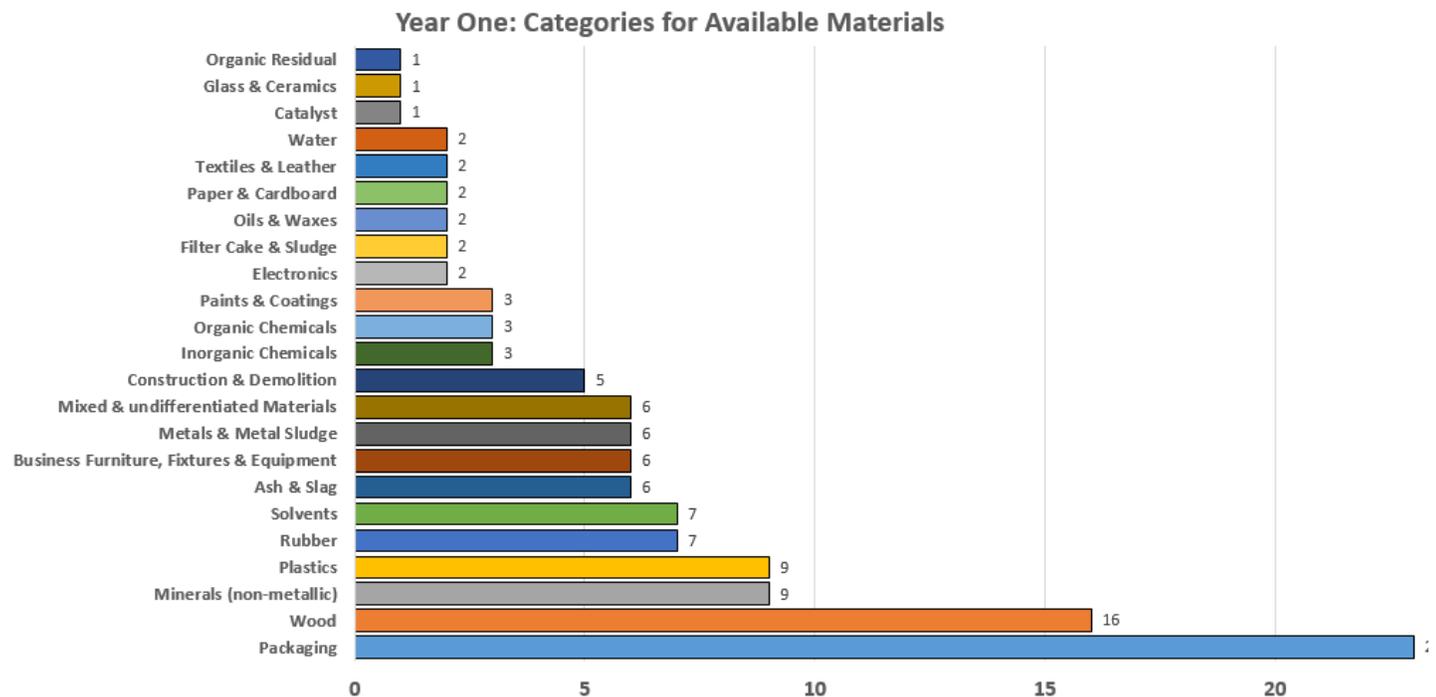


Figure 4 — Year one available materials by category.

