

C L O S E D
L O O P *partners*

Recycling Markets Development in the 21st Century
NRC, April 4, 2018 – Portland, OR

PROJECT FINANCE

C L O S E D
L O O P *fund*

Invest in large scale recycling and circular economy infrastructure with below market rate term .loans

Investors Include



GROWTH EQUITY

C L O S E D
L O O P *ventures*

Invest in growth of leading companies with equity that can catalyze circular supply chain solutions in apparel, food, electronics, and materials.

Investors Include

Family offices, institutions, individuals interested in strong financial returns and measurable social impact.



RESEARCH & DEVELOPMENT

C L O S E D
L O O P *foundation*

Identify and incubate early stage solutions with no-return grants, builds the investment field through funded research.

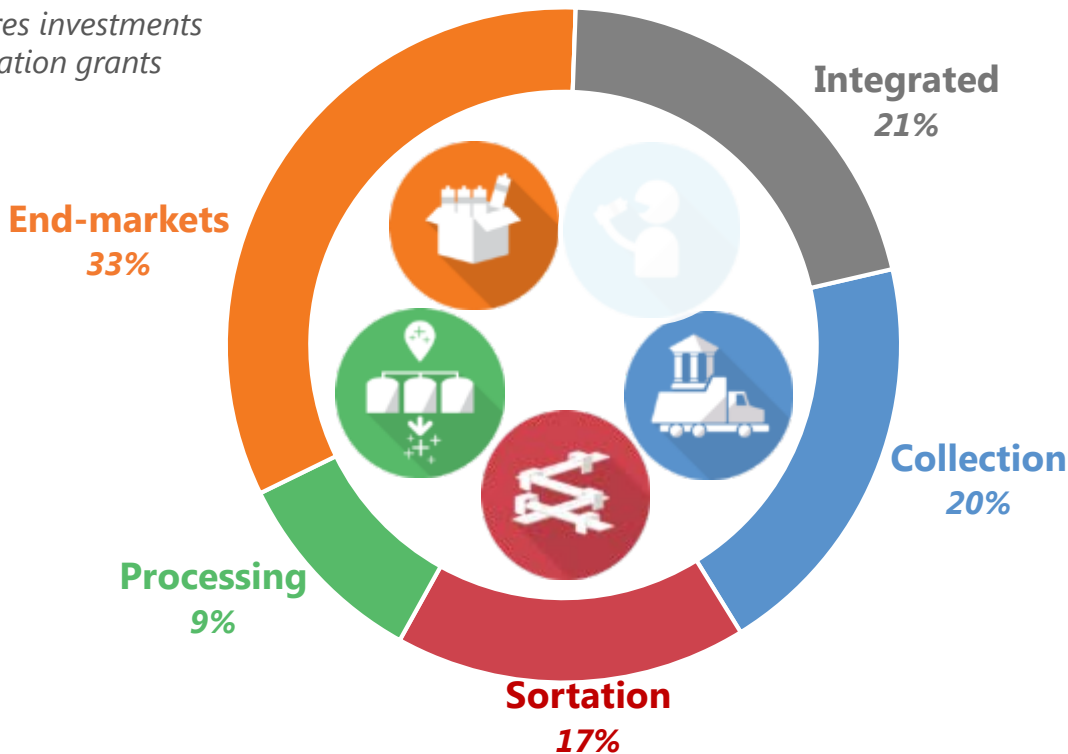
Partners Include



Since 2015, CLP has deployed ~\$35 million across 28 investments unlocking \$90+ million in co-investment

Relative proportion of CLP investments to date (%)

- Fund loans, with co-investment
- Ventures investments
- Foundation grants



Impact to date:

- **2.4 million households** represented
- **330,000 tons** diverted
- **700,000 MTs** of CO2E reduced
- **\$5.3 million** in direct economic benefit to municipalities
- **\$95 million** in co-investment

CLF's First Investments: From Collections to Manufacturing



- CLF Deal closed / Near-closing
- Affiliated / influenced operator
- Early pipeline

● Export markets (e.g., Canada)

Also refer to interactive map: <https://tinyurl.com/CLFsystemsmap>

Investments are driving positive economics across the system



Collection



Sortation



Processing / End Markets



105,000 new recycling carts;
165,000 tons / 10 yrs;
463,000 GHG MTs / 10 yrs



~\$33 per ton in landfill savings
and revenue share



First advanced recycling facility
for City of Chicago
1.1m tons / 10 yrs;
3.3m GHG MTs / 10 yrs



