

# Expanding Building Material Reuse

Austin Sustainable Building Materials Forum | June 30, 2017

## About the US BCSD

An action oriented and member-led nonprofit business association that harnesses the power of collaborative projects, platforms and partnerships to develop, deploy and scale solutions to ecosystems, energy, materials and water challenges.



# The Materials Marketplace

An award-winning regional & national platform to facilitate company- to- company industrial reuse. Through the cloud-based platform, traditional and non-traditional industrial waste streams are matched with new product and revenue opportunities, ultimately enabling the culture shift to a circular, closed-loop economy. In addition to diverting waste from landfills, these recovery activities generate significant cost savings, energy savings, and create new jobs and business opportunities.



# 2013

Materials Marketplace software development begins with the Hebei By-product Synergy Project, a part of the US-China Ecopartnerships Program.

austin materials marketplace



# 2015

US Materials Marketplace launches as a pilot in the summer of 2015. Key metrics included 23 companies, 78 facilities engaged, 150 materials listings, 2.4 million tons of material and 68 recommended matches over just 90 days.



TOP PROJECT OF THE YEAR 2016

# 2017

Ohio Materials Marketplace launches with support from the Ohio EPA. Tennessee slated to launch summer '17.

Materials Leadership Council launched with ECOS.

US Materials Marketplace re-launches on new Marketplace platform.



ECO PARTNERSHIPS

# 2014

Austin Materials Marketplace project launches in Austin, Texas with support from the City of Austin. This is the first US project to utilize the new Materials Marketplace platform. Grows to 100 participants and facilitates 50+ deals in Year 1.



# 2016

Pathway21 is launched to scale the Materials Marketplace platform, begins development on the new Marketplace software platform.

First non-pilot national scale project launches in Turkey using the new Materials Marketplace.

In the US, interest in state projects begins to build in OH & TN.



*austin*  
**materials  
marketplace**



Launched to the public in **August 2014** to bring together businesses of all sizes and entrepreneurs in the **City of Austin** and **Travis County** to create closed-loop systems in which one company's waste is another company's raw material.

The Austin Materials Marketplace has won awards and recognition as a local **economic development** driver, and continues to be one of the City's top resources for businesses and organizations looking to divert materials from landfill and participate in Austin's emerging **circular economy**.

