



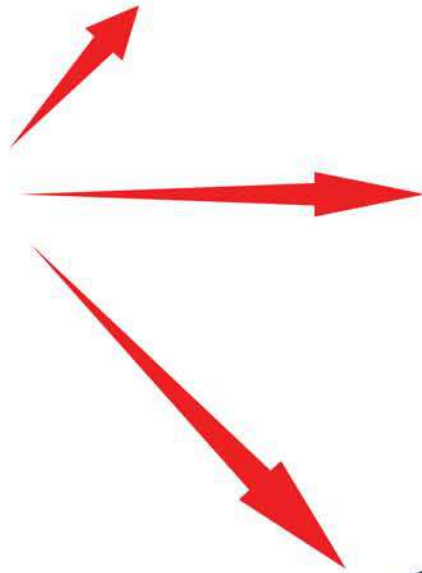
Receiving System



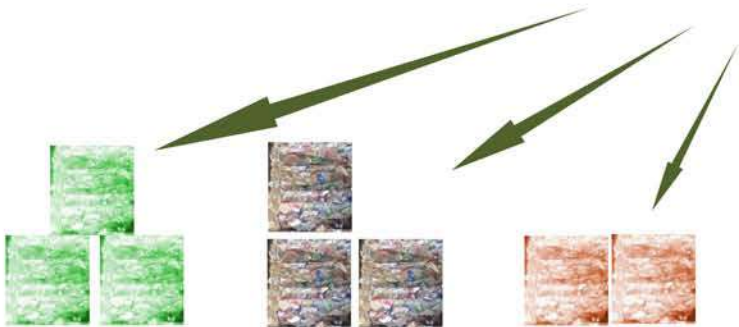
Sorting System



ELKAYAM Management and Control System.



Products



Sorting paper, cardboard, metals, plastics and bio-waste and recycling them into profitable useable fractions.

Municipal Solid Waste Today

Almost all local authorities today have issues regarding MSW at several levels including:

- Waste Collection Efficiency including pre-collection sorting
- Environmental Issues
- Landfill Issues
- Bio-waste Processing Issues
- Residual Waste Disposal



Today most local authorities contract waste collection and disposal as a cost effective method for solving their problem. These contractors are becoming subject to more and more regulation and in order to remain effective must find ways to extract the maximum profit and sort the maximum number of fractions.

To this end **ELKAYAM** can offer a wide range of solutions for MSW processing from the simplest mobile sorting station to the very latest in high speed NIR sorting technology and processing up to 1500 tons per day.

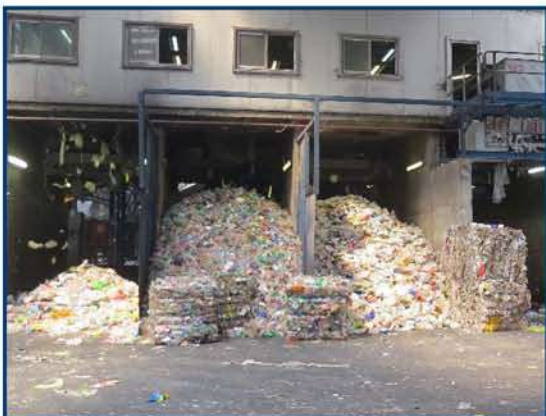
The aim of the Process.

Municipal Solid Waste is received for the most part as a homogeneous mix of waste of all types, and the aim of the process is to sort this waste into identifiable categories, professionally known as fractions, which are of as near as a pure concentration of the given material as is possible.

These fractions must be delivered in a way that they can be handled, either by compressed bales or by truck delivery.

Properly sorted fractions are the heart of a good system and offer an operator the chance to expand market share in a given conurbation area, where certain fractions are in higher demand.

The organic material is transferred to a secondary screening process and then stored in windrows. This material is then taken to the composting process. Any remaining material which cannot be sorted is sent for landfill.



Advanced Processing.

Elkayam offer many advanced and traditional sorting systems:

- Semi-manual sorting in both fixed and mobile installations.
- Medium scale installations for small suburban areas up to 400 tons per line per day
- Large scale processing up to 1,500 tons plus per day per line and larger, covering separation and sorting of most fractions

Material:	Percentage of the total mass:
Cardboard:	10
Paper:	11
PP, PE:	3
HDPE:	1.5
LDPE + Films	5
Mixed plastics:	8
PET:	1
Ferrous metals:	4
Non-Ferrous metals:	1.5
Bio-organic:	30
Glass:	3
Non-recyclable:	14
Wood:	2
Diapers:	6

