Mapping of e-waste value chain
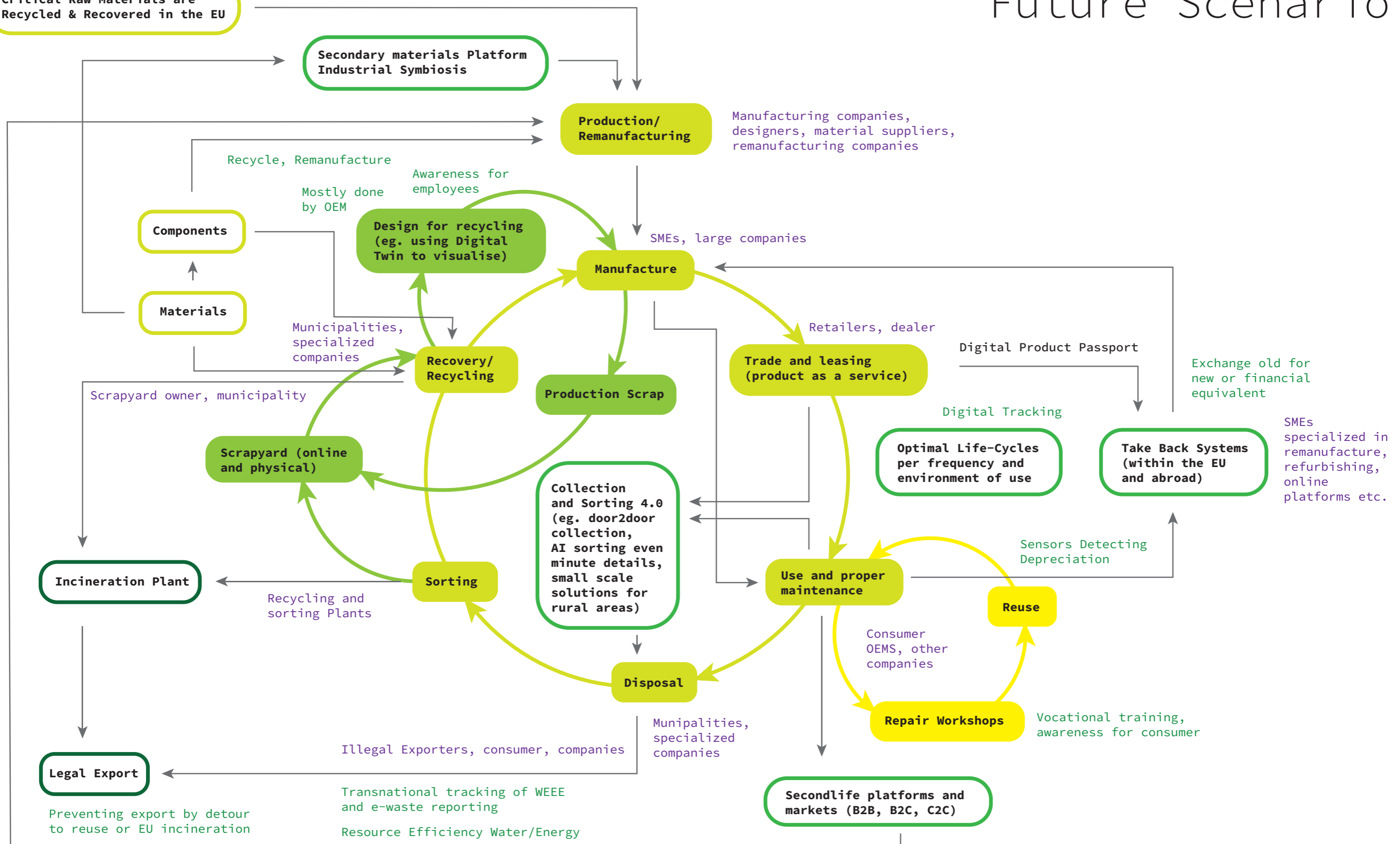## Future Scenario

STARTING POINT

Critical Raw Materials are Recycled & Recovered in the EU

Secondary materials Platform Industrial Symbiosis

Production/ Remanufacturing — Manufacturing companies, designers, material suppliers, remanufacturing companies

Recycle, Remanufacture

Mostly done by OEM

Awareness for employees

Design for recycling (eg. using Digital Twin to visualise)

Components

Materials

SMEs, large companies

Manufacture

Municipalities, specialized companies

Recovery/ Recycling

Production Scrap

Retailers, dealer

Trade and leasing (product as a service)

Digital Product Passport

Exchange old for new or financial equivalent

Scrapyard owner, municipality

Scrapyard (online and physical)

Digital Tracking

Optimal Life-Cycles per frequency and environment of use

Take Back Systems (within the EU and abroad)

SMEs specialized in remanufacture, refurbishing, online platforms etc.

Collection and Sorting 4.0 (eg. door2door collection, AI sorting even minute details, small scale solutions for rural areas)

Incineration Plant

Sorting

Recycling and sorting Plants

Use and proper maintenance

Sensors Detecting Depreciation

Reuse

Consumer OEMS, other companies

Disposal

Repair Workshops

Vocational training, awareness for consumer

Munipalities, specialized companies

Illegal Exporters, consumer, companies

Legal Export

Transnational tracking of WEEE and e-waste reporting

Resource Efficiency Water/Energy

Secondlife platforms and markets (B2B, B2C, C2C)

Preventing export by detour to reuse or EU incineration

Interreg CENTRAL EUROPE

Co-funded by the European Union

CIRCOTRONIC

LEGEND:

Stakeholders/Actors

Right to Repair Implementation

End-of-Life Solutions

Circular Design Strategies

Optimization Strategies