



AlphaBrick helps municipalities overcome blight and divert waste from landfills while providing investors with competitive return

The Challenge: Urban blight & landfill shortage

Landfill shortage:

- The EPA states that recycling is growing substantially, however, there is still a **global crisis in the growing amount of landfills**. The world is estimated to produce 1.3 billion tons of landfill waste annually, with a projected increase to 2.2 billion tons by 2025. The U.S. is the #1 trash-producing country in the world at 1,609 pounds per person per year. It is estimated that 45% of landfills are from construction waste and demolition.
- The environmental problems caused by landfills are numerous: **Pollution to local environment** (contamination of groundwater, aquifers, and soil) due to leaching from landfills are extremely harmful to human, plant, and animal life. **Greenhouse Gas Pollution** (methane) is generated by decaying organic wastes in a landfill, it is a potent greenhouse gas 21 times more potent than carbon dioxide and landfill sites account for 12% of total global methane emissions. **Detriment to future generations are currently not understood** and have not been researched fully. Decomposition rates of some items could range from 500 – 1000 years or more.

Urban Blight:

- Urban blight, the decay or deterioration of an urban area (building, lots, and houses) due to neglect or age, is a **significant problem widely faced by cities all across the U.S.** According to the Census, the total number of abandoned / vacant foreclosure houses in the United States grew by over 4.5 million in the last ten years (a 44 percent increase).
- Abandoned houses and vacant apartment buildings are a common part of the landscape in large and small industrial cities that have lost their population and job base. Many of these buildings will be demolished in the coming years, some due to being beyond repair, others due to lack of demand for rehabilitation

- Not only do these properties exacerbate health and safety hazards, they also devalue neighborhood properties and attract crime. Further, blight is costly for local municipalities as they have to pay a hefty upkeep costs.
- Budget-constrained local governments rely on expensive large-scale demolition in revitalization efforts, but despite a lower upfront cost, these **demolitions are complicated and more expensive long-term, dragging down funding of productive public projects with property maintenance costs.** Furthermore, when these properties are finally demolished, thousands of dollars of intrinsic economic value in building materials is bulldozed, crushed, and buried.

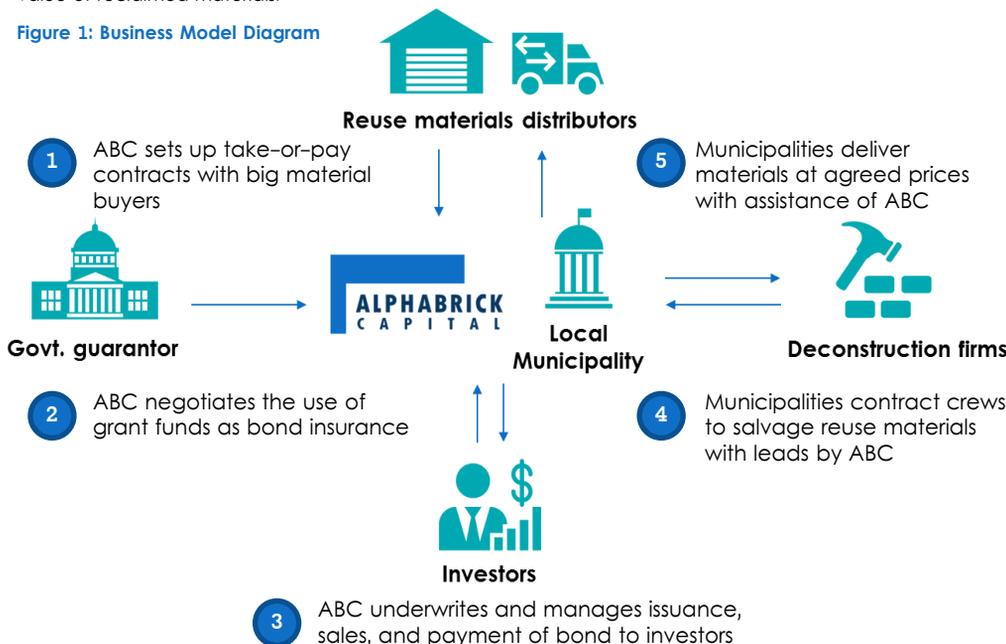
Solution & Investment Thesis: Scaling a value stream

- Deconstruction is a proven method of recovering building materials for resale and reuse.** It is cheaper in the long-term, poses fewer safety and health risks, and much simpler to manage. The lifecycle cost of a deconstruction is cheaper than demolition, even before factoring impact externalities.
- The materials recovered from deconstruction projects building material recovery are of higher quality than most new materials.** Some materials, such as old-growth lumber, are irreproducible in today's ecology and demand price premiums 4x that of typical quality lumber. Even blighted commercial and residential property is a standing inventory of valuable and in-demand lumbars, metals, and plastics.
- The primary challenge to catalyzing this market is scale.** Reuse material resale is a cottage industry limited to niche demands of local markets. Small warehouse retailers cannot supply inventory at enough scale to access these supply chains.
- AlphaBrick can accelerate the development of an efficient market by rapidly consolidating the cottage industry** of undervalued firms under a roll-up strategy in order to coordinate operations, implement efficiencies, and achieve the scale to access the existing distribution networks in what is sometimes called "reverse logistics."

