



Recupel

Collection, logistics, reuse & recycling of WEEE

Lorenzo Glorie

About Recupel

Recupel is the Belgian non-profit association responsible for organising the collection and processing of discarded electr(on)ic appliances and light bulbs



122.547 ton WEEE in 2019



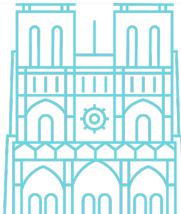
Tower Bridge
London
43 m



Statue of Liberty
New York
46 m



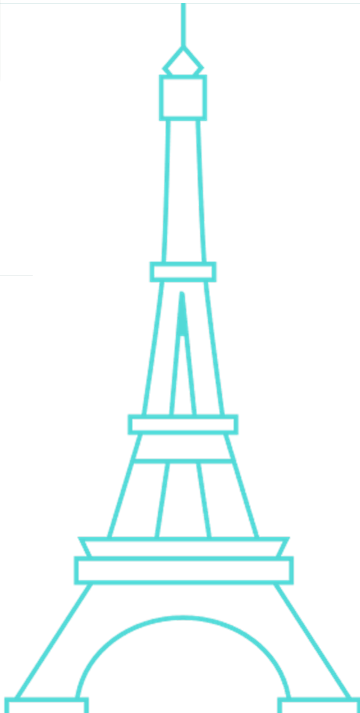
Tower of Pisa
Pisa
55 m



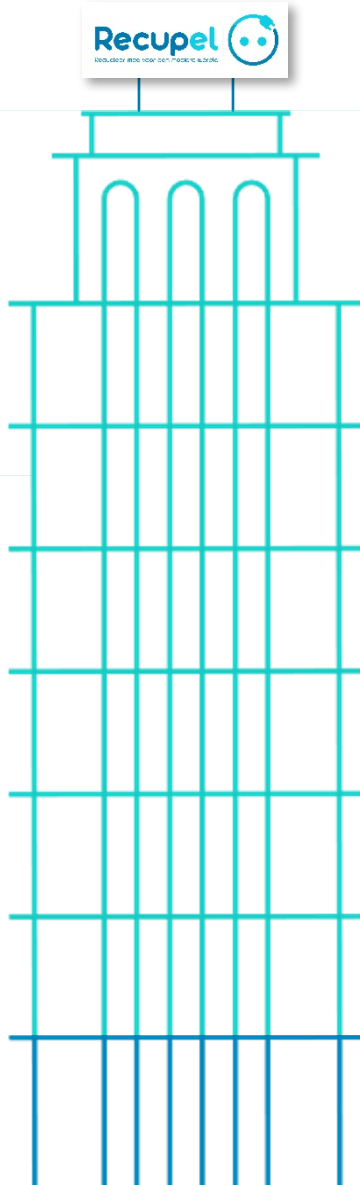
Notre-Dame
de Paris
69 m



The Gherkin
London
180 m



The Eiffel Tower
Paris
324 m



21.720
containers
500 m

90,5%

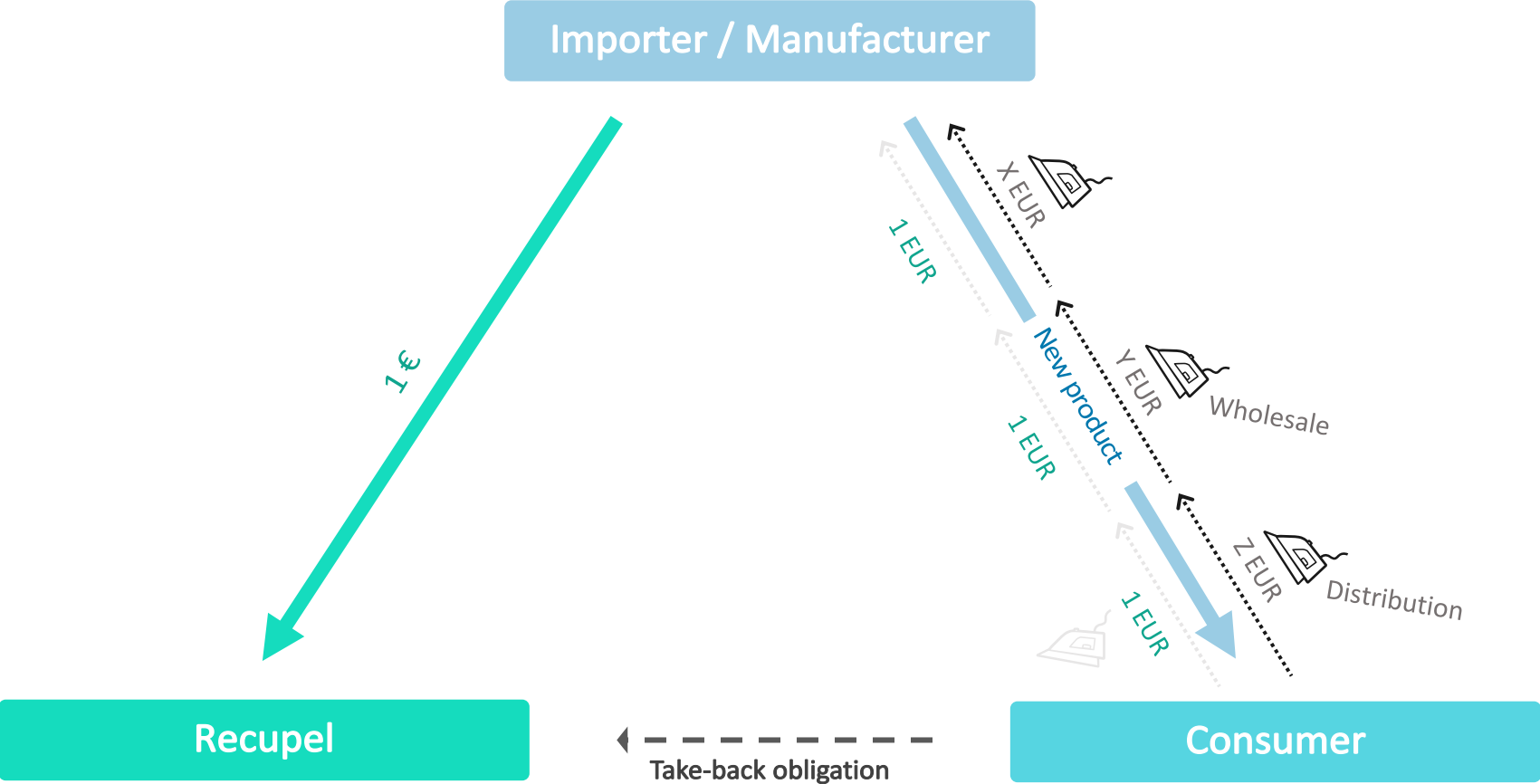
- Conversion to new raw materials
- Useful application
- Reuse

9,5%

waste (thermal/landfill disposal)

