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Enforcement of individual producer responsibility through an Identification und Information System of EEE?

Summary of the ELVIES research project results

elni Forum

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at CEDRE, Facultés universitaires St. Louis

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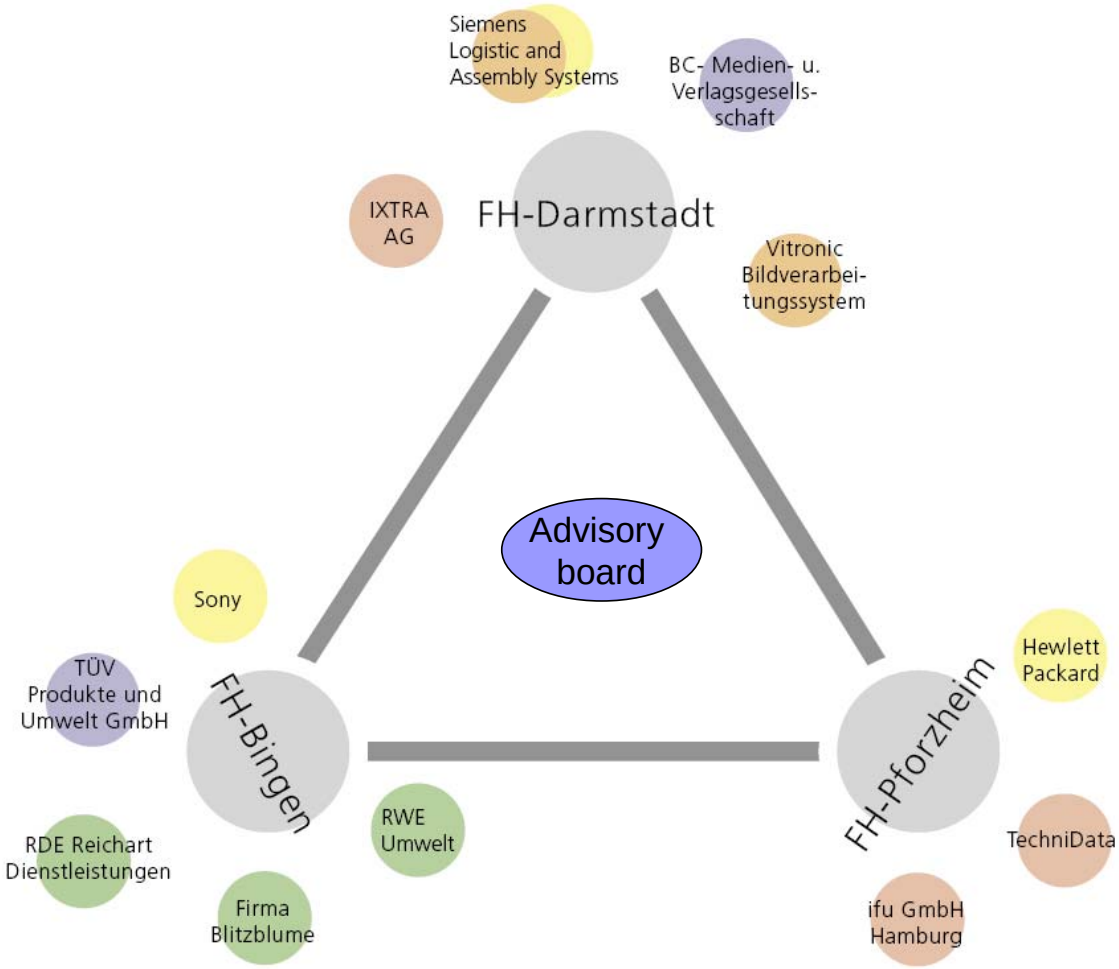
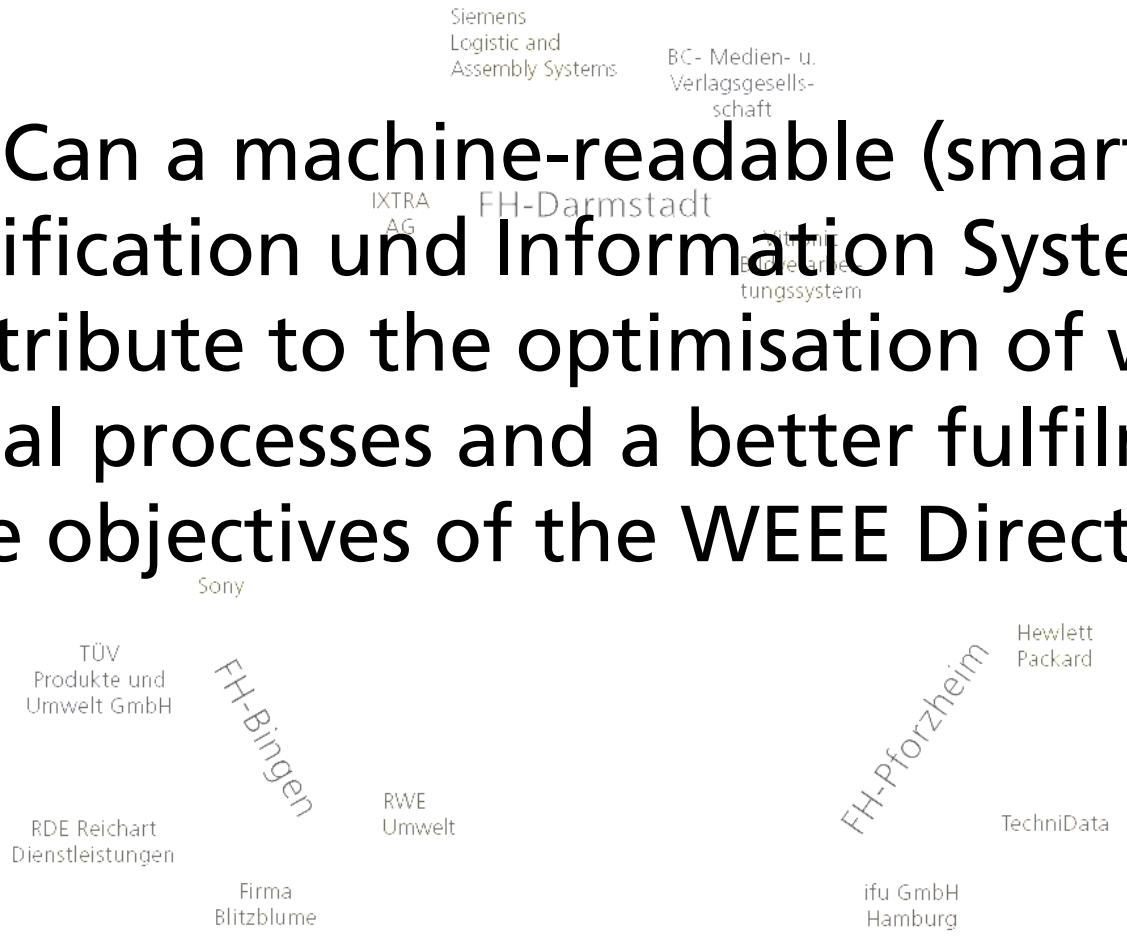
Overview

