



The Challenge

Brand new devices:

- 80 types of Electrical and Electronic Equipment (EEE)
- 328 Different Manufacturer Brands
- 6 Models per Brand & EEE Type

Over 150,000 different devices

Waste Electrical and Electronic Equipment (WEEE):

- Devices aged 30 years to 1 month
- Damaged: broken, crushed, dirty
- Incomplete: missing essential components

Over 2 million different references



High heterogeneity

Bottlenecks and solutions

Difficulty to identify WEEE

Database of Brand-new devices

- Market Catalogues** → Manufacturer brand websites
- Market Analysis** → Market volume and forecast reports
- Legal Policies** → Ministry and legal institutions

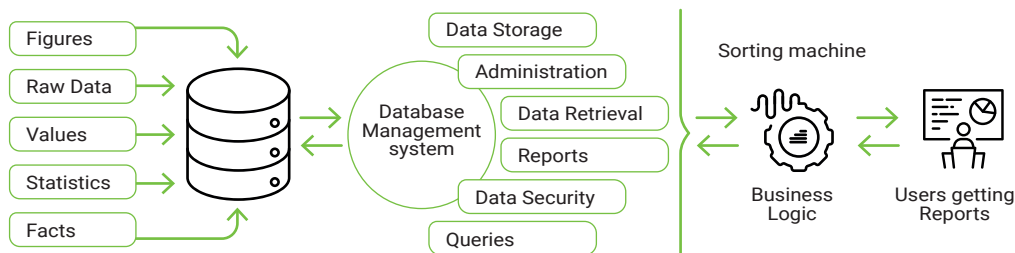
Bottlenecks

- Lack of technical and manufacturing data
- Significant gap between market information and WEEE recycling practices

Content & Potential Use

Content:

- Images
- Product details: Brand, model
- Physical specifications: size, weight, Nd-PM components
- Nd-PM type (if available)



Benefits & Stakeholders

Benefits

- Identification of devices containing Nd-based PMs → REE recovery ↑
- Effortless sorting within WEEE piles → Efficiency ↑
- Easy integration with new Nd-PM identification systems → Employee ergonomics ↑
- Heterogeneity challenges ↓ Scalability ↑



REEPROJCE

IR INDUMETAL RECYCLING



- 9% database
- 14 brands
- 43 models
- 233,000 units sold



- 64% database
- 56 brands
- 303 models
- 251,000 units sold



- 6% database
- 6 brands
- 28 models
- 2.5 million units sold



- 12% database
- 13 brands
- 57 models
- 656.000 units sold



- 9% database
- 21 brands
- 45 models
- 253K units sold



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