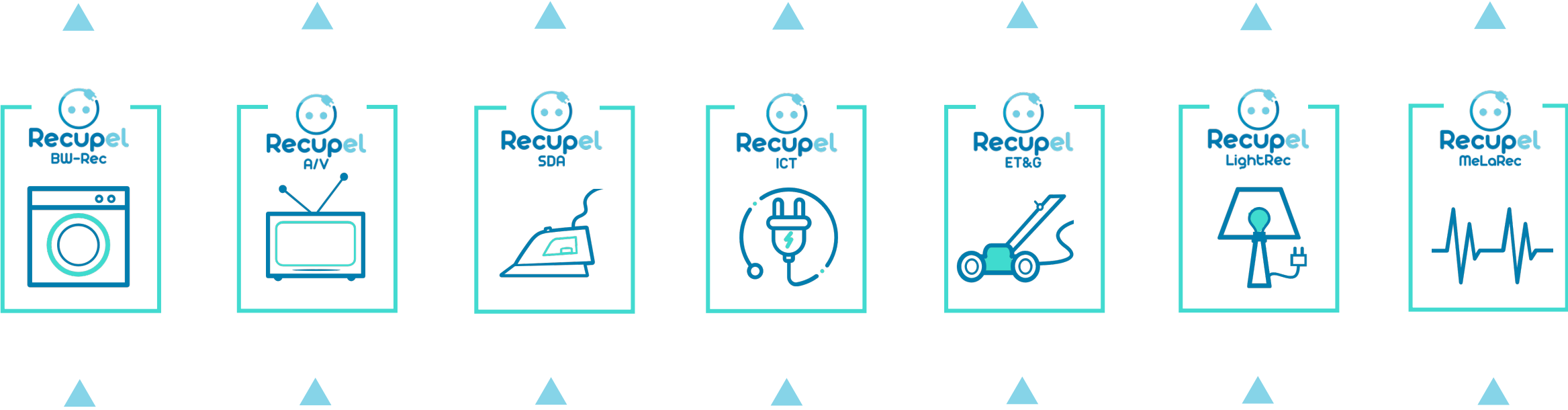


Financing



Executive organisation

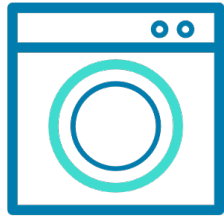
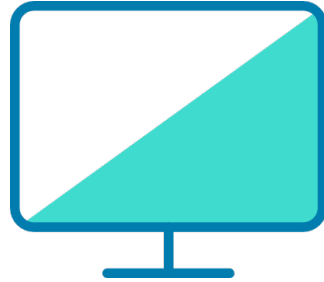
Board of directors