1. Project: Identification und Information System (IIS)
2. Legal framework (WEEE)
3. Status quo
4. IIS: Technical options & cost estimation
5. Implementation Options
6. Required Legal Adaptations
7. Benefits

1. The project partners



1. Research Question



Can a machine-readable (smart) Identification und Information System (IIS) contribute to the optimisation of waste disposal processes and a better fulfilment of the objectives of the WEEE Directive?

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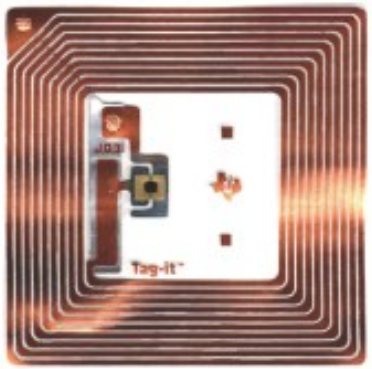
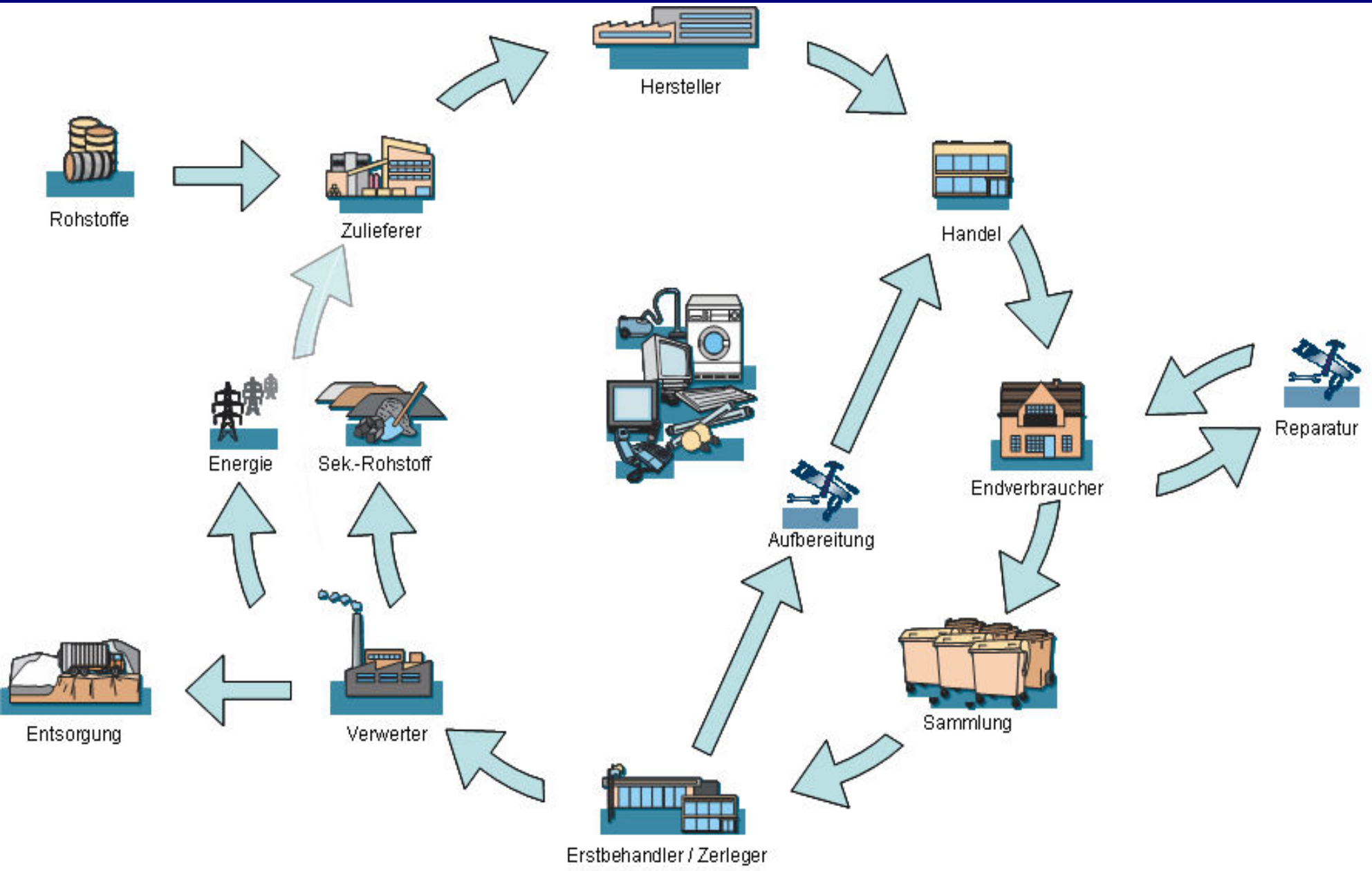


Legal framework

Recital 2 WEEE Directive

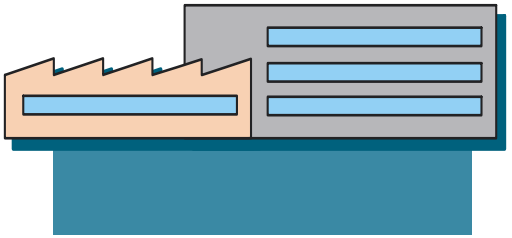
- "the achievement of sustainable development calls for significant changes in current patterns of development, production, consumption and behaviour (…)"

Legal framework: the relevant stakeholders (material flow – information flow)



2. Legal framework

The responsibility of the producer



Producer

2. Legal framework

Product responsibility
(→ 12th recital of the Directive)

by *function-maintaining* measurements such as "repair" and "upgrading" as well as "reuse"

Subsequently:

material-maintaining measurements mentioned in terms of "disassembly and recycling".

