Producer responsibility for plastic packaging in Finland

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Finnish Plastics Recycling Ltd

- Extended Producer Responsibilty organisation (PRO)for non deposit plastic packaging. Founded in 1992 – operational in 1996.
- Non profit organisation owned by 41 private companies covering the whole value chain of plastic packaging
- More than 2500 producers contracted
    - packers
    - importers of packed products
- Abt. 11 ME turnover with 3 employees
- Specialist organisation for collection, recycling, paclaging design and communication & training

How does the system work in practise for plastic packaging?

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Producer

Packer or importer of packed products with more than 1 ME turnover

Producer responsibility organisation (PRO)

- Contract & Registration
- Annual information of material (kg) placed on the market
- Annual payment of Euro/t packaging fee decided by the PRO

Cost in 2020:
Household packaging: 119 e/t
Trade & Industry packaging: 54 e/t

- Meeting collectively the legislative demands for the producer
- Collection & recycling servises & management
- Guidance, training and communication

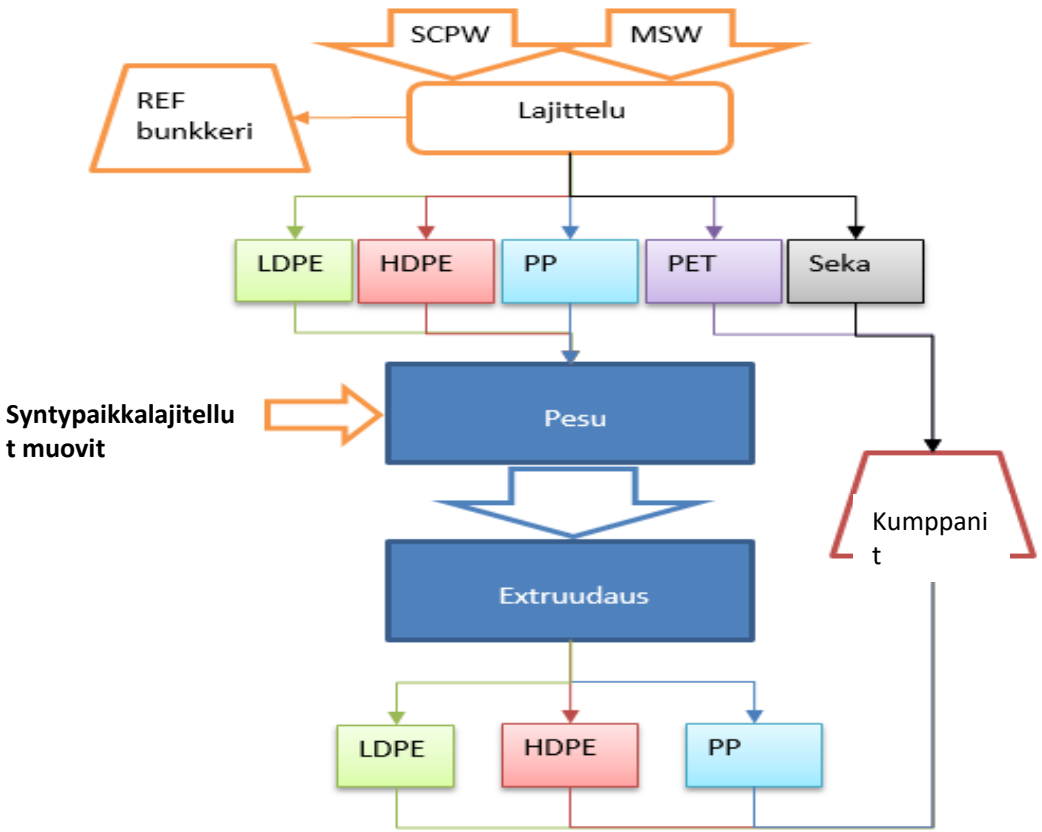
Collection & Recycling by partner network and best practises