Producers and importers of electro-appliances



Sorting in 6 fractions



Recupel all-in contribution



Ways of collecting



24%
DISTRIBUTION

Recycle
Punt.
Pointe
Recyclage.
Recupel


Recupel



55%
PARCS



8%
REUSE
CENTER

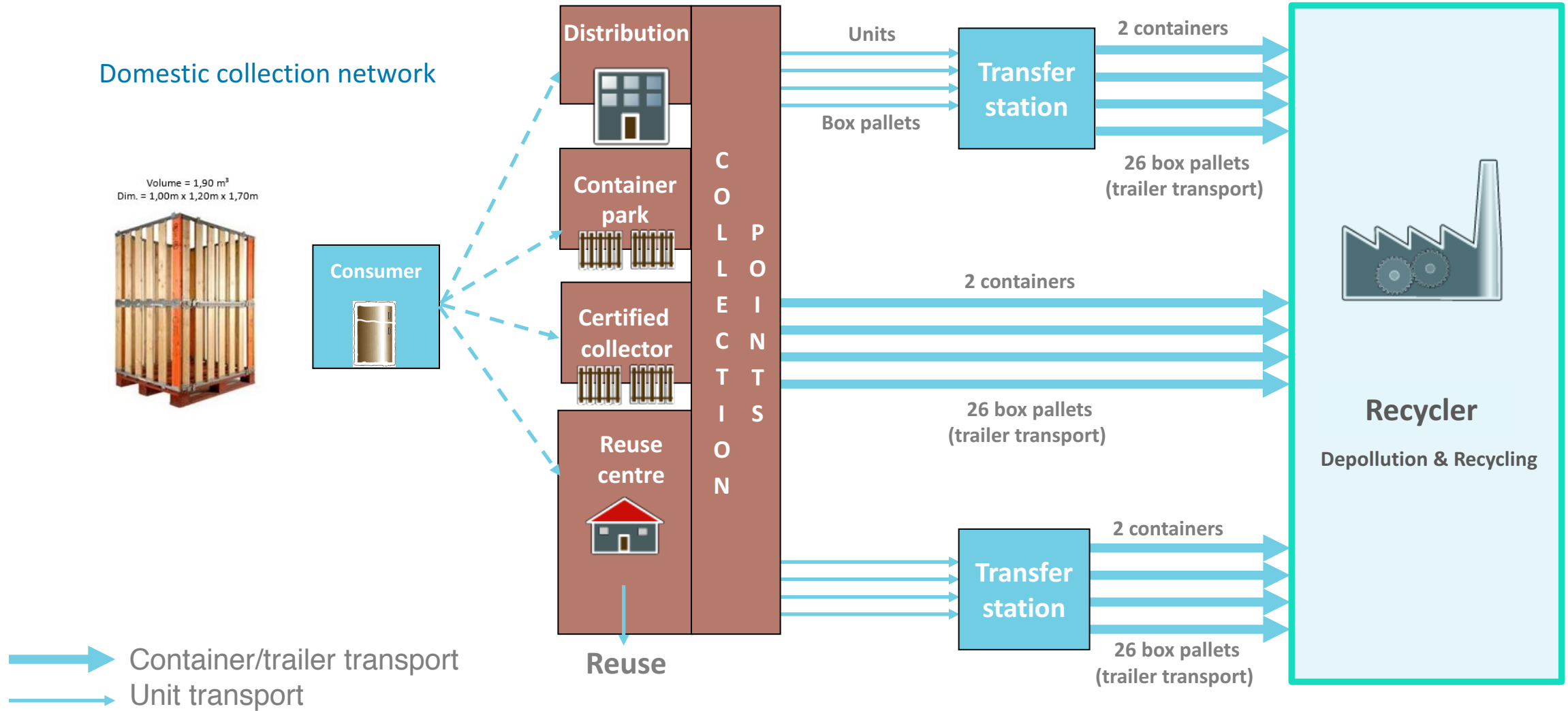


13%
CHARTER



Logistical network

Domestic collection network



Recycling WEEE

Software interface showing a list of components and their properties, including material type and weight.

Software interface showing a list of components and their properties, including material type and weight.