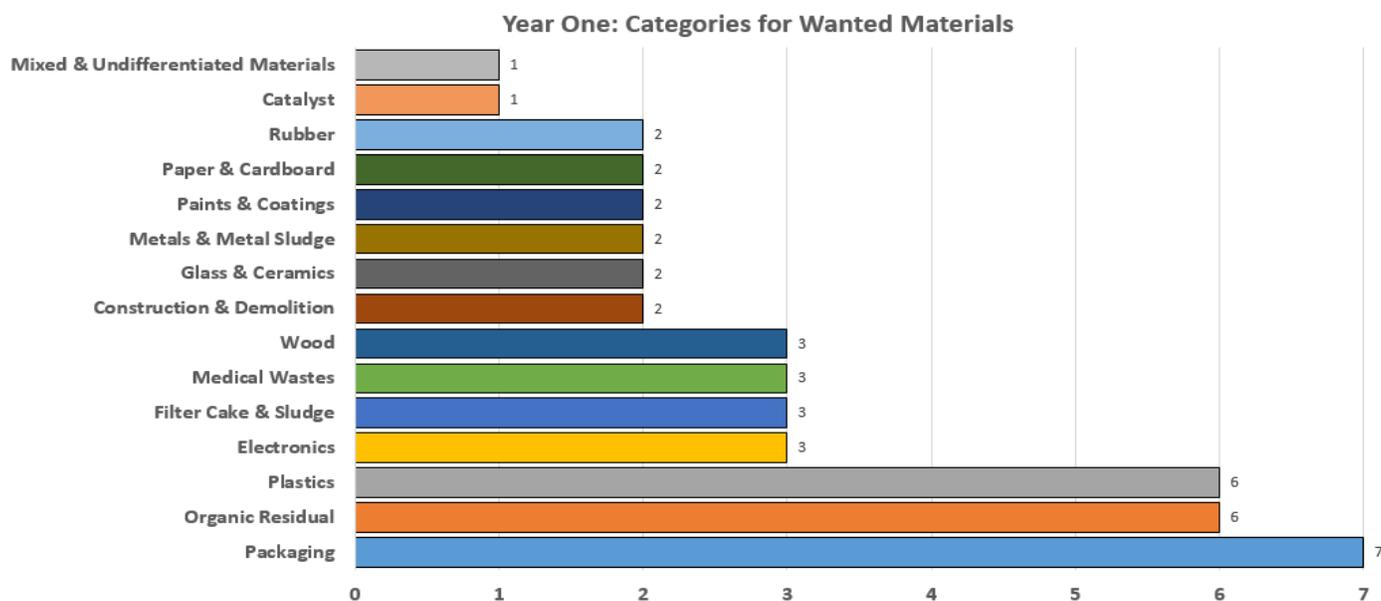


Figure 5 — Year one wanted materials by category.

Marketplace Exchanges

Growth and Success

Several weeks after the program launch, two members recorded the first successful marketplace transaction. Nearly five tons of waste plastic bottle caps were transferred from one Ohio business to an intermediate processor that transformed the plastic bottle caps into pellets that would be sold as raw material for manufacturing into new hard plastic items. Since then, several more transactions have occurred each quarter of marketplace operation (Figure 6).

- A small Ohio brewery found a local recycler to take both electronic waste and used wooden pallets.
- An Ohio car wash found a recycler to take more than 1.5 tons of plastic drums and containers generated during a facility cleanup.
- 25 tons of unused specialty vermiculite no longer needed for its original purpose were transferred out of Ohio to a marketplace member for discounted resale in a new sales market.
- Working on behalf of her client, a member consultant helped divert from the landfill an additional nine tons of used plastic and metal drums to a member recycler.
- 15 tons of excess clean carbon black found an opportunity for use through the marketplace.

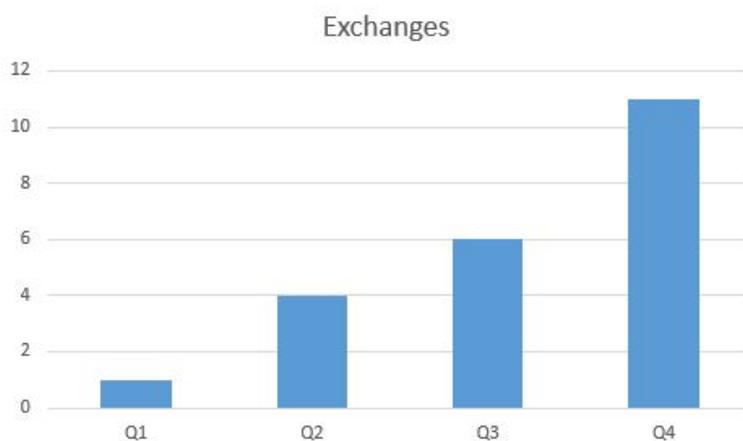


Figure 6 — Cumulative number of exchanges on the Marketplace during the four quarters of Year One (April 4, 2017 – April 4, 2018).

- Numerous unique single-use large metal crates were diverted from recycling when a nearby farm found them on the marketplace and determined that they could be reused as they were.
- The largest transaction recorded involved more than 1,600 tons of spent lime waste from an Ohio manufacturer taken by an organic materials management business for redistribution to local farmers as a soil amendment.

Platform Partnerships

Year one would not have been as successful without the support, outreach and assistance from our OMM platform partners. This includes assistance in developing an initial marketing plan and related outreach materials. Below is a brief spotlight of four of our platform partners and their contributions to year one of OMM.

Platform Administrator Spotlight

United States Business Council for Sustainable Development (US BCSD)

The US BCSD licenses, hosts and supports the OMM software platform. Their staff are materials reuse and sustainability experts who, along with the Ohio EPA team, monitor OMM and actively engage members to successfully further material transactions. They also work to expand OMM membership through marketing to their own association members which include many major industries with a presence in Ohio. The US BCSD actively promotes the circular economy and materials marketplace concepts both nationally and internationally through hosted conferences, association meetings, other public engagements and electronic media.

