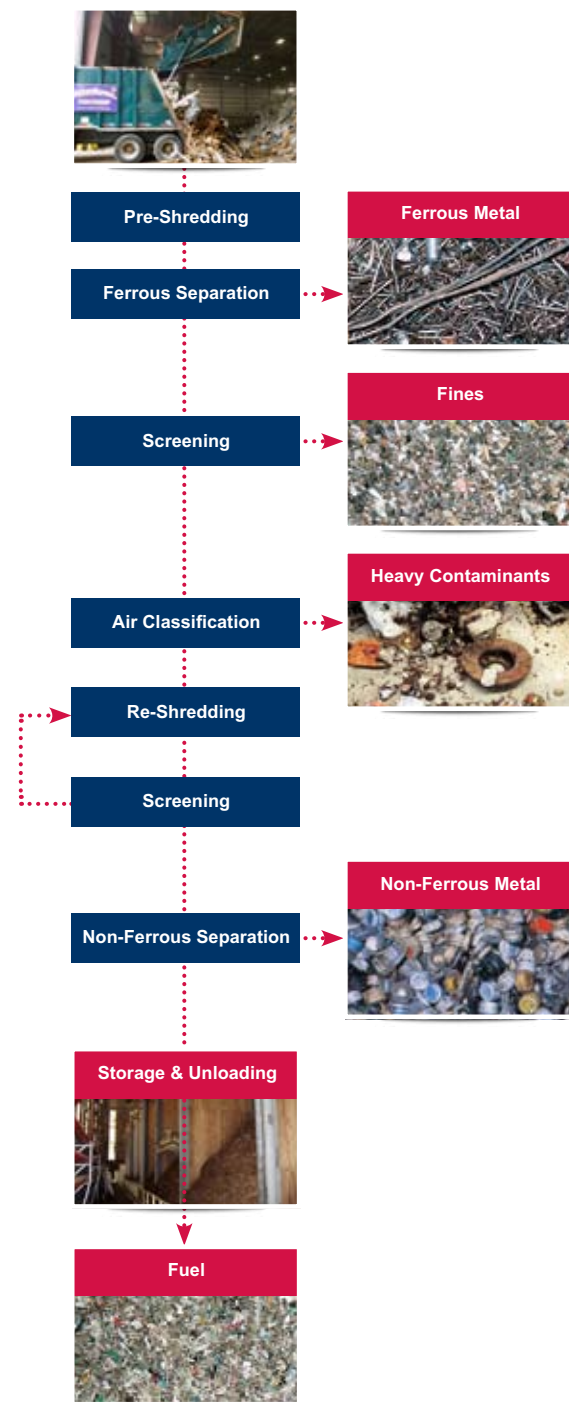




Vecoplan - Liberating Untapped Energy

TECHNOLOGY FOR A SUSTAINABLE TOMORROW

Experience Allows Vecoplan to Ask the Right Questions.
Capabilities Allow Vecoplan to Provide the Right Answers.
The Two, Combined, Allow Vecoplan to Deliver the Right Solution.



Our Technologies – A Brief Overview

- **Shredding:**
Multiple Shaft Shredders, Single Shaft Shredders, Chippers, and Hammer Mills for simple Size Reduction (shredding) or Pre-Shredding and Re-Shredding
- **Conveying:**
Belt Conveyors, Drag Chain Conveyors, Vibratory Conveyors, Screw Conveyors, Pneumatic Conveyors, and Gliding Floors
- **Screening:**
Waste Screens, Vibrating Screens, Drum Screens, Oscillating Screens, Star Screens, Disc Screens, Trommel Screens, Flip-Flop Screens, Finger Screens, and De-Stoner Screens.
- **Separating:**
Magnetic and Eddy Current for Ferrous and Nonferrous metals, Air Classification (wind sifters, aspirators, elutriation) or Float/Sink for Density, Optical including near infrared (NIRS) and X-ray for fractions such as plastics & glass
- **Storing:**
Above and Below Ground Bunkers and Silos, Plus Vecoplan's exclusive Bunker Storage with built-in Load/Unload Conveyor System..
- **Dosing:**
Push Rod systems, Gliding Floor Discharge systems, and Metering Screw Conveyors, and Bunker Storage Load/Unload Conveyor System.
- **Controls:**
Vecoplan also offers total system controls integration. This allows aggregate material to flow from one processing station to another until it reaches its end point without the need for human monitoring of individual machine processing functions and speeds. Wood, metals, plastics, paper, glass, dirt, rock, concrete – Vecoplan can automate the sizing, conveying, and segregation of virtually all fractions within an aggregate through the proper use of the correct technologies

The Difference: Experience, Capabilities, Total Solution – Vecoplan!

Vecoplan is a pioneer and the leader in advanced MSW feedstock preparation systems used in the production of energy, second-generation biofuels and liquid transportation fuels. Strategic alliances with other equipment manufacturers, engineering firms, municipalities and energy companies, uniquely position Vecoplan as your single-source solution provider!