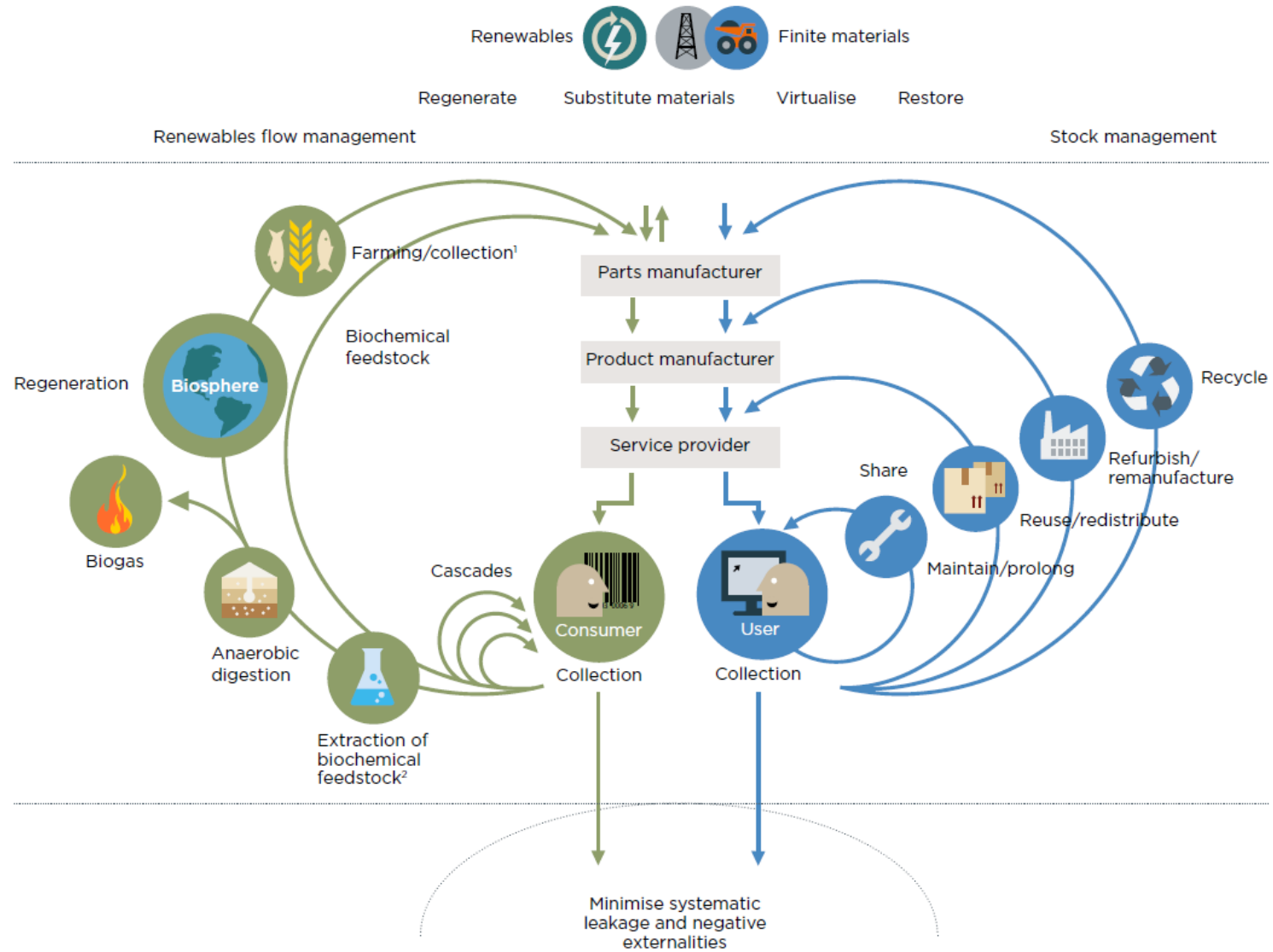
Software interface showing a list of components and their properties, including material type and weight.

Component	RU appl	RU comp	R	OMR	ER	TD	LD	???	check total
Fe / stainless steel			61,9840						61,9840
Cu			2,3730			0,0000			2,3730
Al			3,4781			0,0000			3,4781
other metals			1,3754						1,3754
plastics			4,0474		1,0693		0,9768		6,0935
other organic fractions					11,0323		2,1310		13,1633
organic residues				0,0035	0,0970	0,1104	0,0342		0,2452
glass			0,0005						0,0005
other inorganic fractions			6,9185						6,9185
inorganic residues			0,0111			0,0080			0,0191
mixed fractions - disposal						0,1454	4,2042		4,3496
Weight total (kg):			8.701.821,00	382,00	1.323.768,00	28.628,00	797.204,00		10.851.805,00
	RU appl	RU comp	R	OMR	ER	TD	LD	???	check total
% of total input (10.851.809):	0,0000 %	0,0000 %	80,1877 %	0,0035 %	12,1986 %	0,2638 %	7,3463 %	0,0000 %	100,0000 %

