

Van Dyk Recycling Solutions

Evolution of Recycling Sorting Equipment CT DEEP SWAC



Matthew Turis, Manager of Strategic Initiatives

3/26/19



Delivering waste collection and processing solutions

Company Background

Van Dyk Recycling Solutions

- We deliver waste collection and processing solutions
- MRF Design and Build
 - Bollegraaf
 - Lubo
 - TOMRA
 - Walair
 - BeePro
 - Smicon
- Smart Collection
 - VConsyst



SIMS largest container plant in the world - 70 tph New York City containers (1000 tons per day, only 8 sorters)



Company Background

Major Cities Supplied

- NYC
- City Toronto
- State of Rhode Island
- Dallas
- Houston
- Los Angeles
- San Francisco
- Chicago
- Baltimore
- Philadelphia
- and more...



New Products

New Products

Underground Waste Storage

- New initiative, taken on in 2018
- VConsynt, largest manufacturer of underground waste containers
- Cheaper collection in long run, more efficient routes, hygienic





New Products

BeePro – Dust encapsulation system



New Products

Smicon – Source Separated Organics (SSO)





New Products

Test Facility Norwalk, CT

- 18,000 sq. ft.
- Proof of concept for recyclers
- Lab for paper mills packaging/brand companies
- Lab for packaging engineers and environmental studies



Recycling Industry



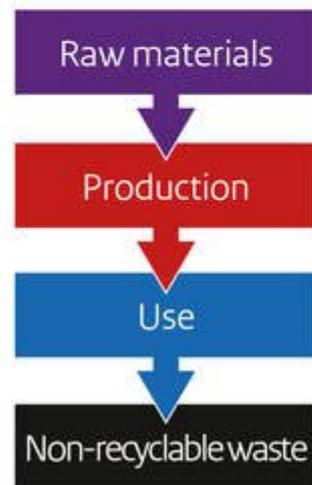
Recycling Industry Timeline Highlights



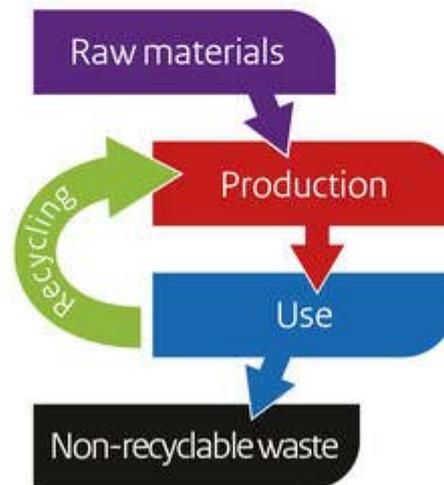
Recycling Industry

From a linear to a circular economy

Linear economy



Reuse economy



Circular economy





Recycling Industry - Today

Paper is 50%-60% of the Residential Single Stream composition

Sample Pricings
2017 -> 2019

OCC: \$150 - \$240/ton -> \$50 - \$90/ton

ONP/Mixed: \$90 - \$120/ton -> -\$15 - \$10/ton



Recycling Industry - Today

Residential Recycling

Dual Stream vs Single Stream

From 2005-2014, went from 29% to 80% of US

Should we go back?

Recycling Industry

Societal wants ≠ Current market situation

Wants

- Circular Economy
- Bans (bags, straws) & EPR
- More products made with PCR (Euro 2030)
- Less landfill
- Recycling for free or cheap
- Self-sustaining industry
- WTE

Reality

- Cheaper virgin materials than PCR
- Anti-regulatory climate
- National Sword & secondary markets filled
- Economics
- New normal, equal to waste
- Dropping commodity prices
- Cheap gas prices