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Vecoplan[®]



Landfill or Goldmine?

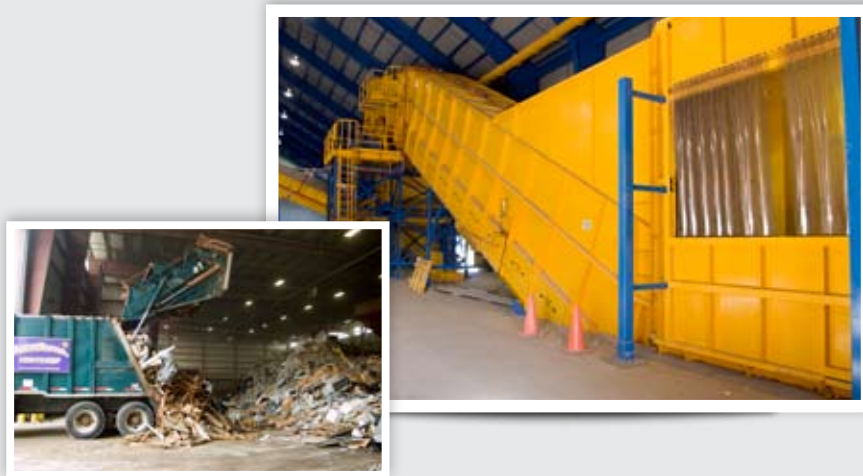
It Depends on Your Vision.

Vecoplan Delivers Turn-Key Systems To Process MSW Feedstock For The Production Of Alternative Fuels & Energy.

In an ideal world the processing of MSW to produce fuel or energy sounds simple. You receive it, make sure it's the right size, take out the bad, keep the good, store it and feed it for combustion, or conversion to fuel. But in the real world, "the devil's in the details". And the real world of processing waste as an alternative fuel feedstock is where Vecoplan shines!

The Details:

Feedstock:
What's feeding in & what do you want feeding out. An analysis of the feedstock aggregate is essential. All other decisions on system components are dependant on this knowledge. What is its makeup? Will it remain consistent or fluctuate? What size is the aggregate? What size does it need to be? What needs to be kept and what needs to be segregated?



Receiving:
We have experience with waste delivered by dump trucks, trucks equipped with live-bottom gliding floors, or semi-trailers requiring lift/tilt truck dumpers. We've built systems that use exposed piles, covered piles or bunkers for initial reception of the waste. In the system shown here, waste is delivered via traditional garbage trucks to covered piles, transferred by front end loaders to heavy-duty steel belt (Z Pan) conveyors and then fed into a Pre-Shredder.

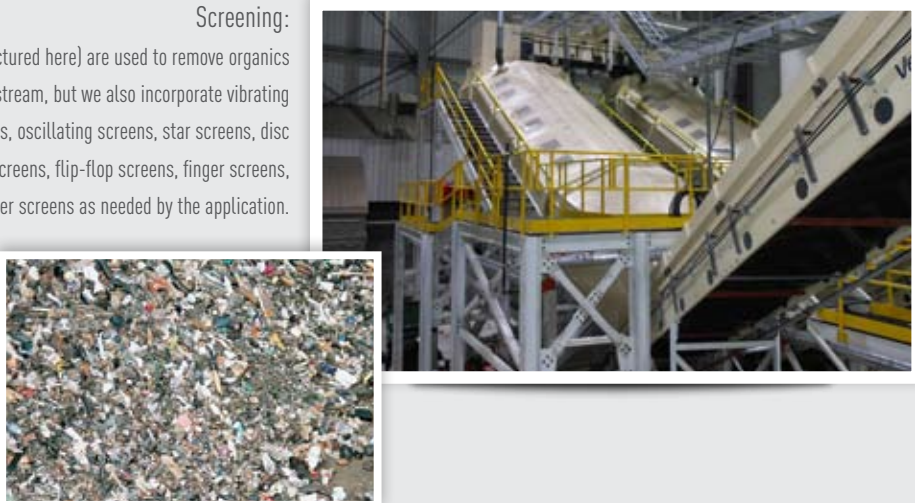
Pre-Shredding:

Large, extreme duty, multiple-shaft shredders are used here to reduce the size of the largest aggregate in the waste to manageable homogenous sizes for ease of processing by the system.