- **The demands of the national legislation is meet by using a large network of service providers**
  - **Collection & Recycling of household packaging**
    - **Bring stations – contract with Rinki Ltd – now some 630 stations mainly in conjunction of super markets and daily good shops**
    - **Collection terminal points to service curbside collection (by appartment houses) that is increasing**
    - **Recycling is done by sorting and recycling partners (local Fortum + export)**
  - **Collection & recycling of trade and industry packaging**
    - **Largest share is recycled by contracts between waste holder and waste company**
    - **We we offer 60 terminals for cost free receival of waste**
  - **Communication & information about collection and recycling to consumers and companies**

Cost effective collection system is important for bring stations - collection bins for small and big volumes

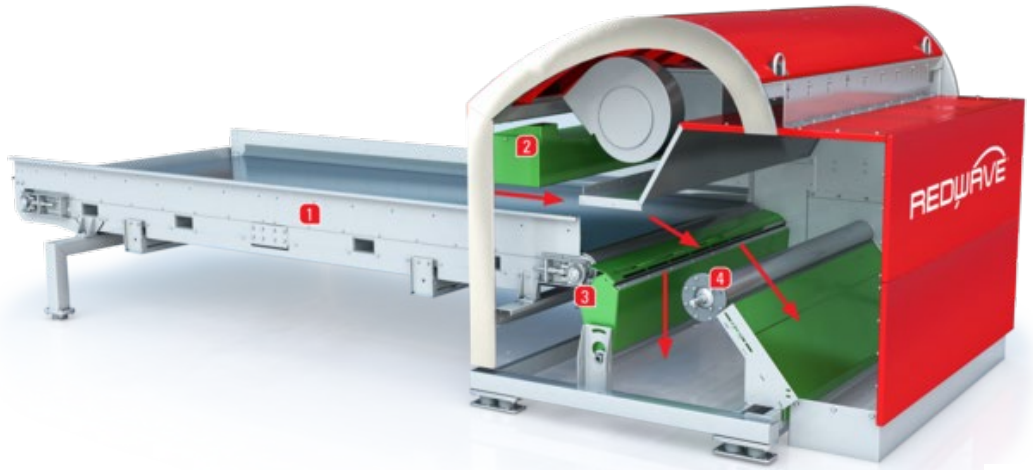
1. 22 m3 waste compactors with GPS and SMART distance control management
2. 10 m3 front loader bins
3. 7 m3 lift based bins for bottom emptying

Fortum Oyj
Plastic sorting facility

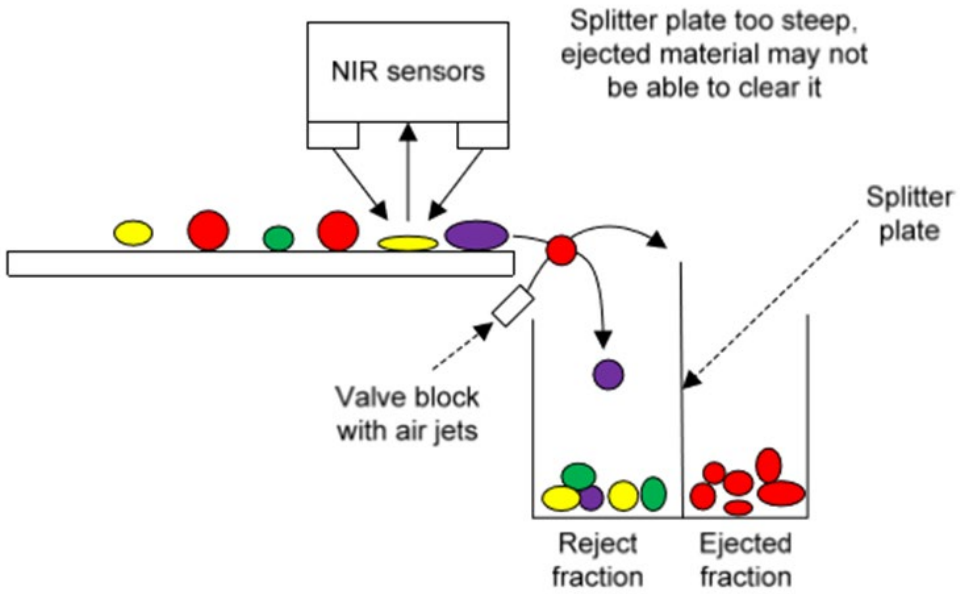


- Stage 1: Sorting and removal of rejects
- Stage 2: Cleaning of sorted plastics
- Stage 3: Processing into recyclates (new plastics)

