

AUSTIN

DEVELOPING THE MATERIALS MARKETPLACE

Creating new value and saving city and business costs



GOVERNANCE
Austin City Council

POPULATION
968,148

GDP
123 billion USD

DENSITY
1,335 per km²

AT A GLANCE

THE INITIATIVE

The City of Austin's ambition to reach zero waste by 2040 has generated several initiatives, including the creation of the [Austin Materials Marketplace](#), an online materials exchange platform. Aligning with circular economy principles, the platform's ambition is to keep materials and products out of landfill and in use, not only reducing waste management expenditure for the city, but also providing the means for local businesses to advertise and bid for surpluses, thereby benefiting from cost savings or creating additional income.

TIME FRAME

The United States Business Council for Sustainable Development (the USBCSD), a non-profit organisation that works with businesses to find solutions that address environmental and resource challenges, won the city's contract to develop and manage the Materials Marketplace. The contract began in April 2014, with the launch of the Materials Marketplace in August of the same year and runs until 2020 when the programme will be reviewed.

Planning, budgeting, testing and developing the Materials Marketplace took approximately two years and policymakers were integral to the development.

FOCUS AREAS

The Materials Marketplace is designed to attract users from across different sectors as discarded materials from one company can be valuable input materials for another. Materials advertised and sought on the Materials Marketplace include construction and demolition materials, plastics, organics, and packaging.

CORE TEAM & EXTERNAL PARTICIPANTS

The programme is run by a Project and Contract Manager from the City of Austin alongside the USBCSD team.

Over 500 businesses, institutions and not-for-profit organisations have signed up as participants of the Materials Marketplace.

FINANCE

For each of the first two years of the initiative, the Materials Marketplace received USD 175,000 - funded by the [Austin Resource Recovery Department](#) (ARR), an enterprise department within the City of Austin which in turn is funded through resource recovery rates and a clean community fee. The funding has decreased annually with the intention that the platform will generate a self-sustaining revenue by April 2020. In 2018, the public funding was approximately a half of what it had been at inception.

LEAD POLICY LEVERS



ROADMAPS AND STRATEGIES



CONVENING AND PARTNERING



AWARENESS RAISING



CAPACITY BUILDING



FINANCIAL SUPPORT



LEGISLATION AND REGULATION

For more see [Policy Levers](#)

OUTCOMES TO DATE

By the end of 2018 the Materials Marketplace had engaged with over 530 participants on the platform. In the period October 2017 to September 2018, an average of 20 trades per month were processed. At the point at which 593 trades had been made, a net value of USD 622,772 had been generated. This includes the amount paid for each trade, in addition to the sellers' estimated disposal

cost savings, and the amount the purchasers saved by not having to buy a new item.

The trades have resulted in:

- Over 400 tonnes of material diverted from landfill
- Over 950 million tonnes of carbon dioxide equivalent emissions saved

THE JOURNEY

ORIGINS

The USBCSD, based in Austin, had already been working with businesses regionally and nationally to find convenient ways of connecting the material input needs of one manufacturing business, with the material disposal of another business.

This work, along with other materials exchange programs in the US, was the inspiration behind the creation of an electronic 'clearing house', that matched supply with demand and diverted materials and products from landfill. Recognising these circular economy practices and the city's wider strategy to achieve Austin's zero waste to landfill by 2040 goal, city staff worked with the ARR Director to develop the concept of a materials exchange programme for Austin.

The concept was put out to tender, USBCSD won the bid and the Materials Marketplace was born.

The circular nature of activities on the Materials Marketplace also complement the work of Austin's Recycling Economic Development programme whose mission is to provide advice and support to zero waste companies, and promote opportunities for local job creation. The programme includes the provision of a [Recycling and Reuse Enterprise Resource Guide](#) which provides information on local programmes, services, resources, community groups, and regulations relevant to zero waste entrepreneurs and in keeping with Austin's 2040 zero waste goal. Other policy initiatives in Austin also work to support the Materials Marketplace, such as regulation in the form of [Universal Recycling Ordinance](#). These mandate commercial property owners in Austin (such as apartment blocks, office buildings and warehouse facilities) to find ways to provide convenient recycling access for tenants and employees thereby diverting discarded materials and products from landfill. The Materials Marketplace provides an additional way for commercial property owners to address their disposal needs and realise a revenue stream in the process.

