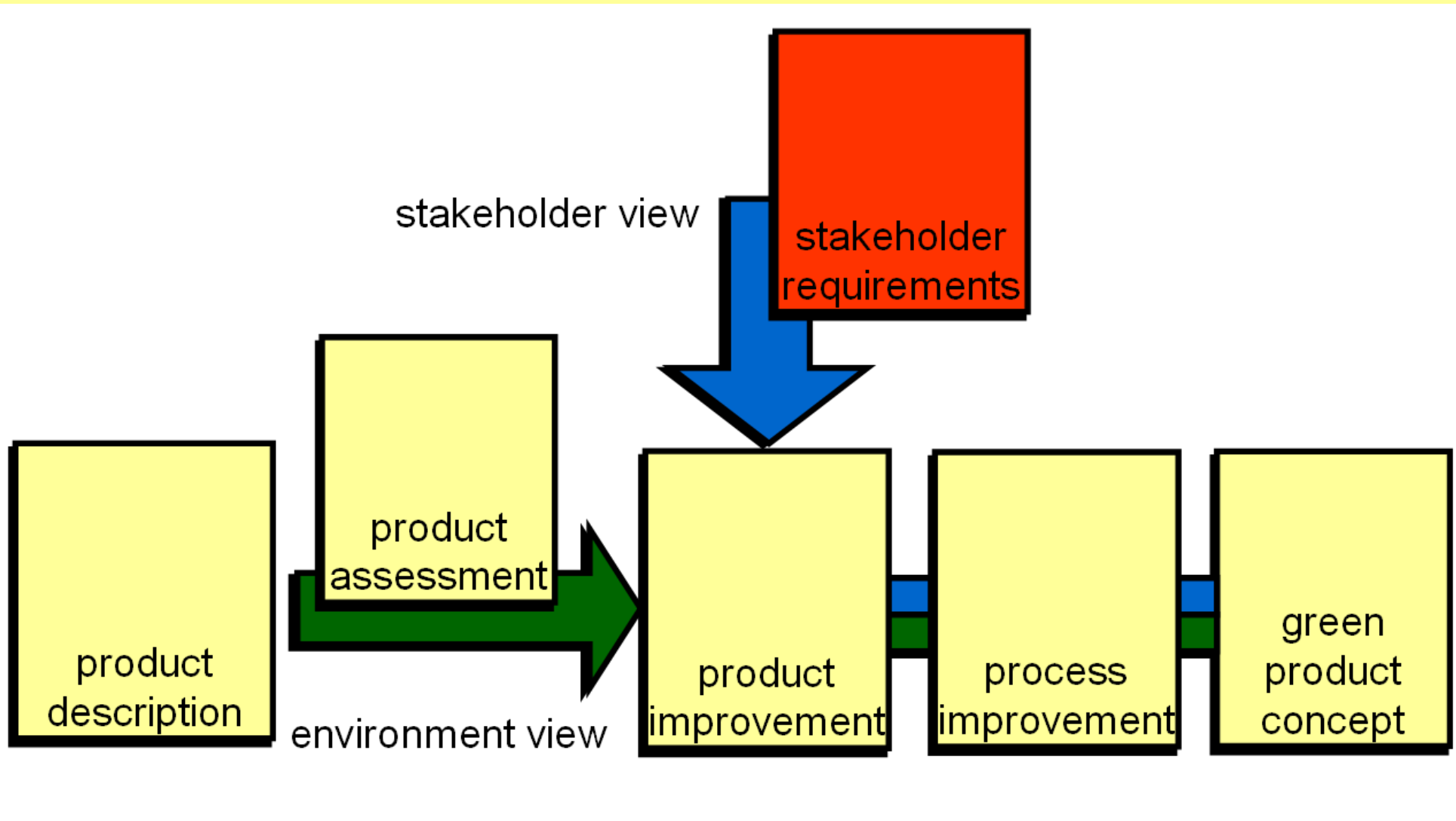


**The Use of the Electric and Electronic Equipment–
PILOT in the ECODESIGN Toolbox for the Development
of Green Product Concepts**