Plastic sorting using the NIR technology



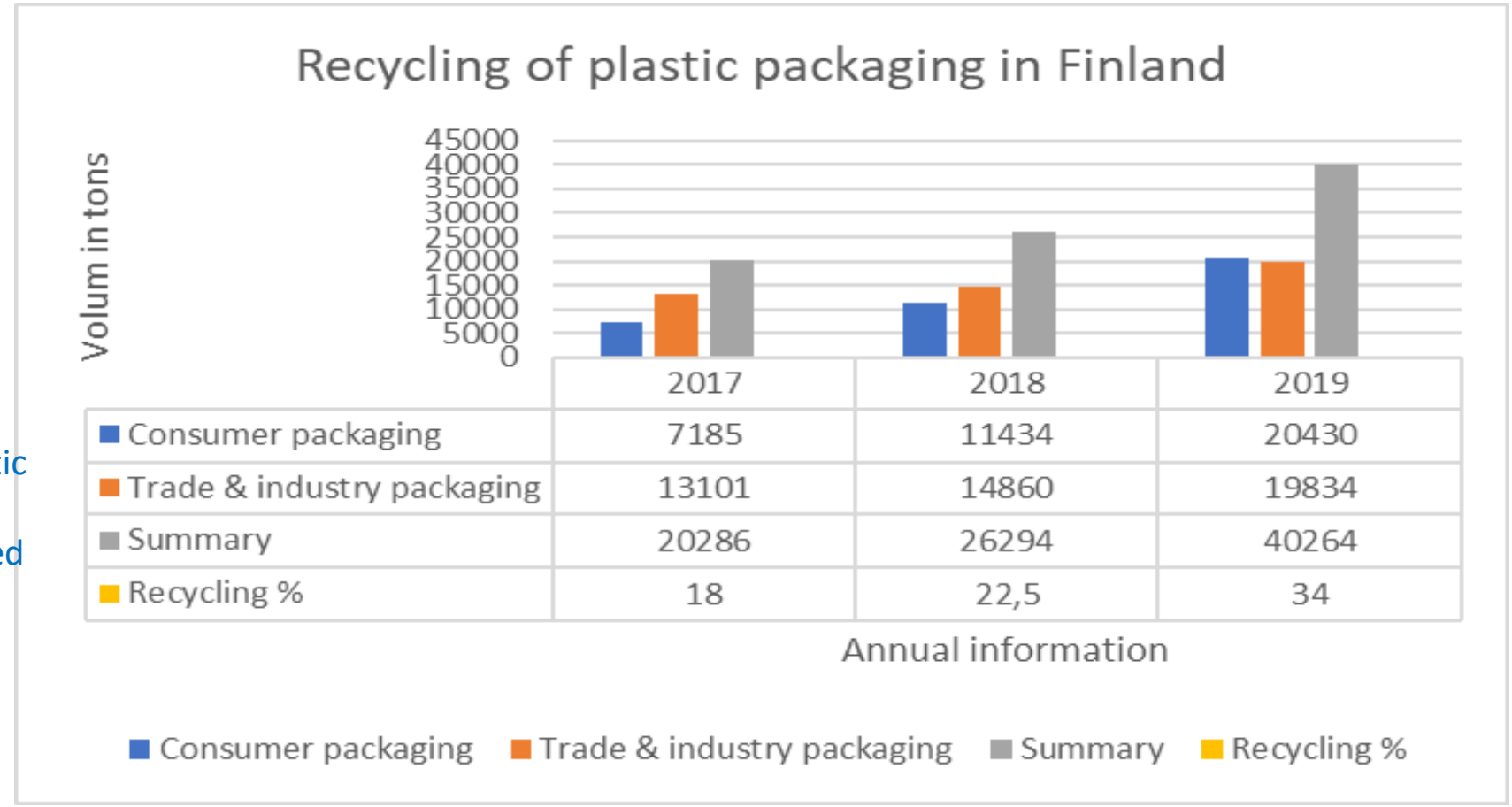
- NIR [Near InfraRed] identifies plastic qualities with a light beam that reflects back to the sensor
- Each polymer type has an own wave length
- Many NIRs can be used after each others (big sites may have up to 30 NIRs)