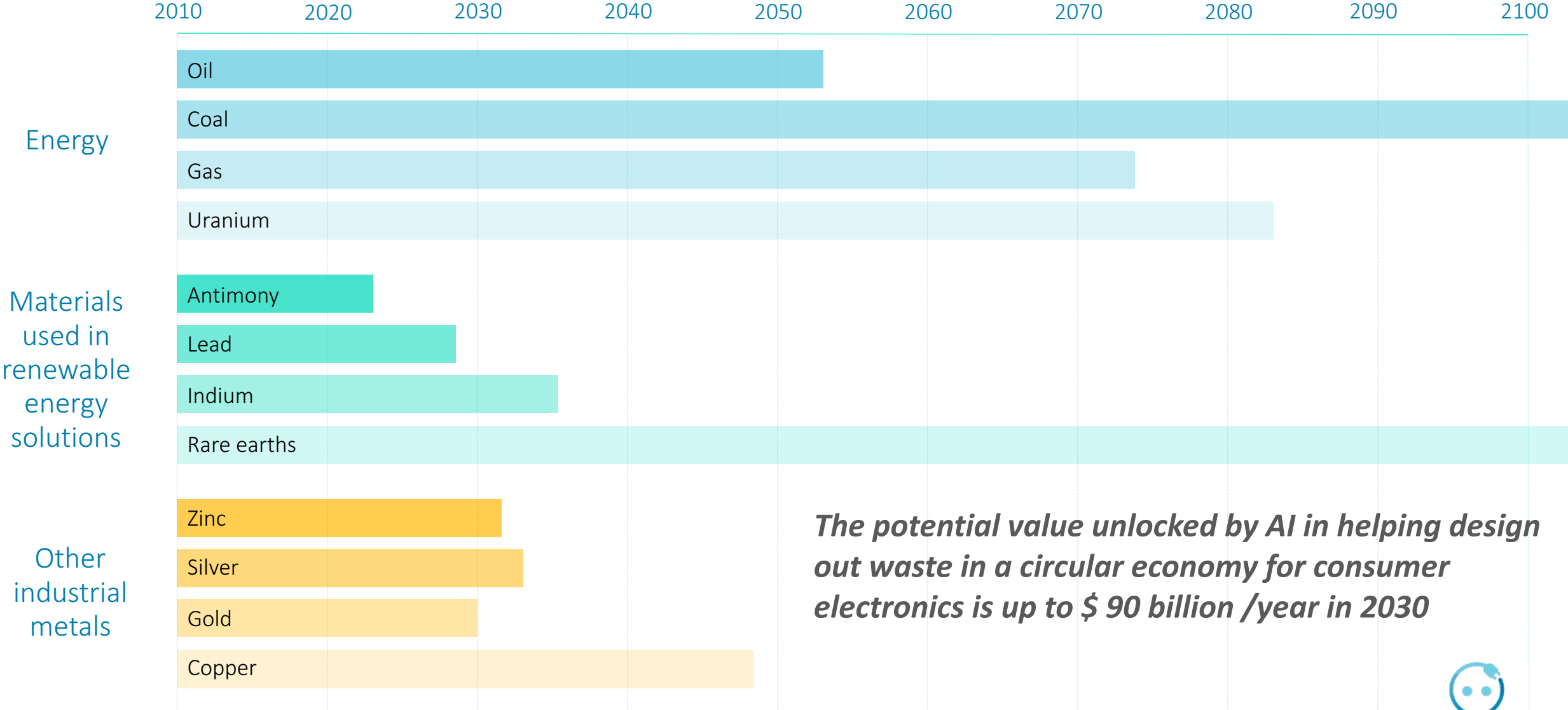
Recycling rate:	80,1877 %
Preparing for reuse and recycling rate:	80,1877 %
Recovery rate:	92,3899 %
Disposal and classification open or not determined:	7,6101 %



Shortening the loop



Born in 2010: how much is left for me?



The potential value unlocked by AI in helping design out waste in a circular economy for consumer electronics is up to \$ 90 billion /year in 2030



Sampling: extensive image database

Recupel built up a huge image database of
1.049.768 sampled appliances
before March 2019



04.02A_S Overige audio-videoapparatuur - HH OVE (Ander) (kleiner dan 50 cm)

Fraction OTH
Sampling date 24/01/2019 15:22:37
WeighingId 966223
Transport number 211636_1
Receptacle no. 5
Weight 2.360g
Pollution Electric
None Electric
Sampler Revam (Michael)

Validated on

OK ? NOK x



05.02S Armaturen (kleiner dan 50 cm)

Fraction OTH
Sampling date 24/01/2019 12:48:24
WeighingId 966827
Transport number 211636_1
Receptacle no. 2
Weight 420g
Pollution Electric
None Electric
Sampler Revam (Michael)