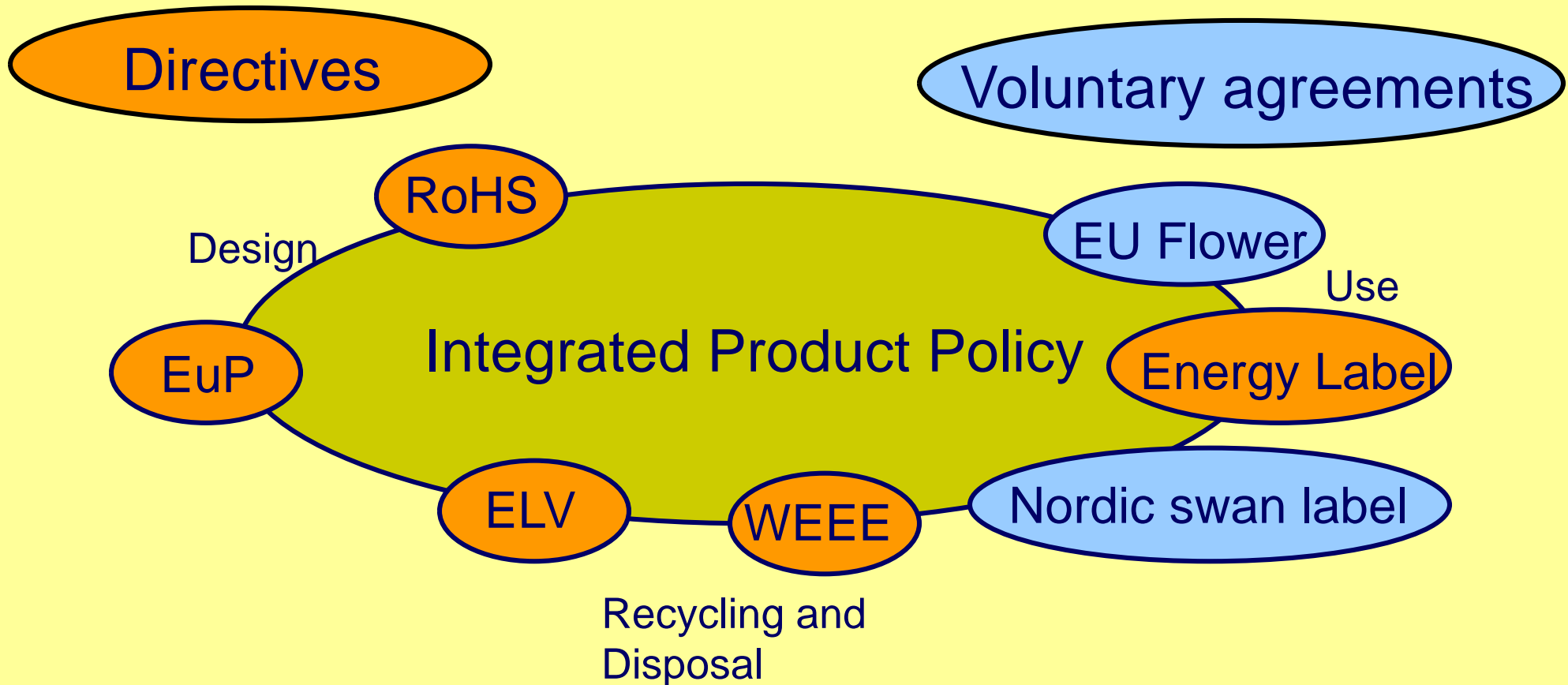
Rainer Pamminger

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EU environmental requirements