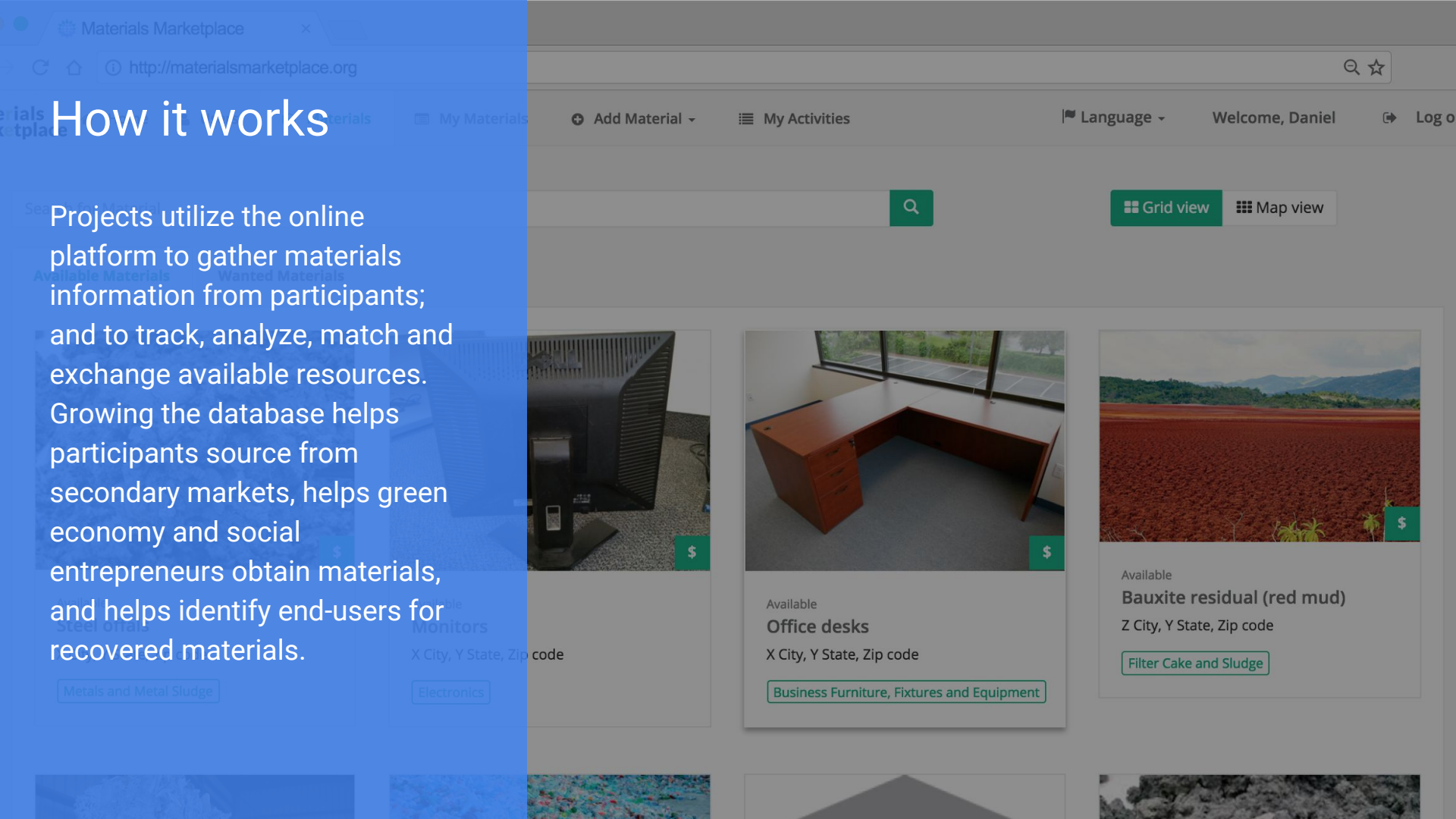
**Website:** <http://austinmaterialsmarketplace.org>

**Scale:** city

**Status:** active since 2014

**Key Metrics:**

- **260+** transactions
- **35700ft<sup>3</sup>** Diverted from Landfill
- **530** MTCO<sub>2</sub>E Avoided
- **232** Active Businesses and Organizations
- **\$235,000** in Disposal Savings & Value Creation



# How it works

Projects utilize the online platform to gather materials information from participants; and to track, analyze, match and exchange available resources. Growing the database helps participants source from secondary markets, helps green economy and social entrepreneurs obtain materials, and helps identify end-users for recovered materials.

Metals and Metal Sludge

Electronics

X City, Y State, Zip code

Available

**Office desks**

X City, Y State, Zip code

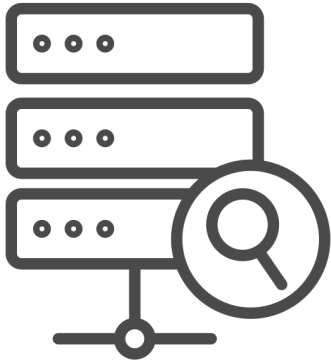
Business Furniture, Fixtures and Equipment

Available

**Bauxite residual (red mud)**

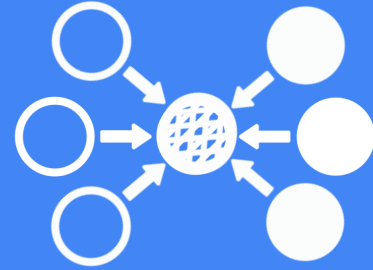
Z City, Y State, Zip code

Filter Cake and Sludge



# Problem Finding

Iterative and integrative; seeks diverse data and methods; experiential; analogical; uses fresh framing; and simplifies instead of adding complexity.



# Problem Solving

Linear and convergent; relies solely on existing information; routine; logical; uses common language; and is typically complex.