2. Legal framework

- Art. 8 (1) WEEE Directive:
  The producers are required to “provide at least for the financing of the collection, treatment, recovery and environmentally sound disposal” of WEEE …

2. Legal framework

- Art. 8 (2) regulates the cost attribution of new devices and lays down that

  "each producer shall be responsible for financing the operations referred to in paragraph 1
  relating to the waste from his own products"

2. Legal framework

- Art. 8 (2) 2: “The producer can choose to fulfil **this** obligation either individually or by joining a collective scheme.”

But:

- In practice he is liable for an undifferentiated mixture of devices.

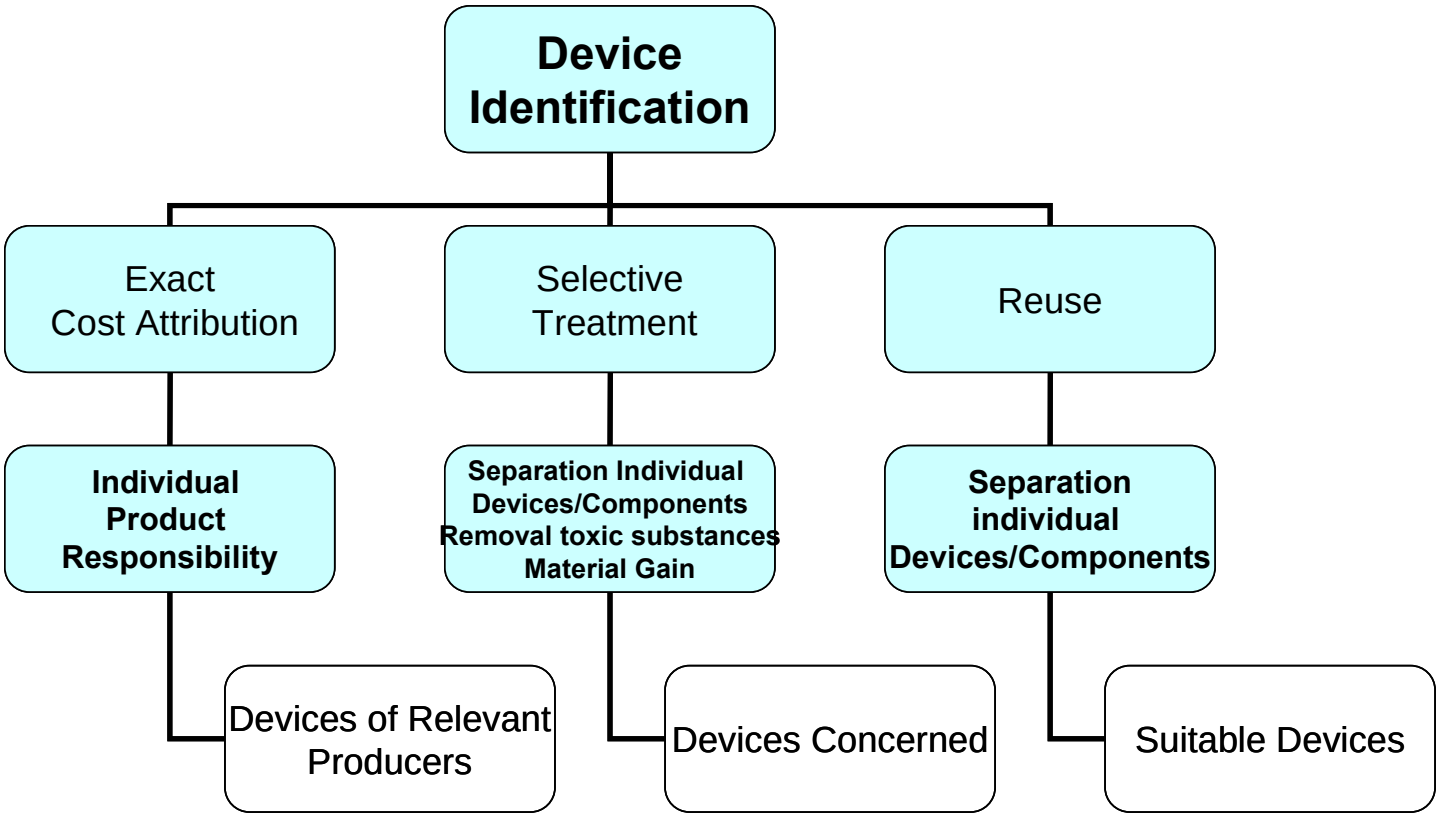
3. Status quo

Examples of mixed collection of collection groups 5 and 3

(Authors' own pictures: July 2007)

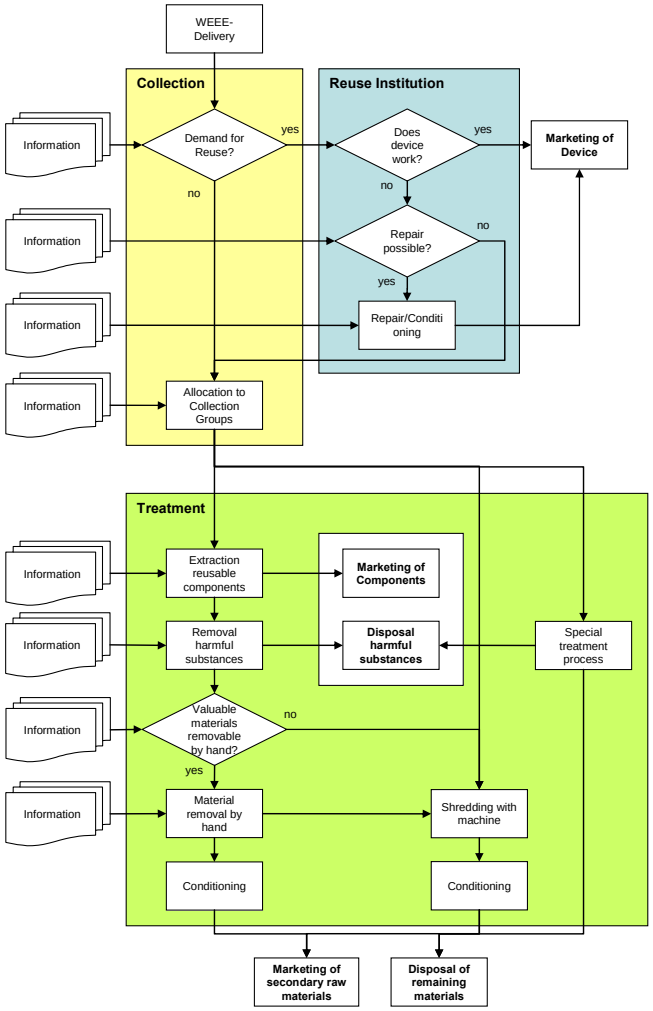
4. Identification and Information System