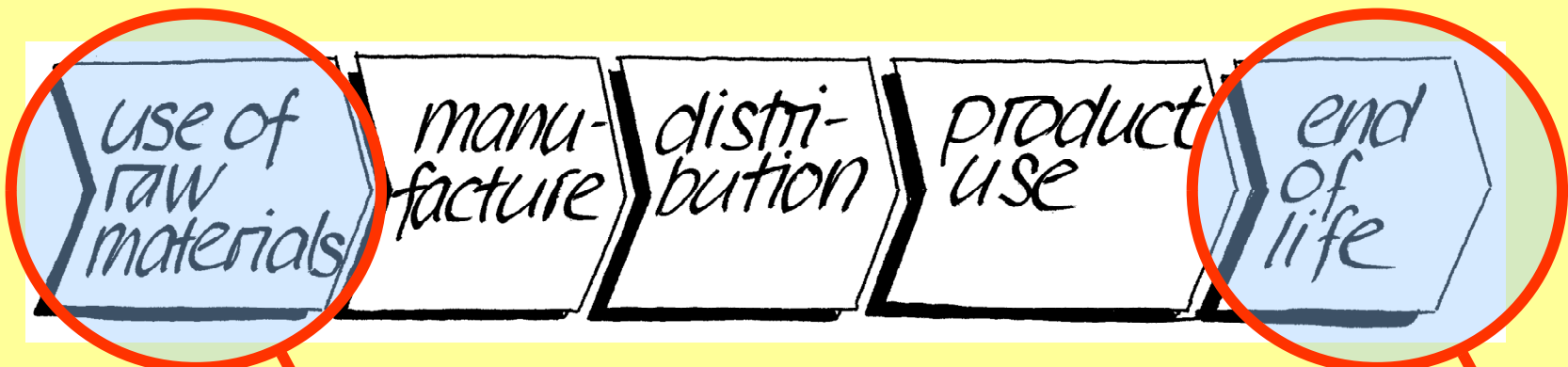
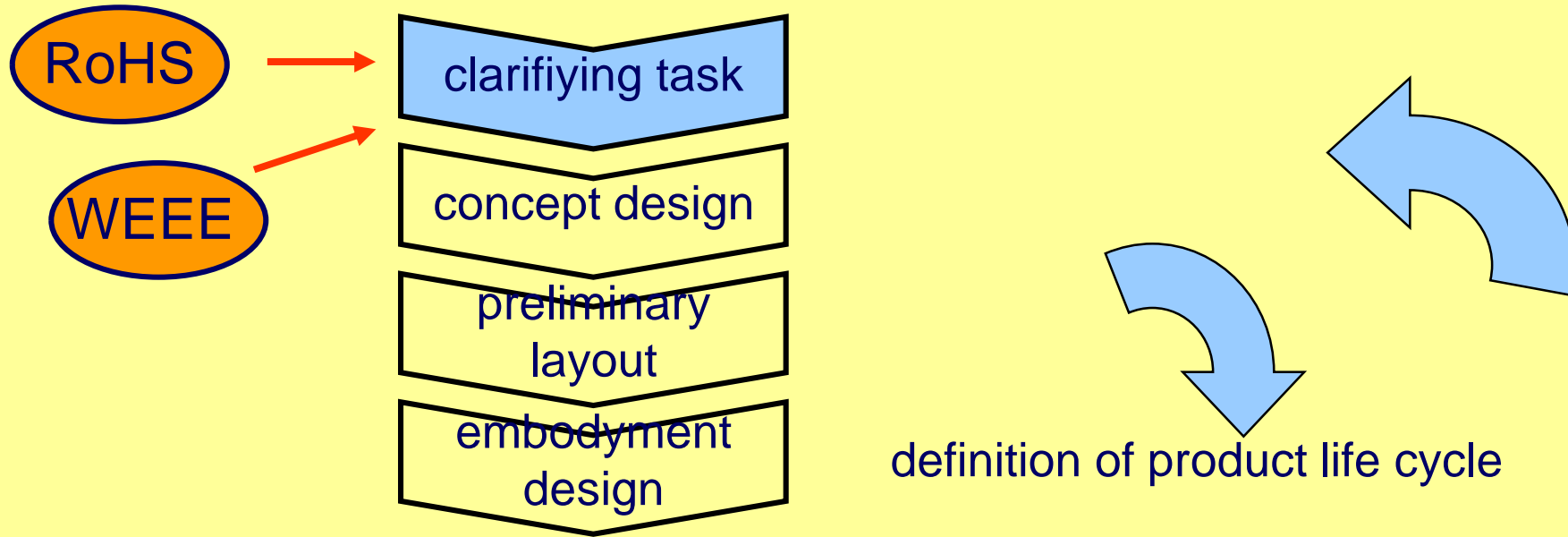
WEEE Directive 2002/96/EC based on Article 175