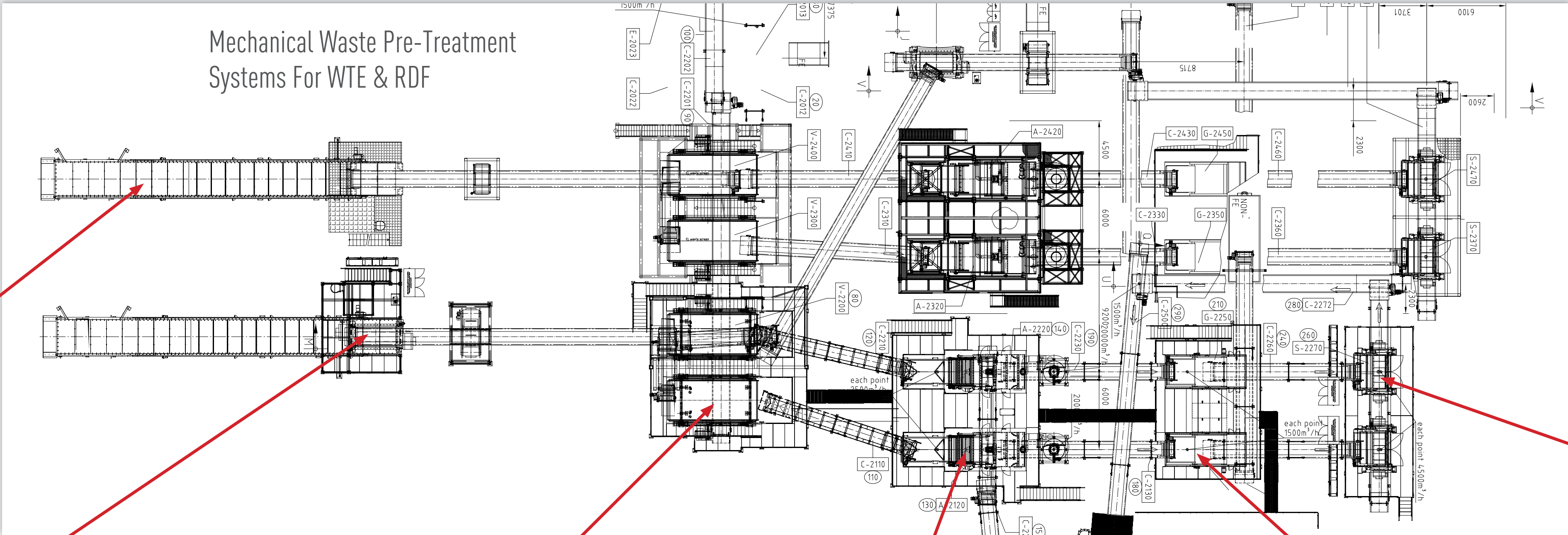
Screening:

Waste screens (pictured here) are used to remove organics from the waste stream, but we also incorporate vibrating screens, drum screens, oscillating screens, star screens, disc screens, trommel screens, flip-flop screens, finger screens, and de-stoner screens as needed by the application.



Separating:

Air Classification (wind sifter - pictured on left) for separation by density and metal separation are common to most systems. (pictured on right) A cross-belt magnet to remove ferrous metals in combination with an eddy current magnet to segregate nonferrous metals are integral components in this system. We also employ other types of air classification including aspirators, and elutriation, as well as float/sink for density separation. optical separation technologies, including near infrared (NIRS) and X-ray to separate by color or material composition are often used to remove fractions such as glass & plastics - usually PVCs..



Vecoplan®



Storage & Metered Feeding:

Vecoplan's exclusive Bunker Storage with built-in Load/Unload Conveyor System (pictured above right) moves both lineally in an x-axis, horizontal direction, and vertically in the y-axis, up and down direction. This allows the system to load and unload the bunker simultaneously. It also loads bulk material from the bottom up and unloads material from the top down and because it's above the stored material it eliminates the need to unload material for system maintenance. We're also experienced with above and below ground bunkers and silos.

Long-Distance Conveying:

Vecoplan's Vecobelt™ (pictured above left) is the ideal solution for conveying and loading bulk materials into rail cars, trucks, silos, bunkers and process equipment or simply to transfer large volumes of material over long distances. This unique design moves more material, over longer distances, with fewer structural supports than traditional conveyors. Vecobelt™ consists of a conveyor belt running on air cushions in a closed tube system. The air cushions minimize friction, which in turn virtually eliminates dust and noise and reduces power consumption by up to 50%.

Re-Shredding:

Single Shaft Shredders, with changeable sizing screens, are used to insure that the final feedstock is sized properly and consistently. Our revolutionary VEBS (pictured here) incorporates the throughput of multiple shaft shredders with the precision of single shaft shredders and features Vecoplan's exclusive HiTorc® energy saving drive.



Feedstocks:

MSW, C&D Waste, Woody Biomass, Crop Residues, Mill Scrap, Plastics, Tires

End Products / Conversion Technologies Supported:

WTE / RDF, Advanced Biofuels, Gasification / Pyrolysis / Torrefaction, Cellulosic Ethanol, Combustion, Pellets, Biomass Power, Renewable Energy

Vecoplan provides the leading technologies for Receiving, Pre-Shredding, Separating, Re-Shredding, Screening, Storage, Loading & Unloading, all types of Conveying necessary between these processes, and integrated controls for the entire system. More importantly, Vecoplan brings total system expertise to the table. Real world experience enables Vecoplan to design, engineer and implement comprehensive systems that work seamlessly to deliver what you need, where and when you need it.

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