~\$50 per ton of mixed plastics



Uses mixed, waste plastics to
produce railroad ties;
184,000 tons / 7 years;
209,000 GHG MTs / 7 yrs



~\$70+ per tie, 300K per year

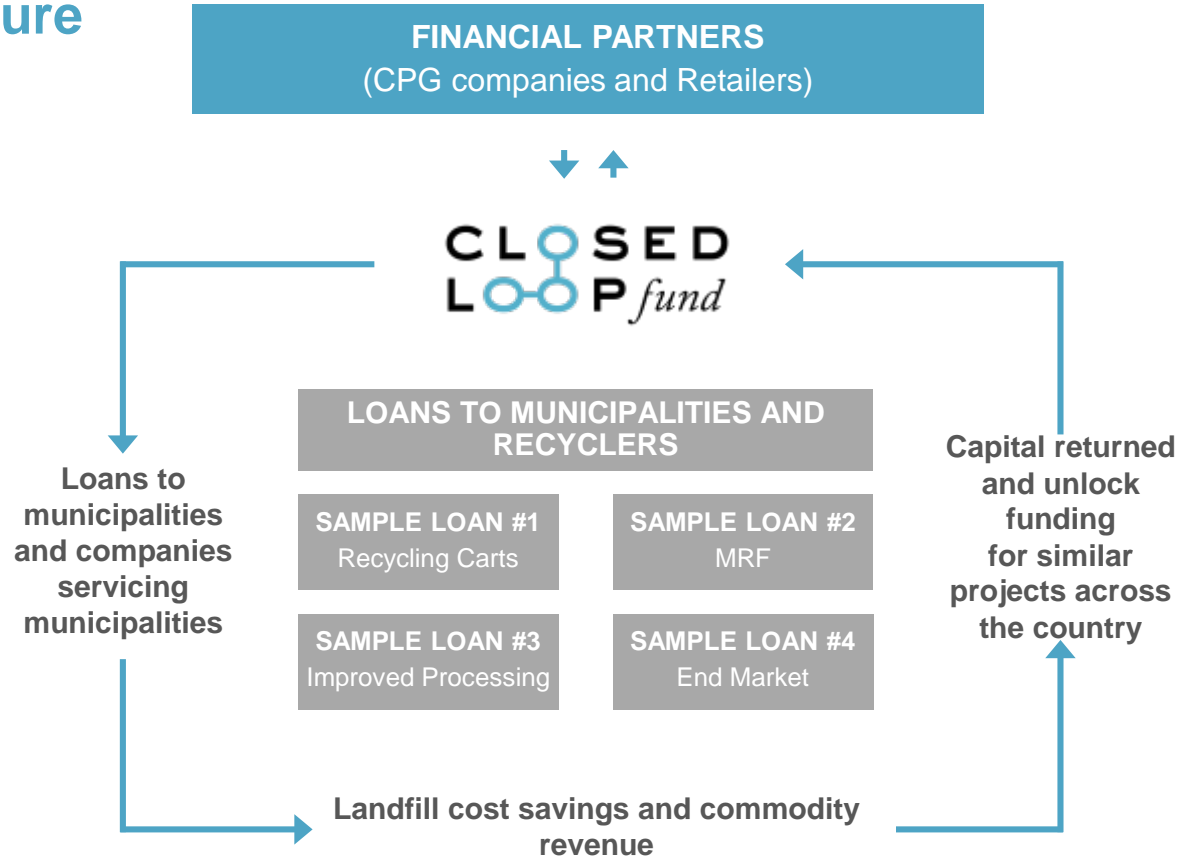
Closed Loop Fund Structure

FUND STRUCTURE

- **Below market rate loans to municipalities and companies** to build infrastructure for recycling and waste reduction.
- **Loans are repaid** via landfill diversion savings and or commodity revenue from the increase in recycling.
- **Fund co-invests** with local state agencies, economic development corporations (EDC's), local banks, foundations and other relevant institutions, thereby expanding the amount of capital invested.

REPAYMENT STRUCTURE

- Investment period is 5 years.
- Loans are on an average of 7 years.