The Materials Marketplace is now well established, with transactions between businesses taking place on a regular basis. The online platform is now undergoing a software upgrade to improve user experience, attract new businesses, enhance reporting functionality, and develop improved revenue creation to support the platform.



LAUNCHING

The Materials Marketplace has initially been funded by ARR, formerly known as 'Solid Waste Services', which promotes waste reduction and resource recovery. The Materials Marketplace is positioned by the ARR as a tool to help businesses address their material input and disposal requirements. In parallel, the ARR also holds events and workshops to bring together multiple stakeholders, raise awareness of the platform and other opportunities, and build knowledge and capacity in Austin.



MEASURING PROGRESS

As part of the commitment to running the Materials Marketplace and to qualify for ARR funding, the USBCSD reports back to the City of Austin on a monthly basis. Each trade is recorded, including details of who the trading parties are, the value of the exchange, the type and quantity of products or materials traded, and their final use. The overall value of trades, which includes avoided disposal costs and avoided costs of purchasing materials through other means, is also tracked.

To determine the value of each trade and track what is being diverted from landfill, each trade is given a weighted score according to the type and

quantity of materials and products. For example, construction and demolition (C&D) concrete would have a lower rating by volume than C&D gypsum board due to the limited local market for gypsum and the toxic gases it creates in landfill. Therefore C&D gypsum receives a higher weighted score for successful diversion. The [current program metrics](#) for the Austin Materials Marketplace provides an overview of engagement to date, a breakdown of the materials available and required, and diversion from landfill data.

The [Waste Reduction Model](#) produced by the United States Environmental Protection Agency is used to track and report greenhouse gas emissions reductions.

REFLECTIONS**Applying circular economy principles supports government targets and can unlock revenue opportunities.**

Austin has embraced circular economy principles as a way to help meet its zero waste by 2040 goal. The city's Material Marketplace is one measure, amongst a package of policy initiatives, that has helped to find new solutions that avoid valuable materials being sent to landfill, and has provided opportunities for entrepreneurs and businesses. The Universal Recycling Ordinance mandates is another, compatible measure, as is the compilation of the Recycling and Reuse Enterprise Resource Guide. The City of Austin's spirit of collaboration has also played a key role. The city has a history of engaging with local businesses to promote the economic benefits of working in different ways, through organisations such as the [Austin Energy Green Building Programme](#) and the [Green Business Leaders Programme](#).

Building a suite of complementary and reinforcing interventions.

In 2015, Austin launched the [\[Re\]Verse Pitch Competition](#), a complementary initiative to the Materials Marketplace. It connects businesses seeking disposal solutions for products that may be less in demand, with entrepreneurs and advisors who are pursuing opportunities to develop innovative ways of repurposing materials. The most impactful ideas receive funding and in-kind support to launch. [Re]Verse Pitch was launched together with the USBCSD and several additional community partners.

Gathering insights and learnings for future initiatives.

The Materials Marketplace was initially offered as a free service, making the transition to a fee paying structure harder, particularly amongst non-profit organisations or infrequent users. With a desire to transition the Materials Marketplace to generate a self-sustaining revenue stream, the platform currently suggests a voluntary donation for each transaction, and is working to establish a percentage-based transaction fee in the future.

Storage and transportation of products and materials has been another learning area. The platform relies on platform-users managing this, rather than creating a dedicated USBCSD storage place which would change liability and risk factors for the initiative. Materials kept in a dedicated warehouse would require the USBCSD taking ownership of them, diverting time and resources from the primary aim of finding new users. USBCSD is therefore currently working with local third-party shippers to find appropriate fee-for-service transport solutions.

FOR MORE INFORMATION

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This case study is part of [Circular economy in cities](#), Ellen MacArthur Foundation