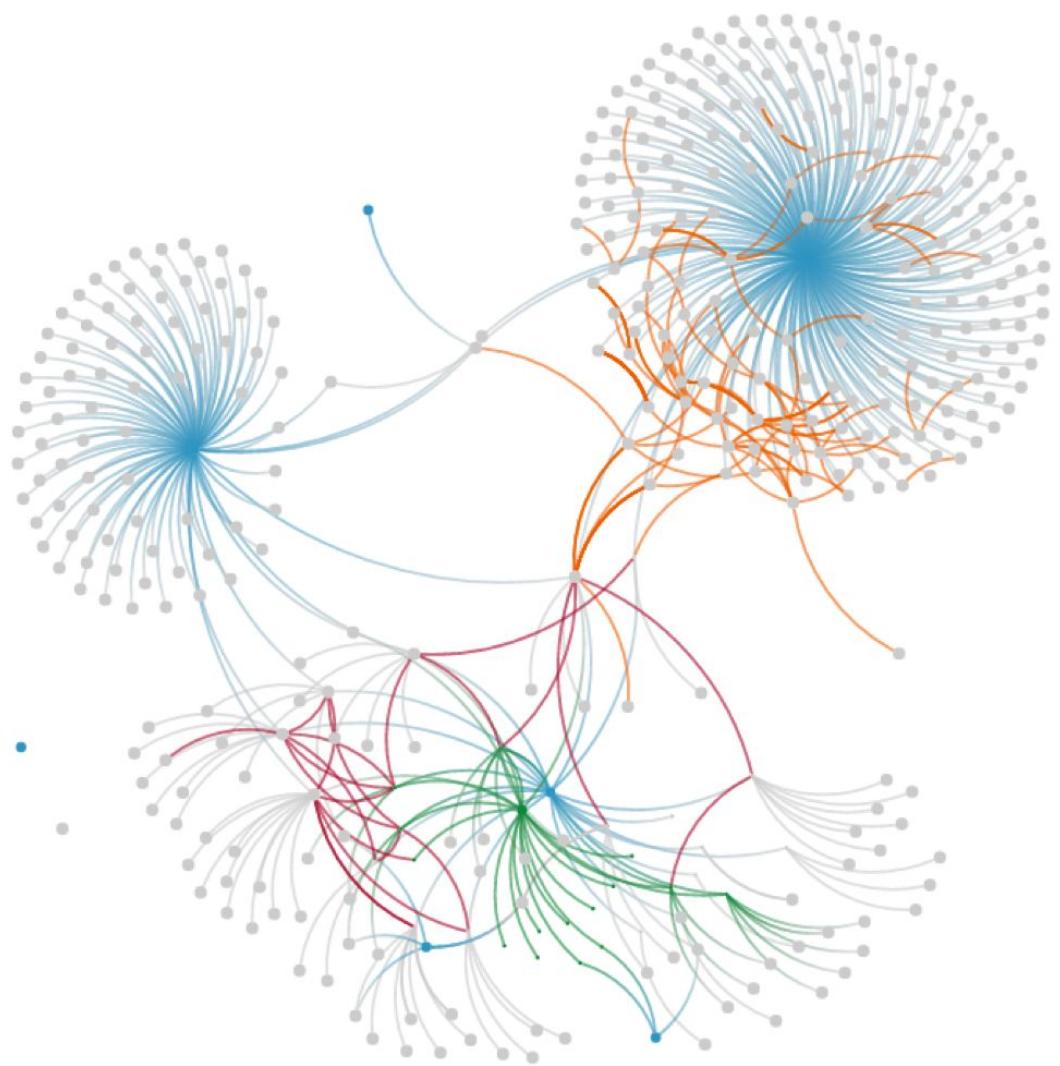
“We fail more often because we solve the wrong problem than because we get the wrong solution to the right problem.”