Partnership Spotlight

Ohio By-Product Synergy Network

The Ohio By-Product Synergy Network (Ohio BPS Network) supported and provided important feedback during the early development stages of OMM. Ohio BPS Network has continued their support by featuring and marketing OMM in their bi-monthly meetings, actively encouraging their members to join OMM, and allowing current OMM members to attend their meetings and participate in synergy building. The largest transaction recorded in year one was initially facilitated during an Ohio BPS Network meeting.

Partnership Spotlight

Cuyahoga County Solid Waste District

The Cuyahoga County Solid Waste District has been actively educating county businesses and organizations about OMM. Activities include multiple hands-on presentations with regional trade groups and associations as well as OMM inclusion in the Waste and Recycling Sense for Your Business workshop. They have also encouraged their county recycling partners to join, which helped result in a successful transaction.

Partnership Spotlight

Hamilton County Recycling and Solid Waste District

Hamilton County Recycling and Solid Waste District operated a successful regional waste exchange, The Interchange, for many years. Realizing the impact, potential and benefits of a state-wide platform, they ended The Interchange in December 2017 and encouraged their participants and partners to join OMM. These new OMM members created additional opportunities for successful transactions and realized expanded access to members across Ohio.

Year Two Objectives and Goals

Growth in membership has met expectations. However, frequency of transactions has been limited, most likely due to the network effect illustrated below (Figure 7). A strategic plan for marketing OMM has been created to address this effect.

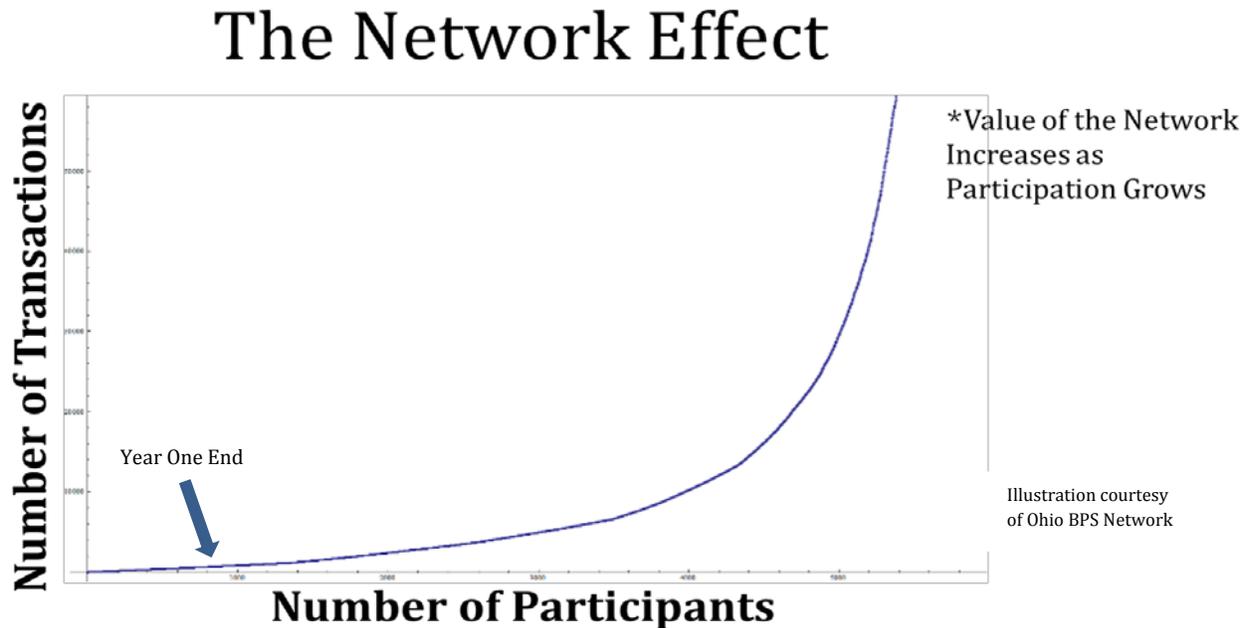


Figure 7 —Potential Network Effect as OMM participation grows.

In accordance with the year two marketing plan, marketplace management and marketing will continue to be directed toward increasing OMM membership numbers and diversity while improving member participation with a goal of 33 transactions by April 2019.

To accomplish the above, Ohio EPA's OMM management team will work to build upon existing external administrator partnerships (solid waste management districts, Ohio BPS Network, etc.) to further awareness and promotion of OMM. Ohio EPA will also explore existing lists of organizations for new direct marketing or to encourage the pass through of OMM information. Finally, the team will contact current members with active postings to help improve the quality of information presented and will contact all members without current postings to better understand and address barriers to listing available or needed materials.

Year Two Marketing Goals:

- Identify effective means for recruiting new business members to expand network
- Maintain steady growth of participating companies and expand network
- Increase the number of completed transactions by 300 percent
- Identify range of stakeholders and set priorities
- Establish timeline for marketing program



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