- * Financing
- * Treatment
- * Design
- * Separate collection
- * Marking
- * Information

RoHS Directive 2002/95/EC based on Article 95

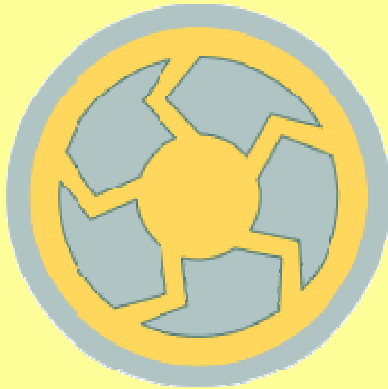
⇒ By 1st July 2006 new Electrical and Electronic Equipment put on the EU market shall not contain:

- * Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated byphenyls, Polybrominated dypenyl ethers



Product Life

learning all about ECODESIGN



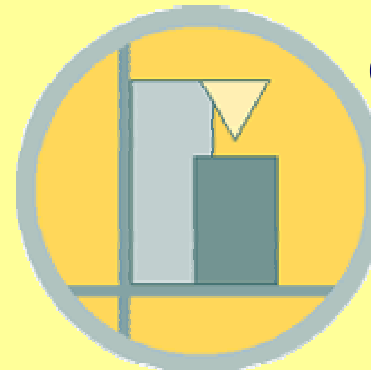
Development

applying ECODESIGN to **new** designs



Improvement

of **existing** products



ECODESIGN
EEG PILOT

INFORMATION | VALIDITY CHECK

RoHS | WEEE

ECODESIGN PILOT for electrical and electronic products, helping manufacturers implementing compliance with the new EU Directives and corresponding Austrian legislation.

- ▷ **RoHS Directive**
 Information and support related to the RoHS Directive, which regulates the restrictions of hazardous substances in electrical and electronic devices.
- ▷ **WEEE Directive**
 Information and support related to the WEEE Directive, which regulates the handling of waste electrical and electronic equipment.

Deutsch
 English

in
 regular focus

BWA
 BUNDESMINISTERIUM FÜR
 WIRTSCHAFT UND ARBEIT

Kompetenzzentrum
 Elektro(nik)altgeräte-
 Recycling & nachhaltige
 Produktentwicklung

TU
 WIEN

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⇒ ... to questions of producers, dealers, importers:

- * Who is affected by the Directives?
- * What are the compulsory obligations according to the Directives?
- * How can I make sure that my product meets these requirements?
- * Which strategies and measures have to be planned?
- * When is the deadline for full compliance with the requirements of the Directives?

WEEE-Directive



The intention of the WEEE Directive (Directive 2002/96/EC on waste electrical and electronic equipment) is to reduce the amount of hazardous substances in waste. The underlying purpose is to promote the avoidance, recovery and risk-free disposal of waste.

Directives validity check "WHO"

Obligations, "WHAT"

Timetable, "WHEN"

Implementation, "HOW"

Directive Relevance for Companies

- i Do you produce electrical or electronic products under your own brand? yes no
- i Do you sell electrical or electronic products under your own brand which are produced by other companies? yes no
- i Do you import electrical or electronic products into the European Union? yes no
- Do you export electrical or electronic products into the European Union? yes no



Validity Check Result

Both directives (RoHS and WEEE) are relevant for your product!

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INFORMATION | VALIDITY CHECK

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Legal Compliance, "WHAT"
WEEE-Directive ←



Product categories

- **Large household appliances**
- **Small household appliances**
- **IT and telecommunications equipment**
- **Consumer equipment**
- **Lighting equipment**

Product examples

- refrigerators, washing machines
- toasters, kitchen scales, ...
- notebooks, printers, ...
- radio sets, TV sets, ...
- fluorescent lamps, discharge lamps


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INFORMATION | VALIDITY CHECK | RoHS | WEEE

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LEARN

IT and telecommunications equipment
WEEE-Directive ← Legal Compliance, "WHAT" ←




Meeting set recovery rates for IT and telecommunications equipment

Article 7 of the WEEE Directive sets the recovery rate for **category 3** devices to an overall 75% of average weight per appliance. This is to be interpreted as the recovery of any type of material or energy. The mandatory reuse and recycling rate for components, materials and substances is set to 65% of a device's average weight.