Russell Ackoff, 1974

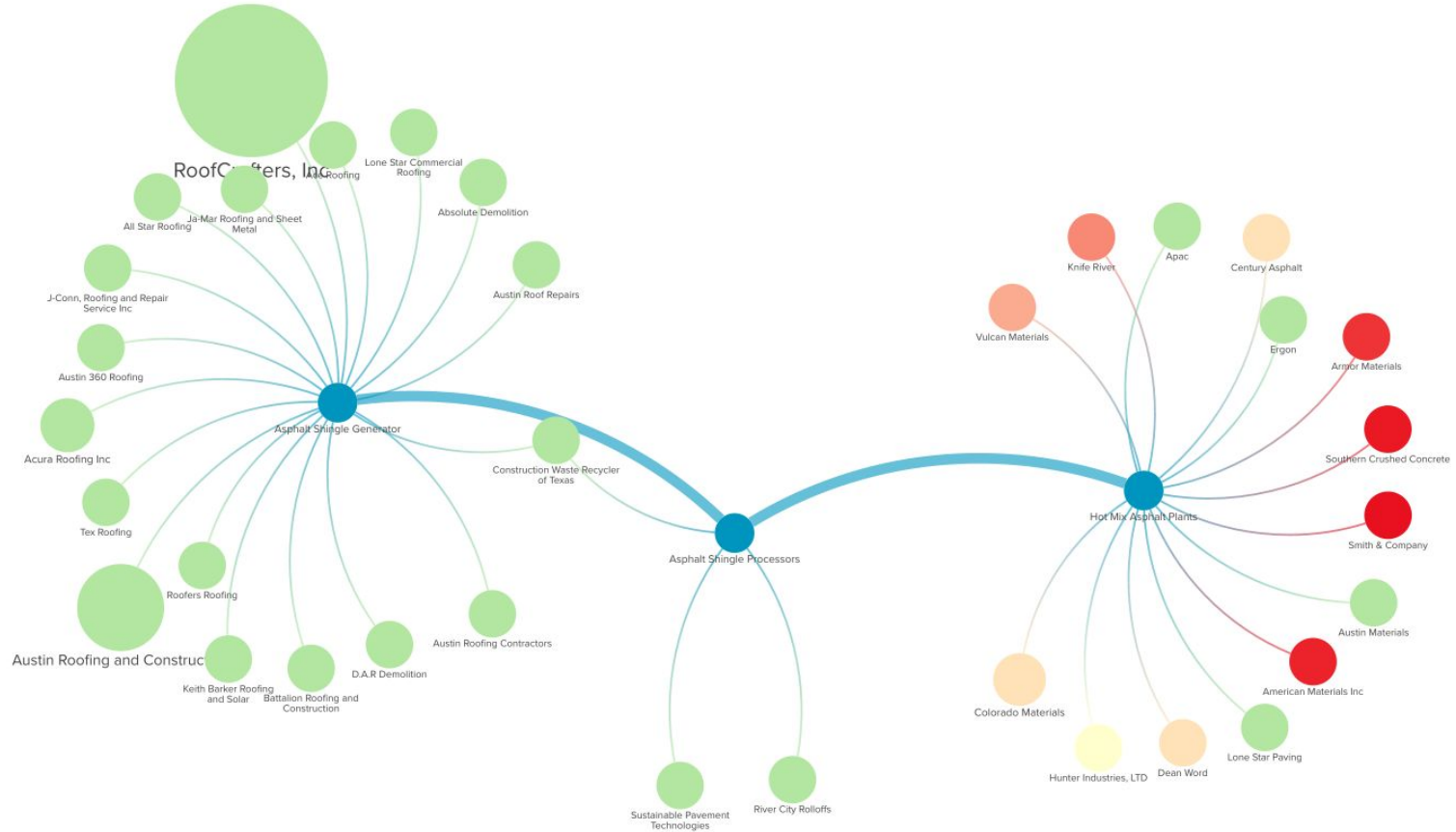


# Systems Approach

Engaging diverse organizations and industrial systems to create networks that foster reusability, collaboration, co-innovation and other forms of synergistic exchange.