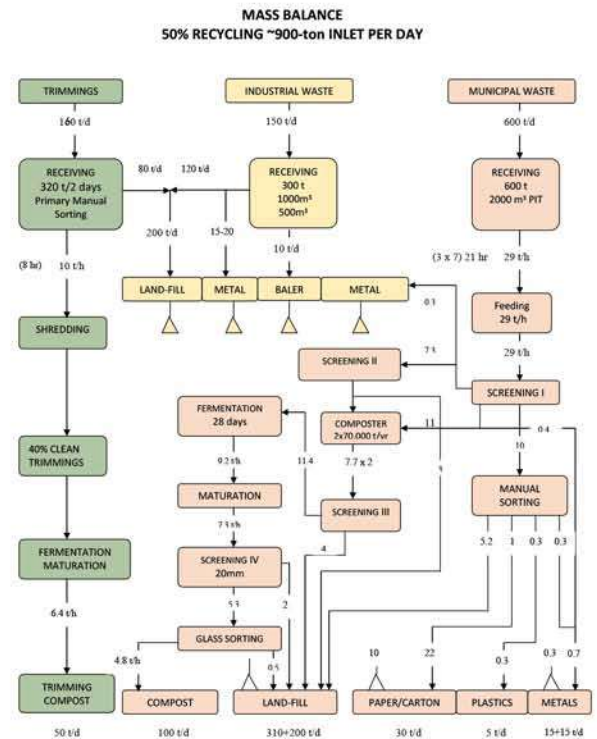
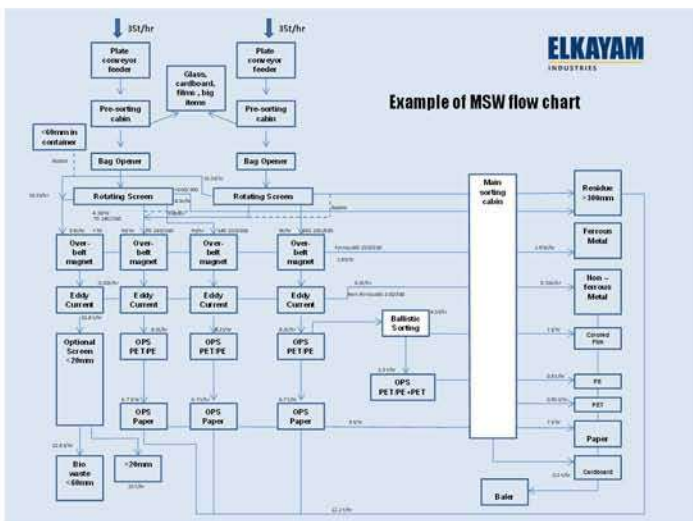
How the ELKAYAM process works:

I. MSW Analysis

Input of raw materials, which are of a composition determined by examination of samples of the material to be processed – please refer to this sample chart.

II. Process Mass Balance

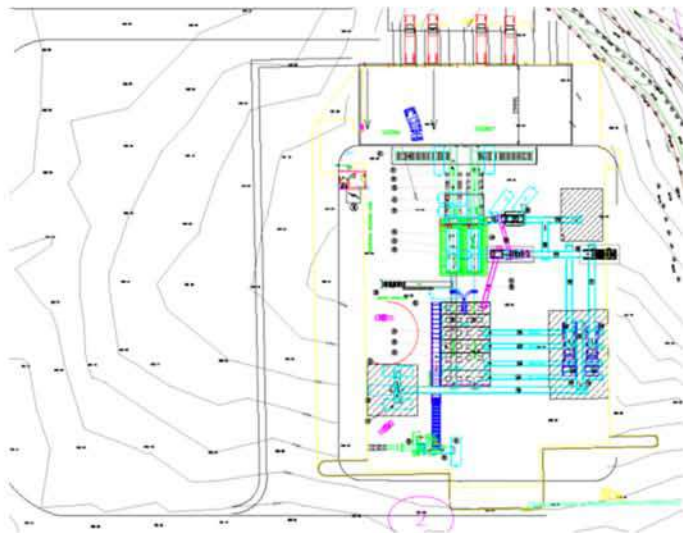
ELKAYAM calculates a mass balance for proper processing flow and the correct specification and choice of equipment.



III. Process Flow Chart

ELKAYAM then prepares a flow chart which details the exact flow of materials in the proposed line and how they will be processed. An example is seen here:-

- Using their technical knowledge and experience, **ELKAYAM** helps you to install and run the best techno-economic line possible. Where required the new installation can be integrated into your existing lines for a seamless step-up in output.
- By making this detailed analysis the recommended system will be the most cost effective that is possible allowing for the type of material and the available budget. All factors will be taken into account including the costs of transport to and from your site, staffing costs and fraction demands and current market prices.
- Once the working parameters for your line have been decided , **ELKAYAM** produces a full working layout of the line tailored to suit your site, with reference to various in situ site features and incorporating all the right systems.