- # of CT Households:
1.35 million
- Landfill tip fee (state avg.):
~\$70/ton
- DEEP grants to recycling:
\$95,000 (2016)

Opportunity: CT Department of Environment and Energy Protection (DEEP) and CLF have established a formal partnership to support recycling infrastructure

- **History:** CT DEEP co-invested with CLF in Waterbury
- **CLF's Role:** CLF will commit \$5M from core fund to deploy in the state of Connecticut during calendar year 2018
- **State** will be responsible for:
 - Marketing opportunity and soliciting projects
 - Vetting/first phase of DD and recommending projects to CLF
- **CLF** will:
 - Complete full due diligence on any potential investment
 - Following CLF investment criteria and approval process, make the final decision on whether/how much is invested

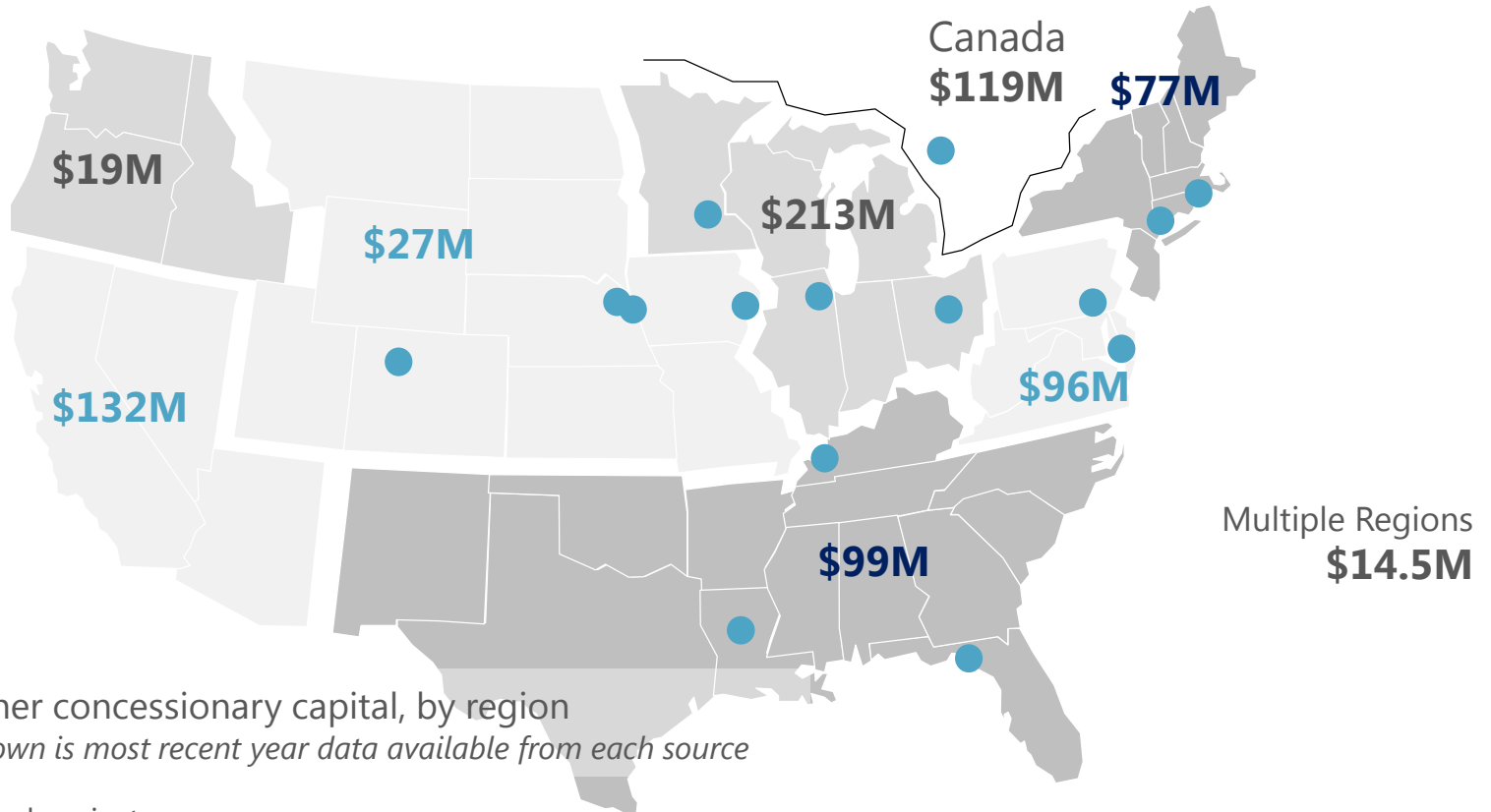
If we are successful:

- Efficient and coordinated deployment of capital for comprehensive regional infrastructure
- Replicable model for other states/regions
- Ability to strengthen local markets through follow-on investments across the system

APPENDIX: Recent Research

Capital Landscape: \$800 Million/yr

In public & private concessionary capital is available



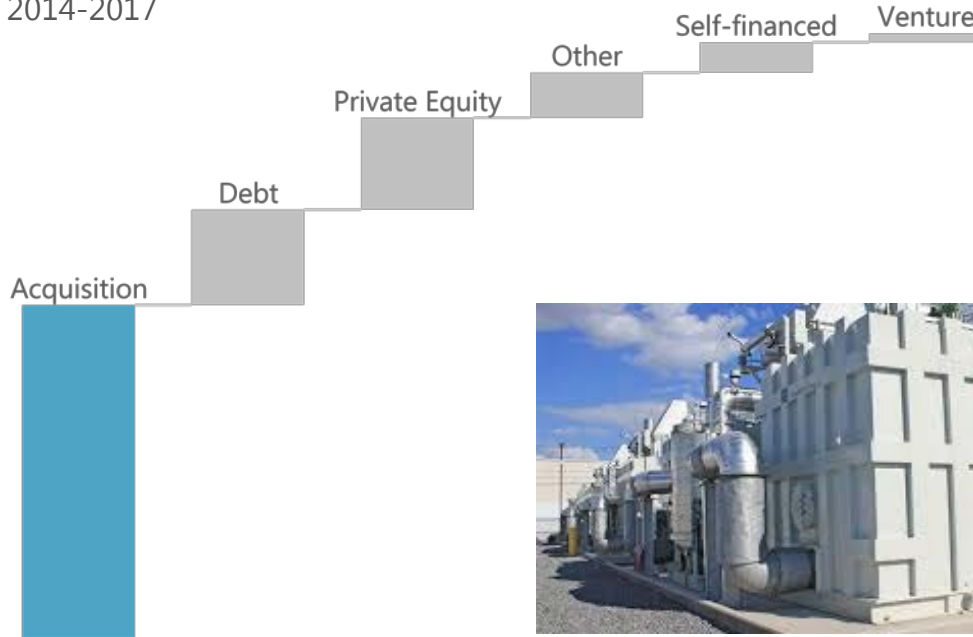
\$ Grants and other concessionary capital, by region
Total amount shown is most recent year data available from each source

● Closed Loop Fund project

Capital Landscape: \$10 Billion/yr

In investment capital is supporting linear models

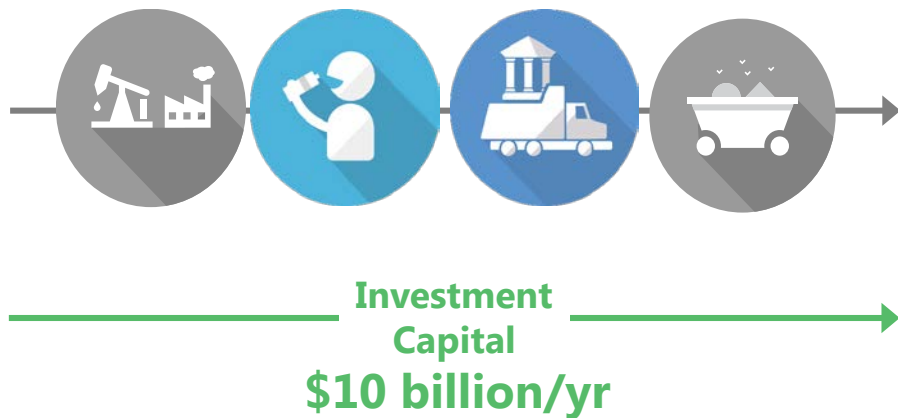
Relevant Deals by Type of Capital
2014-2017



FORTISTAR
GreenGas

\$150 million private acquisition of two landfill gas-to-energy operations

Institutional capital is waiting on the **sidelines**



- × Private capital lacks sightlines across the system
- × Supply side controlled by few players
- × Volatility in commodities markets
- × Lack of offtake agreements
- × Innovative, but unproven, technologies

More catalytic capital is needed to unlock mainstream investment in end-market development

Catalytic capital would:

- ✓ De-risk
- ✓ Prove business models
- ✓ Stimulate investment

Other supports needed:

- + Subsidized R&D
- + Long-term offtake agreements, price floors
- + Loan guarantees
- + Green procurement & code

