

SENS Recycling System Activities SENS International

R09 study tour, Zurich, September 7th, 2009
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SENS®

Topics

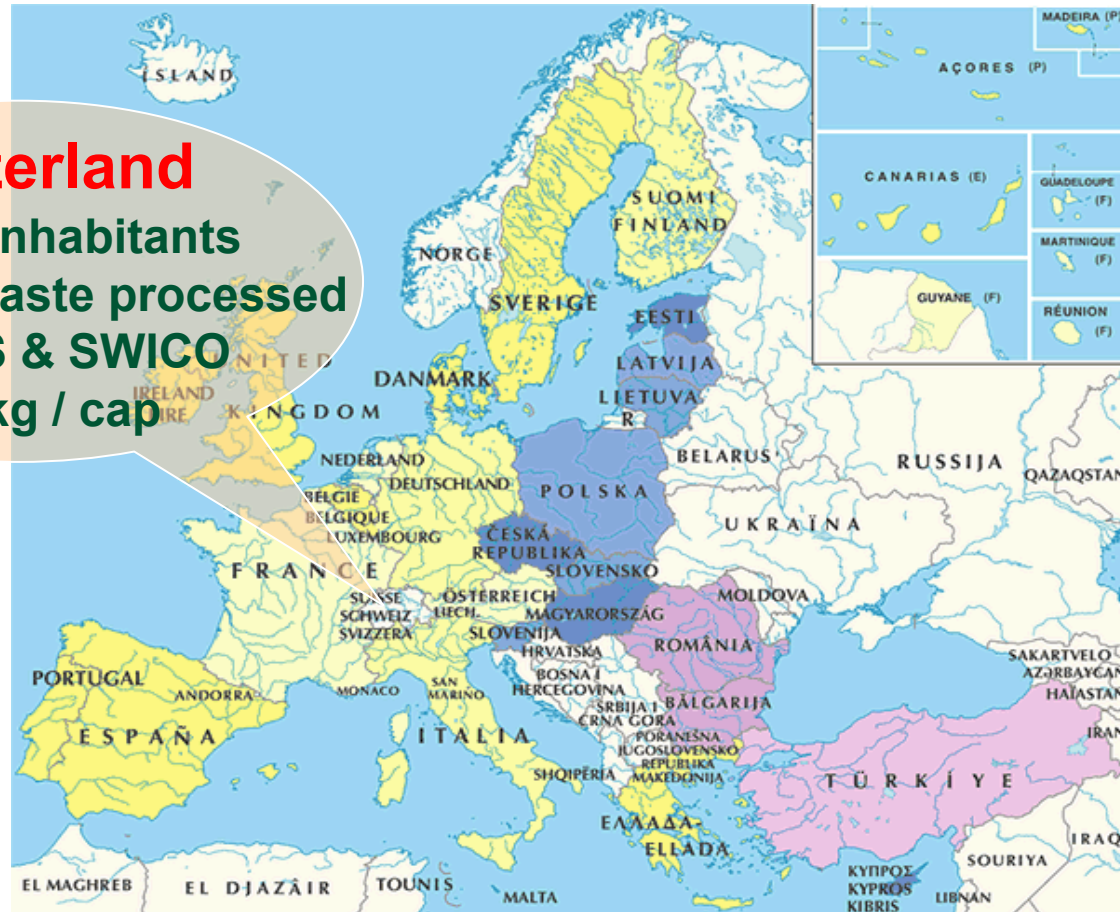
- Swiss E-Waste Market
- SENS Foundation
- SENS Take Back Scheme
- Advanced Recycling Fee / Money Flow

- SENS International – Activities in Brazil

Swiss E-Waste Market

Switzerland

7.6 Mio. inhabitants
107'000 t E-Waste processed
by SENS & SWICO
14.2 kg / cap



SENS Foundation – Area of Activity

- **Management of e-waste recycling system for part of swiss e-waste**
- **Management of ARF funds, data clearance and controlling**
- **Quality control through independent technical experts and auditors (TK-SENS)**
- **Public relations**

SENS Foundation

General Assembly

Board of Directors

ARF-Commission
- Producers and Importers
- Big retail chains
20 Members

System Management

TK-SENS
- External Supervisors for
technical control of recycling
standards
9 Members