Recycling Industry

Societal wants \neq Current market situation

Wants

Want to save the planet without paying more or changing habits drastically

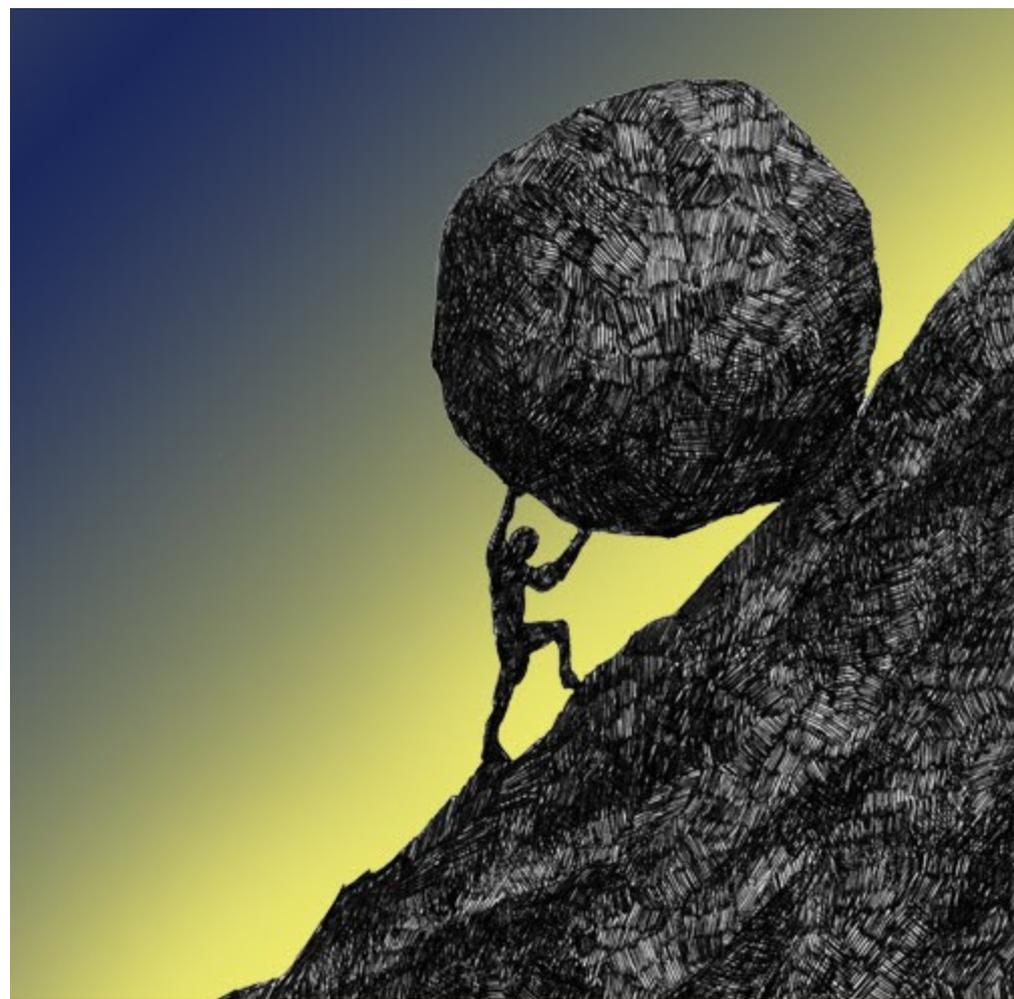
Reality

Times have changed. We can recycle and recover more, but it's a balance of legislation, money, and cultural shifts



Recycling Industry - Today

Sisyphus



Recycling Industry

1) Screen improvements

440 screen - How it affects paper:

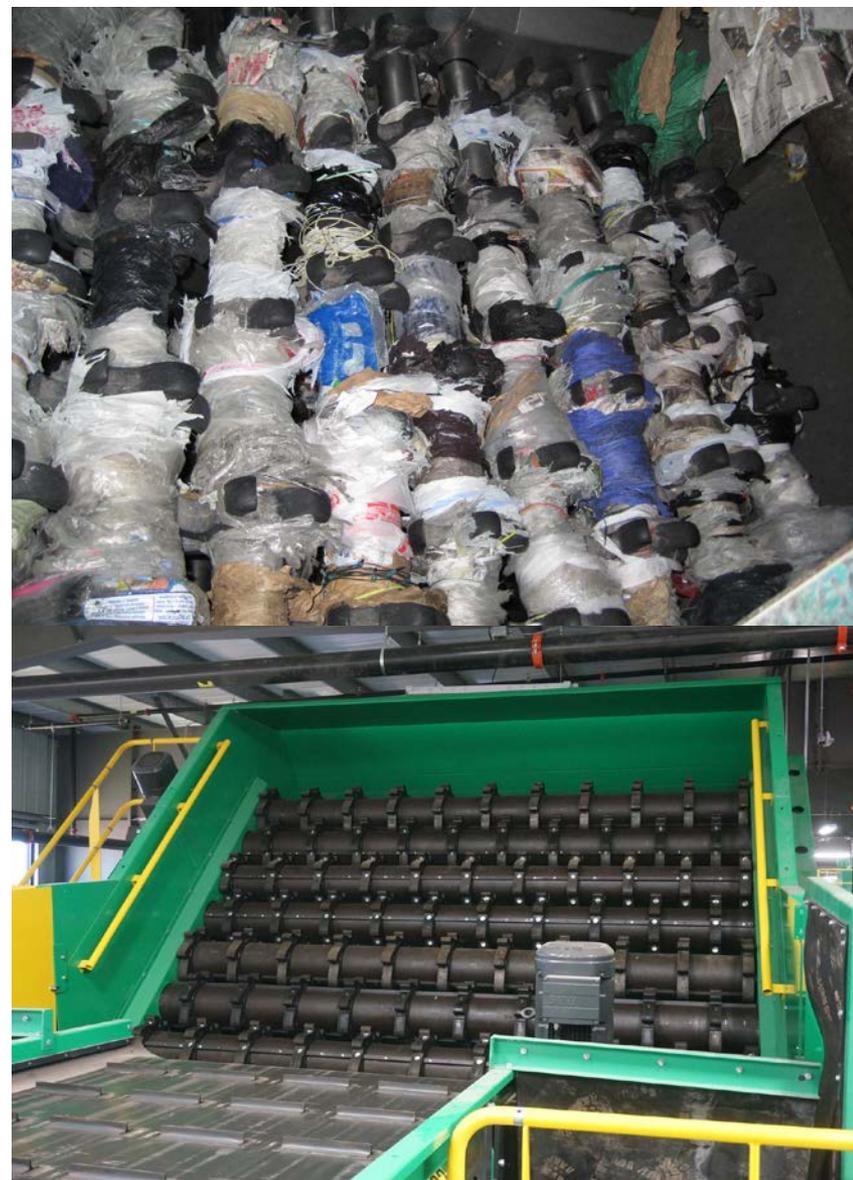
- Less cleaning time
- More production
- Better paper quality
- Less star wear
- Safer



