

Sorting Plant Design

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(INGEDE)

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Introduction

- Why PFR sorting is a topic for INGEDE
- 3 lectures
 - Manfred Geistbeck: Sorting plant designs
 - Manuela Suttng: Sorting plant design Stora Enso Langerbrugge
 - Details about Langerbrugge sorting plant
 - Manfred Geistbeck: Sorting plant operation



Quality



- Quality of input and all output streams
- Quality depends on
 - Collection scheme and recycling awareness
 - Population & reading behaviour
 - Pre-sorting of comingled material
 - Weather conditions
 - Quality of by-products
 - Yield
 - Operations



Availability



- +1 % yield is equal to 35.000 t/a in Germany
- Composition of household collected PfR
 - Change will come, less graphic paper
 - Phase 1: Improvement of yield is necessary
 - Phase 2: Economic efficiency is no longer guaranteed
- New processes are needed
 - Affect the process
 - Be an active player



Sorting plant design

- Different designs
 - Simple processes
 - State of the art processes
 - Sophisticated processes

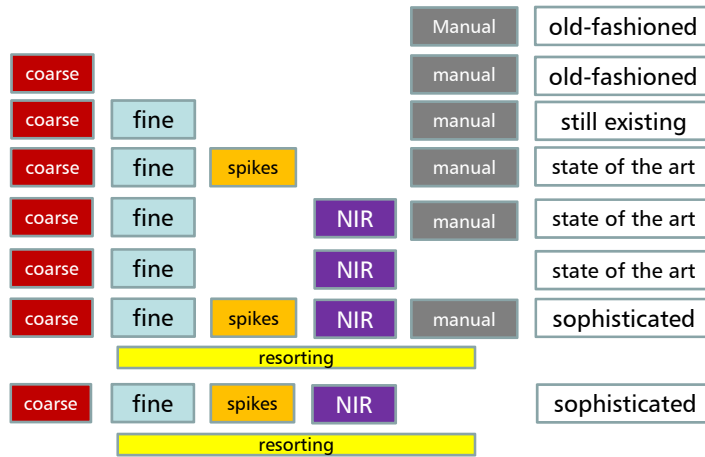


Main components

- coarse**
 - Removal of big cardboards
- fine**
 - Removal of small-sized material (<A5, plastics, metals, glass)
- spikes**
 - Removal of small cardboards
- NIR**
 - Removal of small cardboards, other unwanted papers and plastics
- manual**
 - Removal of small cardboards, other unwanted papers and plastics



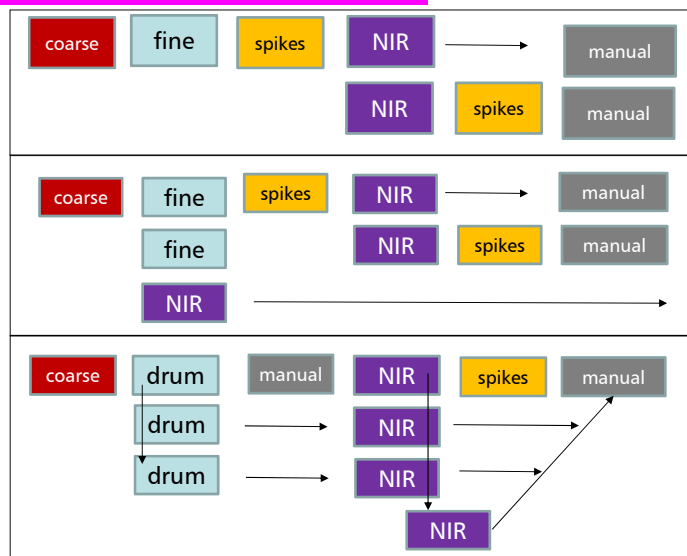
Examples for designs



- Rowing of sorting steps can be changed



Examples for modern designs



Reasons for choosing a certain design

- Input quality
- Targeted output quality
- Yield
- Tonnage (t/a, t/h)
- Staff
- Economic KPIs



END

- Thank you for your attention

- The floor is yours, Manuela Suttinig