Operational Units
ARF-Management
Controlling Take Back System
Quality Management Recycling
SENS French Region

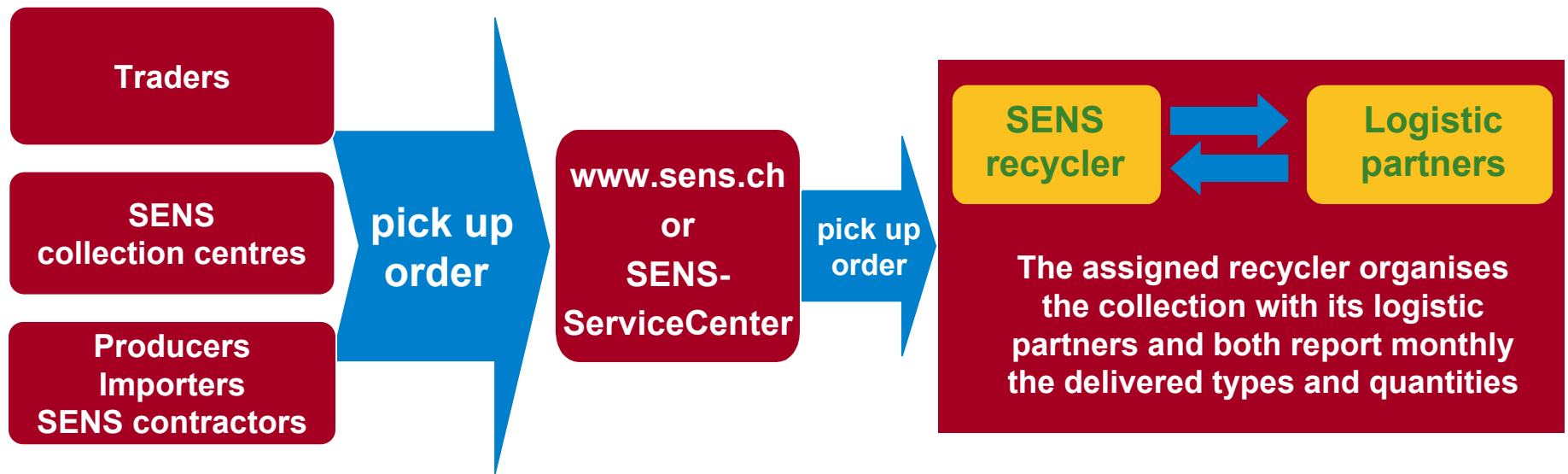
SENS Take Back Scheme



SENS-Hiphop-Teddy



SENS Take Back Scheme



Collection

Controlling

Transportation & recycling

Taking Back Illuminants



Fluorescent lamps



High pressure lamps



Light emitting diodes



Taking Back Illuminants



Collection in Runge palettes

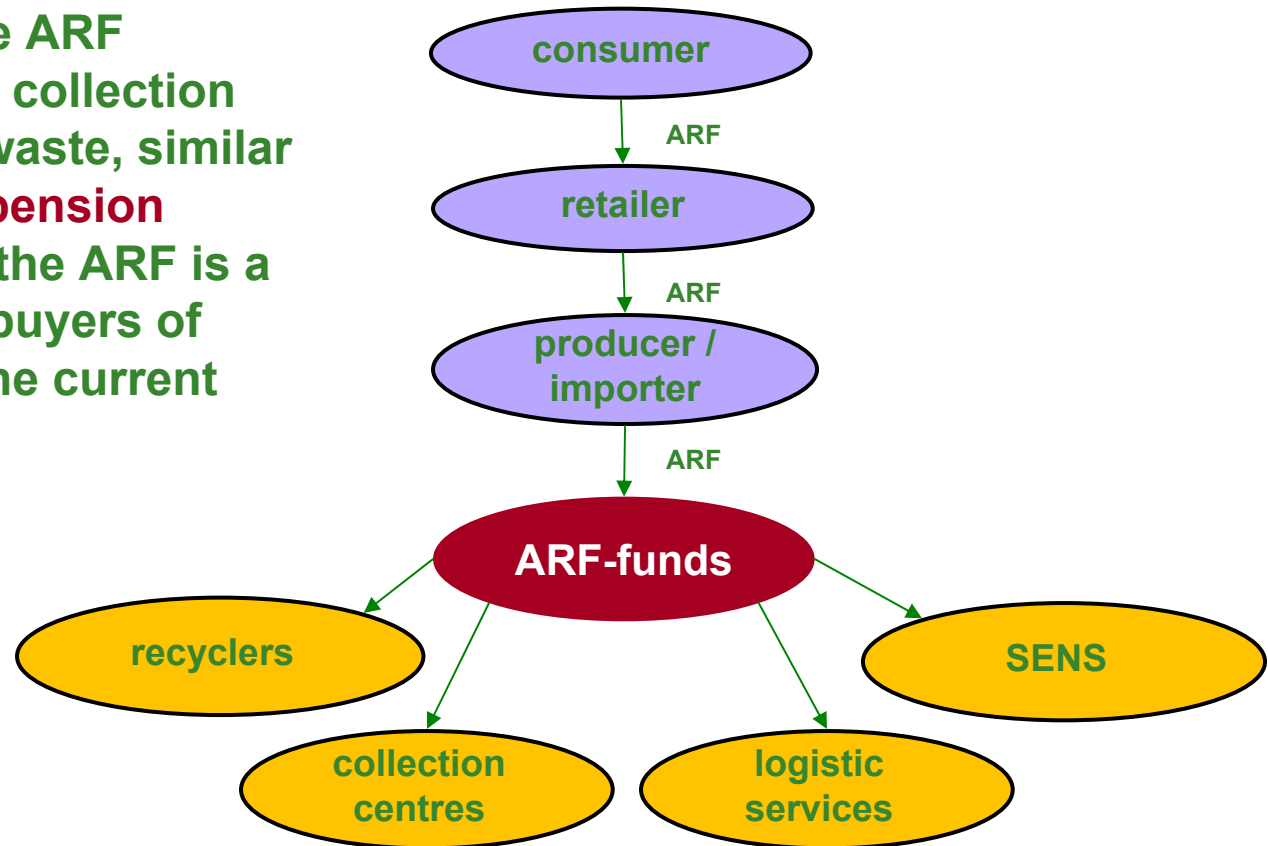


Controlled Recycling:

- Mercury separation
- Fluorescent powder disposal
- Glass recycling
- Metals recycling

Advanced Recycling Fee ARF – Money Flow

The income from the ARF finances the current collection and treatment of E-waste, similar to a **pay-as-you-go pension** scheme. Therefore, the ARF is a participation of the buyers of new appliances to the current costs.





SENS International



Since 1990



Since 2009

Refrigerator Disposal Today in Brazil



- Metal recovery in car shredder without CFC recovery

Changing the Situation through international cooperation

- ➔ **SCPI climate protection project:
setting up & operating a recycling plant in Brazil**

- **Transferring sound recycling techniques & procedures from Switzerland & Europe to Brazil**
- **Brazilian workers benefit from state-of-the-art technological progress while, in return, we benefit from climate protection improvements & atmospheric recovery worldwide**