Application areas of an identification and information system

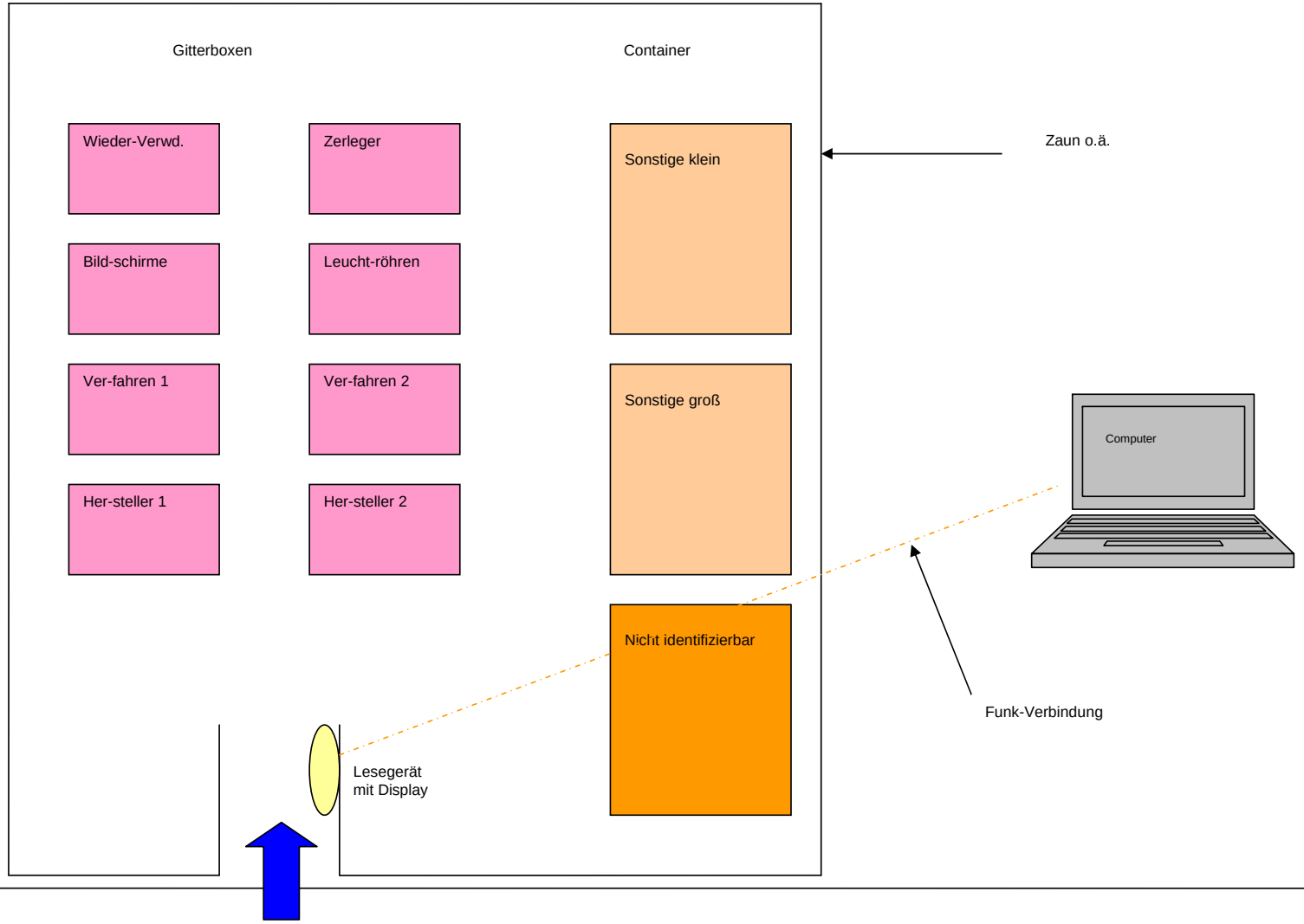


4. Requirements for an IIS

- The need for information



4. Example


Gitterboxen
Container
Wieder-Verwd.
Zerleger
Sonstige klein
Zaun o.ä.
Bild-schirme
Leucht-röhren
Ver-fahren 1
Ver-fahren 2
Sonstige groß
Computer
Her-steller 1
Her-steller 2
Nicht identifizierbar
Funk-Verbindung
Lesegerät
mit Display

4. Technical aspects of an IIS

Optical systems with a bar code or 2D-Code (DataMatrix)

Electronic system with **R**adio **F**requency **I**dentification (RFID)

4. Cost estimation

The costs for the introduction of a product identification and information system in the area of electrical and electronic scrap are comprised of the following:

- Labels on every product placed on the market,
- Scanning devices at collection points and primary treatment centres
- Conveyer belt units for a few large plants,
- Conversion of collection points to sorting centres
- Software development
- Compilation of product data and making these data available.