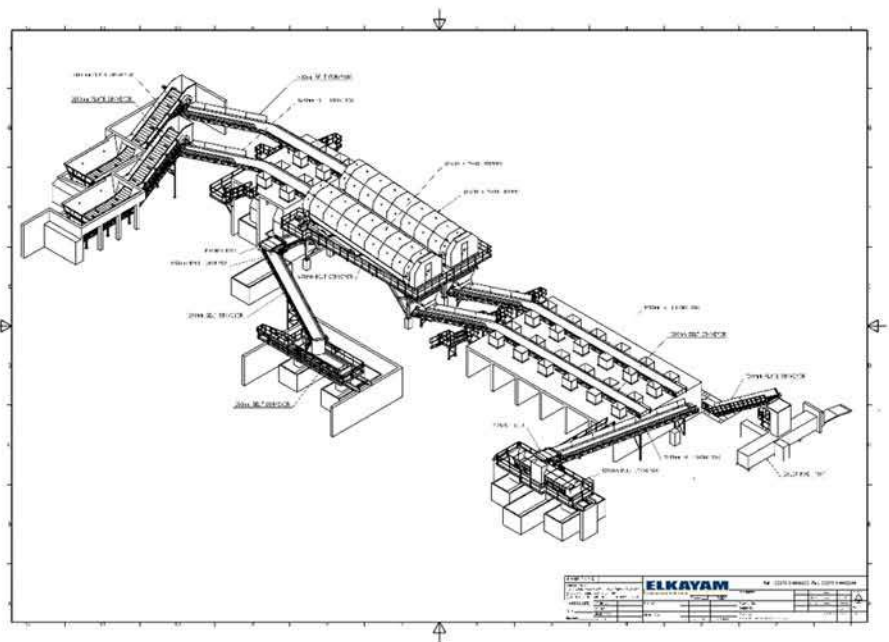


IV. Project Layout

ELKAYAM designs the general arrangement layout drawings and cross sections for submission to you to allow checking of the site for height , circulation etc. before installation can begin.

V. 3D Design

Following this full 3D drawings and details plans are produced and the production of your line will begin.



VI. Electrical and Control Installation

ELKAYAM programs and installs the PLC control and electrical elements for the operating system incorporating integrated computer systems with full synoptic screen control and multiple stations where needed. All safety parameters are covered and the system adds to the line effectiveness by streamlining operation. Where needed the new system can be electronically integrated with existing systems at this time. The operator can view and control the operation using the HMI screens.



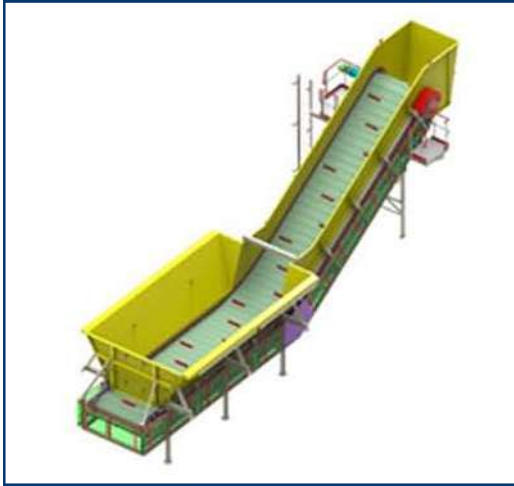
VII. Installation and Commissioning

ELKAYAM can supervise the entire project and installation as required and we are available for consultancy at any stage.

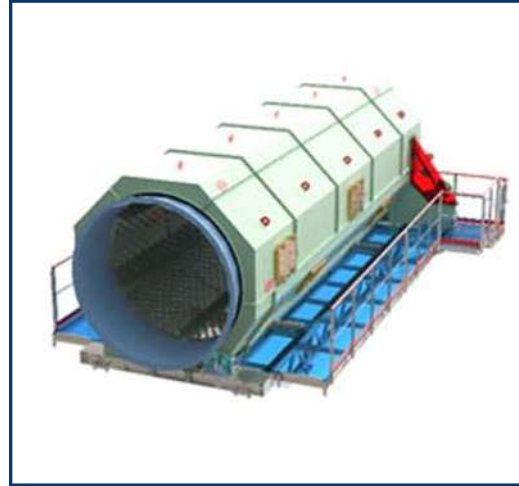


ELKAYAM MSW lines are built from many elements all produced in our factory:

Apron Conveyors



Rotary Screens



H D Star Screens



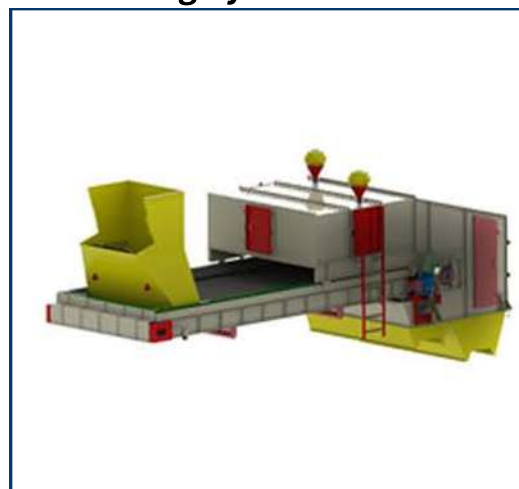
Eddy Current



Accelerator Belts



NIR Sorting Systems



Windsifters

Conveying Systems

ELKAYAM

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