Recycled plastics market

- Sorters of household plastics can use the material themselves or sell it for further processing
- Trade & industry plastic packaging is normally sorted at the company in ready recyclable plastics => direct processing into granulates or plastic products possible by next steps
- Plastic waste is traded by many; for ex waste companies, brokers, plastic product manufaturers and producer organisations
- The demand is good for certain plastics (= positive price)
    - Rigid HDPE and PP
    - Bottle APET
    - Transparent LDPE film
- Due to the Chinese import stop of plastic waste the prices in EU has been falling => some plastic waste do not have a market at the moment (= negative price)

Recycling of non-deposit plastic packaging is increasing



Start of separate collection of plastic packaging from households started in 2016

+ 79 %

+ 33 %

+ 53 %

-> EU directive requires 50 % recycling in year 2025

-> EU plastic strategy requires that in 2030 all plastic packaging is designed to be recycled or re-used

OUR ROADMAP 2025 (POLKU 2025)

- Increase of communication to consumers and companies
- Further improvement of separate collection
  - the Ekopiste bring station network will be optimised
  - big increase of the curbside collection
- Central sorting will be required to boost the collection volume
  - Of municipal household waste before incineration
  - Of SRF raw material before use
- Companies need to sort and recycle more than today
- Ecodesign of packaging of most importance; packaging needs to be designed to allow recycling
- We follow and take part in improvements of collection and recycling technology; for ex
  - Chemical recycling
  - Recycling of black packaging and multilayer materials

“Without fundamental redesign and innovation, about 30% of plastic packaging will never be reused or recycled”

New Plastics Economy Catalysing Action

Packaging design is important

- NIR sorting technology leads ecodesign demands
- Not labels bigger than 60 % of the surface
- Capsules and lids the same material as the pack itself
- Transparent packaging is OK - black packaging should be avoided (NIR cant read the polymer)
- Monomaterials (one polymer) instead multilayers (many different polymers)
- Biobased polymers are OK – biogradable are not
- Use polymers that have a market as recycled plastics

Challanges and oppoturnities for more recycling (1)

- Extended producer responsibility mandatory in EU from year 2024
  - Important to have material based knowledge and independent decision making
- EU target of 50 % reycling in year 2025 is very challenging due to
  - Recycling measurement point = production of process ready recylates or new products
  - Many packs are not yet designed to be recycled
- How to collect enough waste to be sorted ?
  - Voluntary separate collection reaches max 50 % => is not enough
  - Central sorting from residual waste will also be required
- Companies need to improve sorting of their own packaging waste
- More use of recycled plastics is critical => in EU estimate is that 10 milj. tons need to find end product usage
- **The whole plastics value chain need to work together; new packaging materials required + better collection & sorting technology + chemical recycling for difficult materials + more end use of recycled plastics**

Challanges and oppoturnities for more recycling (2)

- Consumer envolvement is important both in sorting and using products made of recycled plastics
  - Quality image of these products is essential
- Plastic product manufacurers can be offered ” best practise” and other knowledge learning for usage of recycled plastics
  - Training of personnel
- Development of new polymer raw materials where recycled plastics is used or can be combined with
- Support of big super markets and brand owners for better recyclable packaging and ysage of recycled plastics
- Food grade recycled plastics now in APET (bottles) – challange to find other polymers – chemical recycling can be a solution

Hyvää jatkoa muovipakkauksille

Longer life for plastic packaging

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