Recycling Industry

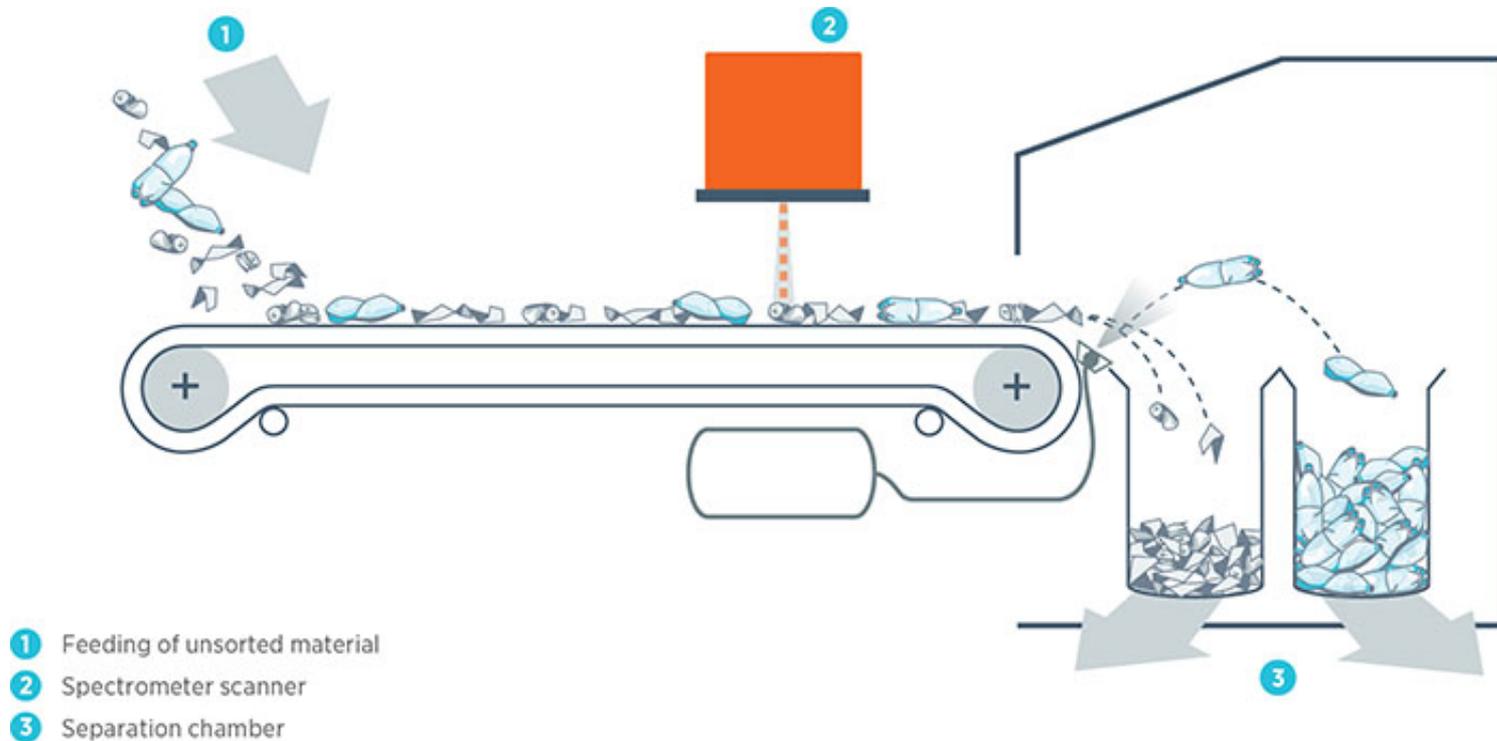
Example

- City Carting, CT
- WM Avon - MA
- Republic Southfield - MI
- JP Mascaro - PA
- WM Elkridge – MD
- FCC Dallas – TX
- Waste Connections – TX
- Sanco – CA
- Recology - CA



Recycling Industry

2) Optical Sorters to improve paper quality



Recycling Industry

2) Optical Sorters to improve paper quality

Video from test center



Recycling Industry

Example

RIRRC – Paper
Cleanup
Johnston, RI

- 40%-50% more OCC
- Paper higher quality
- Air-assist for more production



Recycling Industry

Example

Total Recycle – Flexible Packaging Recovery Birdsboro, PA

- Cleaner paper
- Flexible packaging recovery
- Less labor

Recycling Industry

Example

USA Recycling – Commercial Single Stream Bridgeport, CT

- Optical recovery of small browns
- Originally optical recovery of SOP
- Markets changed, now optical QC of paper
- Opticals allow for flexibility

Recycling Industry

3) Improvements in system designs
Plano, TX

“Positive Sort”

3 grades paper purity:

97.1% Low Grade

98.2 Medium Grade

99.1 High Grade



**Thank you for your attention
Questions?**