4. Cost estimation

Total estimation:

- about 4 million Euro is needed for public waste management services (collection points)
- 2.2 million Euro for the primary treatment centres plus corresponding costs for the installation of the system (one-time investment costs)

4. Cost estimation

Costs for equipement			
Position		coll. points	treatment
Scanner incl. PC	[€]	2.500	2.500
Number	[-]	1.500	500
Fließbandsystem	[€]		75.000
Number	[-]		10
Software	[€]	200.000	200.000
Umbaukosten	[€]	??	0
Implementation	[€]	??	??
Gesamtkosten	**[Mio. €]**	**4,0**	**2,2**

4. Cost estimation

Example:

- 21.000 t/a products cat. 3
- 13.000 t WEEE
- 100 €/t operative costs
- Administrative fees
- Internal costs

4. Cost estimation

	Einzelpreis		Gesamtpreis pro Jahr	
Entsorgung Sammelgruppe 3	100,00	€/t	1.300.000,00	€
Gebühren für Abholanordnung	52,00	€	104.000,00	€
Gebühren für Bereitstellungsanordnung	41,00	€	82.000,00	€
Gebühren Aktualisierung Garantie	193,00	€	965,00	€
Gebühren Aktualisierung Mengendaten	95,00	€	95,00	€
Zwischensumme			1.487.060,00	€
Interne Kosten			5.024,00	€
Summe			1.492.084,00	€

→ **0.07 €/kg**

4. Cost estimation

Implementation of the system:

- 1,5-3,5% increase of costs over 10 years

5. Implementation Options

1. **Voluntary** identification and information system
2. **Obligatory** identification and information system
3. **Expanded** information obligations (EuP-Dir)

5. Implementation

- In all scenarios, the costs for the disposal of *identifiable* waste equipment are directly assigned to the producers; the remaining costs are divided, for example, according to the weight of the equipment brought onto the market, as has been the case up to now.