Validated on

OK ? NOK x



05.02S Armaturen (kleiner dan 50 cm)

Fraction OTH
Sampling date 25/01/2019 12:39:16
WeighingId 966963
Transport number 211636_1
Receptacle no. 13
Weight 640g
Pollution Electric
None Electric
Sampler Revam (Michael)

Validated on

OK ? NOK x



03.02C_S Overige IT- en telecom. apparatuur - HH OVE (ICT) (kleiner dan 50 cm)

Fraction OTH
Sampling date 25/01/2019 13:29:46
WeighingId 967098
Transport number 211636_1
Receptacle no. 17
Weight 9.360g
Pollution Electric
None Electric
Sampler Revam (Michael)

Validated on

OK ? NOK x

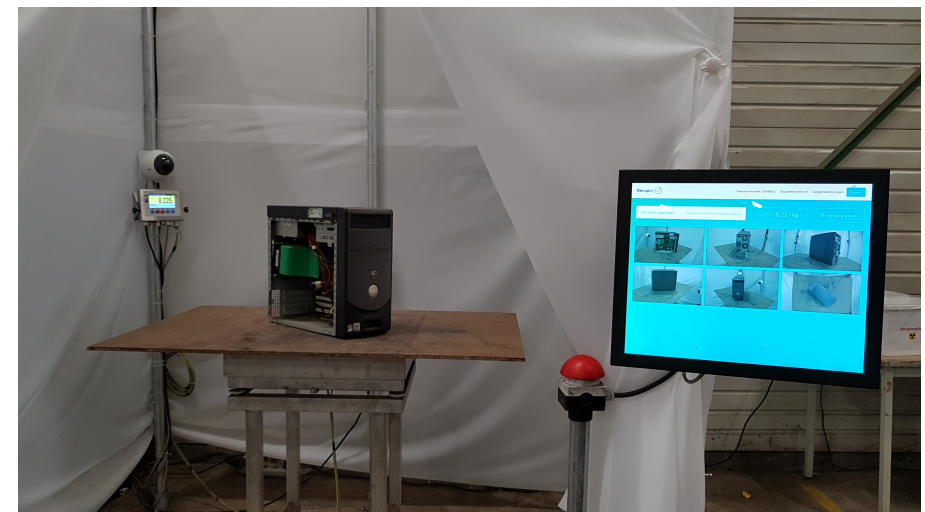
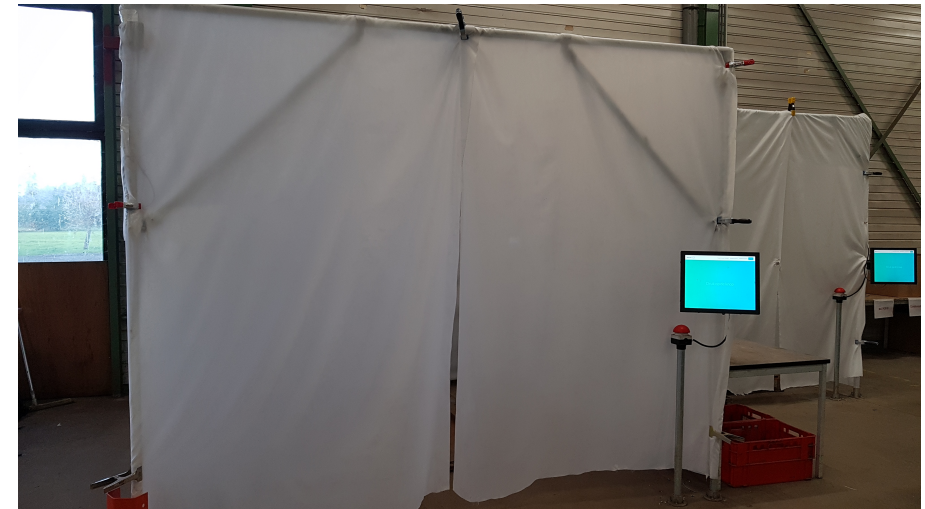