Investment Opportunity

AlphaBrick Capital's ("ABC") goal is to **bridge investors looking for solid market rate returns with financially challenged local municipalities who want a decrease in blight and filling in demand for the reuse materials distributor through a municipal bond.** With our business model, we have identified the opportunity to scale the deconstruction and reuse material market to reach scale economics and access the full value of reclaimed materials.

Figure 1: Business Model Diagram



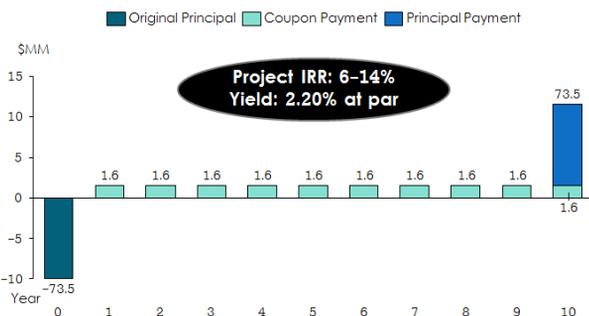
Why Municipal Bonds?

- Municipalities are the single biggest payor of the costs of urban blight
- Municipalities are familiar with managing urban renewal deconstruction
- These bonds provide cash-constrained municipalities familiar, cheap access to capital
- The required return and payout policy best fits the project return profile
- Most target state credit ratings have improved over the last few years and generally 50-100 times less likely to default vs. corporate bond of comparable ratings

Financial Instrument

- AlphaBrick partners with municipalities to arrange, issue, and sell DeconBond municipal revenue bonds. These bonds are insured by the very grant money that would otherwise have been drained for the commission of demolitions.
- An illustrative portfolio of 40,000 homes (representative of a state like Ohio or Louisiana) over 10 years would seek \$73.5 million. There are over \$1 billion to be invested across the United States in DeconBonds. The Investment project is expected to run for 10 years for each bond and each bond has a 10-year term to maturity.
- The upfront capital will be deployed in the first year to contract the deconstruction, transportation, and sale of material of 4,000 properties. Follow on years will use cash flow from revenue to fund continued operations.
- In Dec 2015, congress passed a \$2B federal fund to eliminate blight. We'll work with the federal and state governments to hold on to this capital as bond insurance for our bonds.

Figure 2: Alphabrick Expected Cash Flow



Assumptions: Discounted deconstruction fees of \$5K. 4000 deconstruction projects/year, \$80K average salvaged materials appraisal values per home with 25% resale price. 40. Assumes guarantees by US federal govt.

Fund Profile

Type	Municipal Revenue Bond
Issuance	\$73.5MM
Rating	AA Insured (shadow: BBB)
Term	10 Years
Size	40,000 deconstructions
Target Investors	Institutional investors, municipalities, local retail investors
Yield	2.20% Insured (Market rate)
Payout	Semi-annual coupon + bullet at maturity
Underwriting Spread	1%

Risk & Mitigation

Risk	Mitigation Strategy
State and municipalities are the center of operations (bureaucracy)	Financial instrument follows a tried and true model that mimics industrial development and green bonds. The instrument also creates a lot of incentive for government entities.
Lower material resell values impacting revenues	Model takes a conservative view of outcomes and the promised return is less than half the expected return. Perform a thorough due diligence.
Uncertain, strict regulatory policies	Case by case collaboration with municipalities within deconstruction contract.
Lower market value of newer home material	Improved compatibility of newer materials for future projects and the diversification of aesthetic inventory provide natural hedges against newer technologies producing cheaper materials.

Social Impact & Benefits

	Social Impact	Beneficiary	Impact Metric
Economic	Local employment	Local low-skilled labor	164 additional productive hours per project
	Reduced maintenance costs	Municipalities land banks	Present value of ~\$5,000 in savings per project
	Reused material value	Taxing governments, Local economies	Improved taxable economic multiplier
Social	Reentry employment	Rehabilitated prior offenders	2 additional reentry employees per project
	Reduced recidivism	Rehabilitated prior offenders	1% decrease in recidivism rate for each 1 employee per 1000 within the commutable area
	Reduced air and noise pollution	Municipal environmental controllers	90% less airborne dust, 17 dB reduction in noise
Environmental	Waste diversion	Municipal environmental controllers	3,300 lbs of waste diverted per 1000 sq ft project
	Reduced lifecycle carbon emissions	EPA Region 5, municipal environmental controllers	8 tons less carbon emissions relative to demolition, 4 tons less carbon emissions relative to new materials

Our investment criteria

- High number of blighted homes with expected valued materials
- Municipalities actively seeking to eliminate blight
- State or federal guarantor with adequate credit rating
- Enough buyers within 600 mile radius able and willing to transport
- Executed take-or-pay contracts at price and volume to ensure returns

Target Geography & Scaling Opportunities

- We have identified more than 550,000 vacant foreclosure properties across the country which we can systematically tap into.
- The first pilot location will be Michigan, due to the high number of abandoned homes across the country. The state is also actively fighting blight & eager to secure funding. It is further selected due to its proximity with a major lumber yard such as Duluth Timber Company in MN.
- The next target states are Florida (Miami, Tampa, Orlando) as well as Ohio (Dayton, Cleveland) have severe blight problems and are actively fighting to eliminate and demolish these abandoned homes. Cleveland has spent \$50MM to demolish 5,000 houses over a six-year period; while Dayton has committed to spend at least \$10MM to raze 900 homes per year.

Figure 3: Identified target states