- **Recovery of very potent Greenhouse Gases & their disposal in an environmentally sound manner, resulting in a considerable reduction of GHG emissions**
- **Financing the investment in plants and plant operating through issuance of “Swiss Charter Units” which are measured in tons of CO₂-equivalents and represent greenhouse gas emission reductions.**

SENS International Swiss Climate Protection Initiative (SCPI)

Project development & operation



Responsibilities:

- Methodology development & execution
- Technology development
- Project management
- Staff training & education
- Project consulting



Responsibilities:

- Recycling of refrigerators
- Destruction of CFCs
- Network development Brazil

Transfer of
Swiss Charter
Units
(SCUs)
(CO₂ certificates)



Financial
remuneration
of SCUs and
project support

Project steering & finance



Responsibilities:

- Project finance & project sponsoring
- Project controlling
- Swiss Charter development, enforcement & execution
- Public relations & communication
- Marketing & sales of Swiss Charter Units



Validation &
verification
by
external
experts



Accounting
of SCUs



Sales of
Swiss Charter
Units (SCUs)

Quality control



TÜVRheinland
Genau. Richtig.



Responsibilities:

- Methodology assessment
- Independent validation & verification of SCUs

Registry

- Issuance, retirement and traceability of SCUs

SCU buyers
SENS International
stakeholders



Thank You

Thank you for your attention!

Questions?