03.04S Kabels, Stekkerblokken, Stroomadapters, Batterijladers (kleiner dan 50 cm)

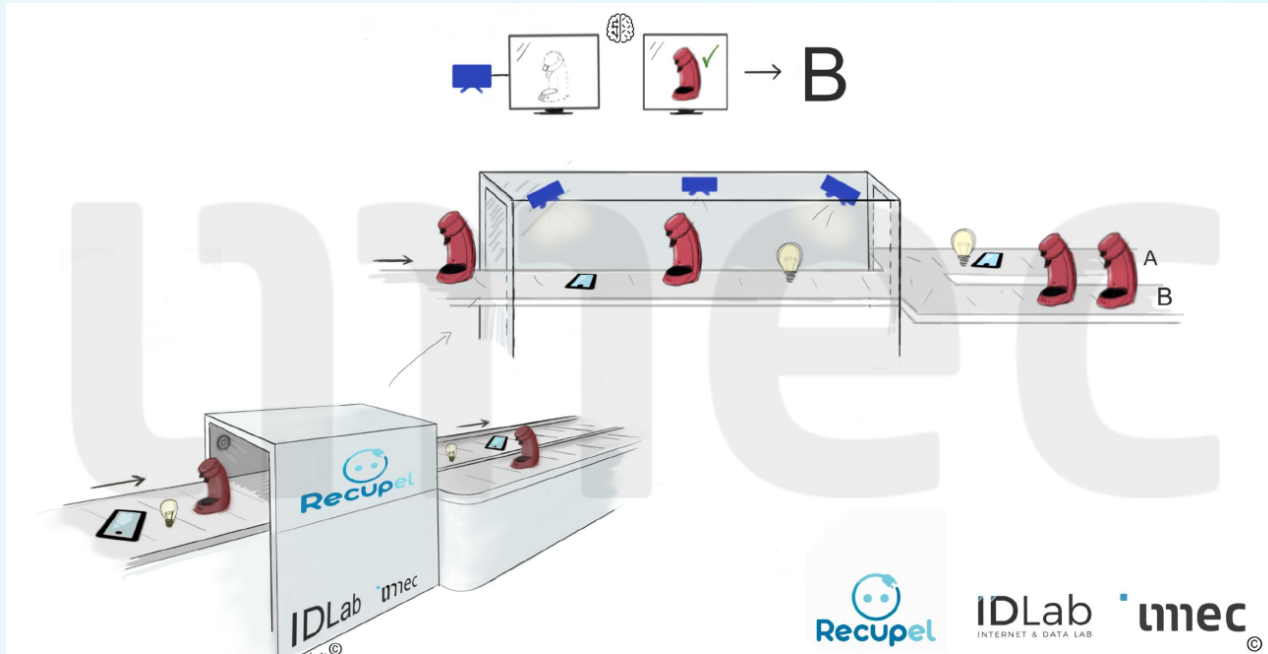
Fraction OTH
Sampling date 25/01/2019 11:21:39
WeighingId 966806
Transport number 211636_1
Receptacle no. 11
Weight 420g
Pollution Electric
None Electric
Sampler Revam (Michael)

Validated on

OK ? NOK x



AI in sampling



SAMSUNG WLAN Access Point

MODEL : WEA524i

RATING : 48 V_{DC}; 0.75 A(Adaptor), 48 V_{DC}; 0.54 A(PoE)

Manufactured : 2017.05

WiFi CERTIFIED

802.11ac Wave2

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC ID : A3LWEA524I
IC : 649E-WEA524I

UL LISTED I.T.E. E149091

SAMSUNG ELECTRONICS Co.,Ltd.

MADE IN KOREA

MAC : 000F02200FA

2WWQ012345A WDS-A524I/XAR 8 87276 19313 7

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.brussels 
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Recupel

Thank you for your attention!