Different materials are varyingly reusable and recyclable. Furthermore, components as e.g. the coatings of computer screens may contain additives, such as flame retardants and stabilizers, which impede the recovery of substances and cause emis

Reuse and recycling rate 65%

Recovery rate 75%



Standard-compliant marking of electrical and electronic equipment

Manufacturers and importers are required to mark electrical and electronic devices which enter the market after August 13, 2005, with the WEEE symbol "crossed-out wheeled bin indicating separate collection of electrical and electronic equipment." The symbol must be printed visibly, legibly and indelibly. In exceptional cases (e.g. small size) the symbol shall be printed on the packaging, on the instructions for use

... additionally:

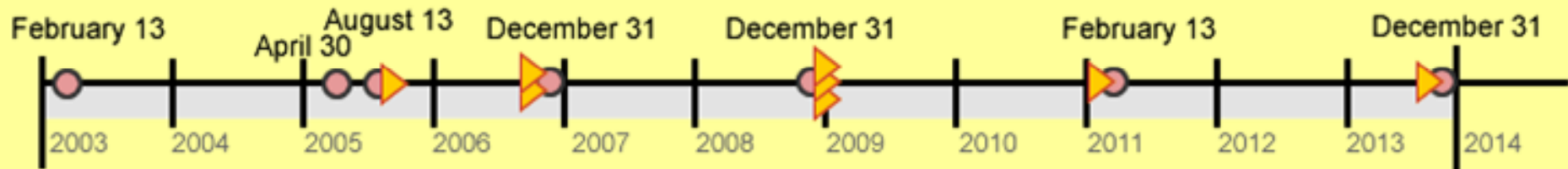
- ⇒ Separate collection of electrical and electronic equipment
- ⇒ Selective treatment: removal of components which contain hazardous substances
- ⇒ Selective treatment: removal of fluids and hazardous substances
- ⇒ Information for end-user
- ⇒ Information for treatment facilities

Timetable, "WHEN"

WEEE-Directive ← WHEN-overview ←



Important deadlines for implementation of the WEEE



until/from	Deadline	National / EU	Content
	February 13, 2003		WEEE becomes effective.
	April 30, 2005		EAG-Ordinance becomes effective.
from	August 13, 2005		Entry into force of WEEE directive.

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INFORMATION | VALIDITY CHECK | RoHS | WEEE