# Looking at the System: Asphalt Shingles



## Use Case: Steel Offal

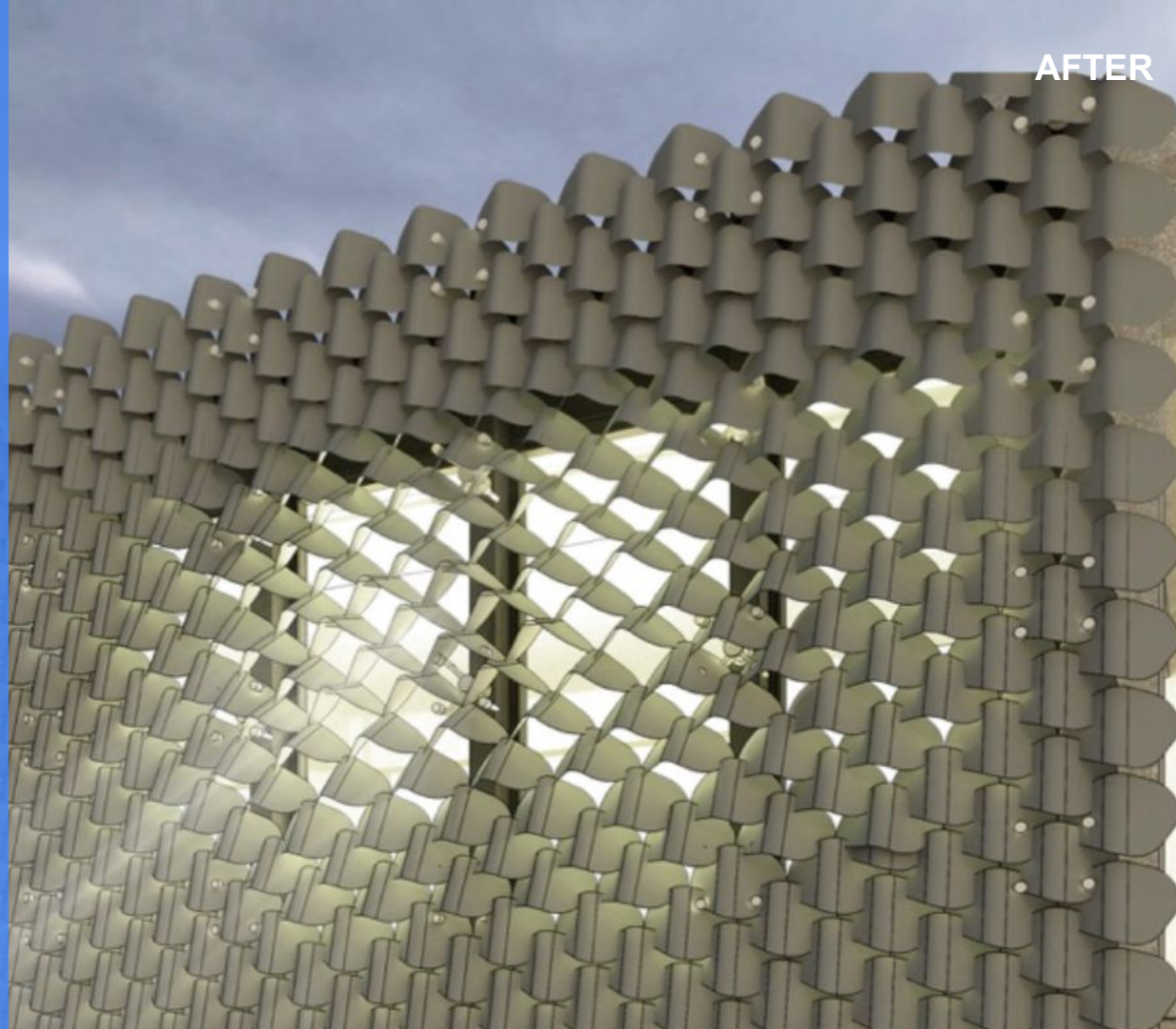
A steel by-product of General Motor's stamping operations. In the US, GM produces ~40,000 pieces per month in about 12 different shapes and sizes. Due to its consistent size, quality and predictable quantity, pieces have reuse potential and value beyond traditional scrap metal markets.



BEFORE

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