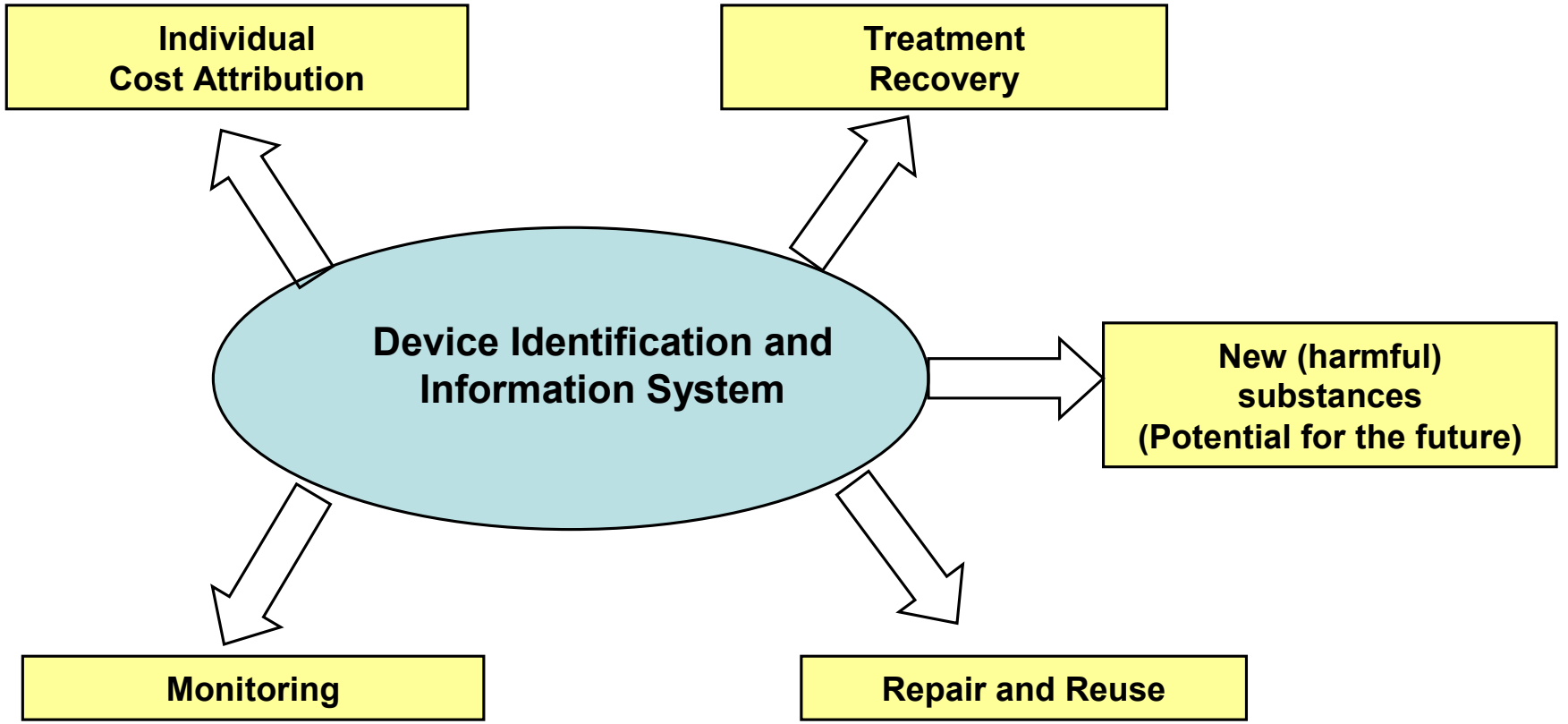
6. Required Legal Adaptations

Scenario 1: no amendments of the WEEE Directive are necessary.

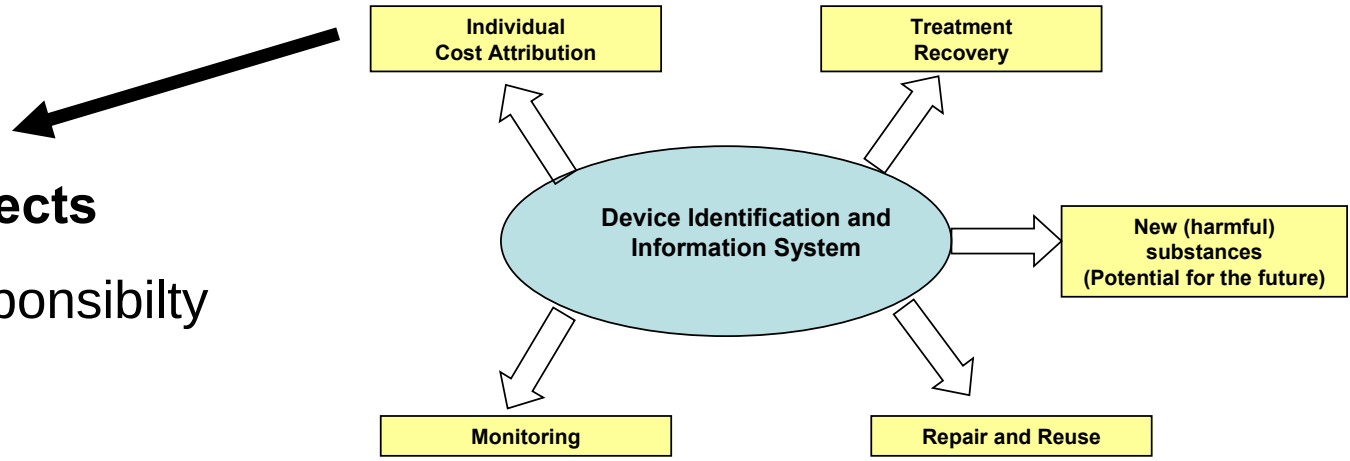
Scenarios 2 and 3:

- Art. 11 paragraph 2 labelling obligations of producers
- obligation of primary treatment centres and collection points to create the technical prerequisites for equipment identification (new Art. 11 para.3)
- expansion of the standardisation mandate for the Commission in Art. 11 paragraph 2 sentence 3
- the directive should more clearly prioritise individual producer responsibility in the objectives

7. Benefits of an IIS



7. Benefits and Effects of an IIS



Effects

- Inidivual producer responsibilty
- Competition
- Innovation

+ other benefits

= improve the environmental performance

of all operators involved in the life cycle of electrical and electronic equipment (Art. 1)

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Thank you very much for your attention!

For more information:
www.elvies.de
www.elni.org.