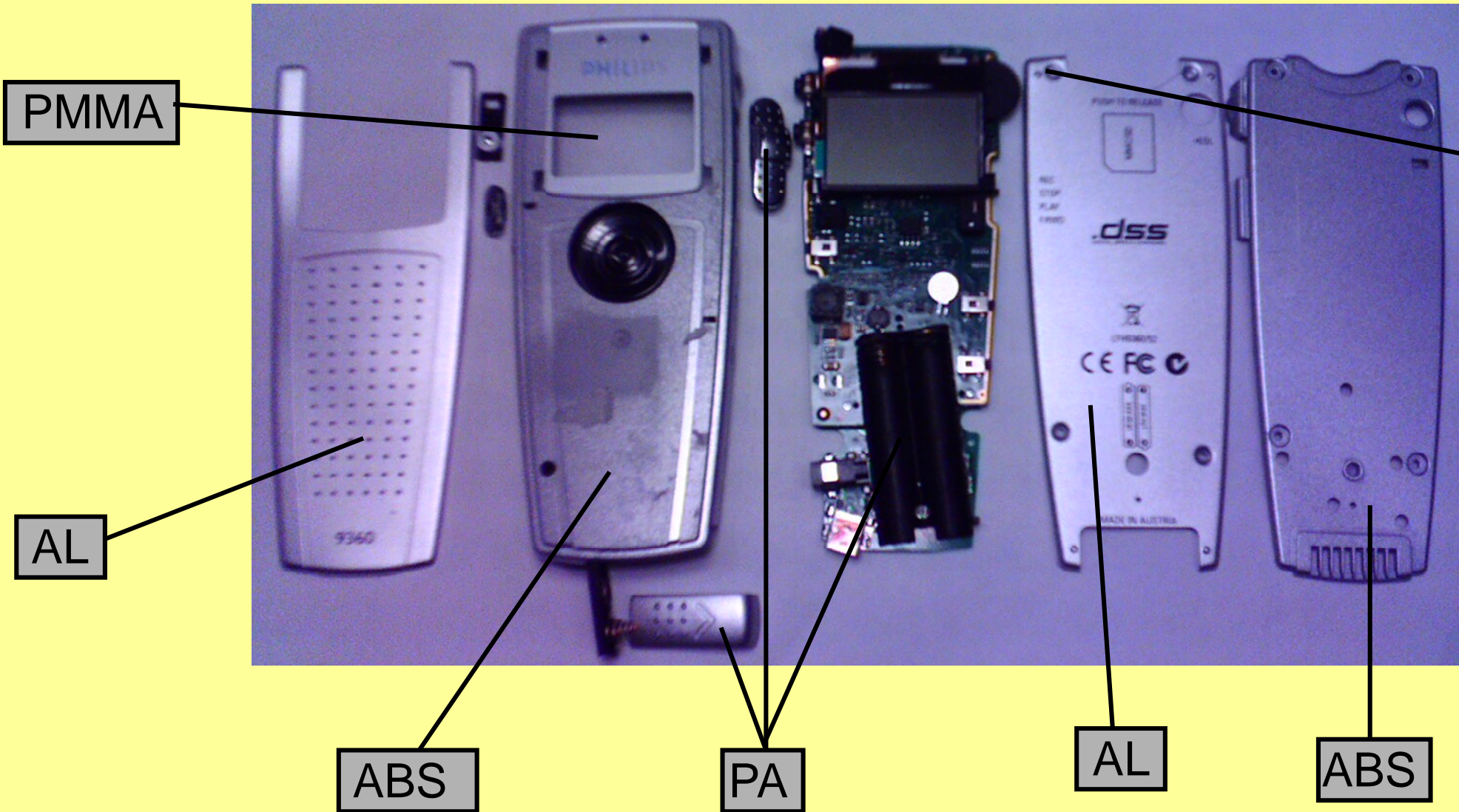
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LEARN

Design Support, "HOW"
WEEE-Directive <-

- Secure Take-back, Collection and Treatment
- Supply of information for users and treatment facilities
- Recovery-friendly product conception - material choice
- Disassembly-friendly product conception - connection techniques
- Selective treatment - depollution

Example: Variety of materials



Example

Did you minimize the variety of materials used in the product?



How many different types of material have been used in the product? Is it possible to use the same material for different components?

Relevance (R)	Fulfillment (F)	Priority (P)
<input checked="" type="radio"/> very important (10) <input type="radio"/> less important (5) <input type="radio"/> not relevant (0)	<input type="radio"/> yes (1) <input type="radio"/> rather yes (2) <input type="radio"/> rather no (3) <input checked="" type="radio"/> no (4)	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <h1 style="color: red; margin: 0;">40</h1> </div> $P = R * F$

Measure	Reducing the variety of materials used <small>LEARN</small>
Idea for Realization	<div style="border: 1px solid black; padding: 5px;"> <pre>omit parts between front and back - using shell technique with just on material for the outer parts</pre> </div>

- ⇒ Shell technique – use just one material for outer parts
- ⇒ Use PS, ABS and PP which can be recycled with a rate of up to 100%
- ⇒ Print crossed-out wheeled bin on the packaging, on the instructions for use, on the warranty and on the product.
- ⇒ Creation of a CD-ROM containing information of components, materials and location of the accumulator.
- ⇒ Registration in Austria at: <http://edm.umweltbundesamt.at>
- ⇒ Joining a collection system
- ⇒ etc.

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