



Lessons learned from vehicle recycling

Yacht Recycling Conference
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1. Introduction of ARN



Producer Responsibility Organisation (PRO)

- End of Life Vehicles
- Automotive Batteries
- Two wheelers (Mopeds)

www.arn.nl

A joint initiative of four branch organisations



ARN Recycling



Post Shredder Technology (PST)

- Separation of complex Shredder Residues
- Separation of other waste streams

ARN Advisory



R&D / Consulting

- Recycling processes
- End-of-Life Chain development
- Circular Economy

ARN Recycling Services



Waste Management
for the automotive sector

Institute for Sustainable Mobility



Branch office

- Certification, standardisation & Auditing
- Mobility projects

2. Basics of car recycling: Background

- Between 6.8 and 15 mio End of Life Vehicles (ELV) in EU27
- Strict European legislation
- Extended Producer Responsibility



...but it all started with an *environmental* problem

2. Basics of car recycling: Process chain

Car dismantler



De-registration



Draining fluids



Reuse parts



Shredder



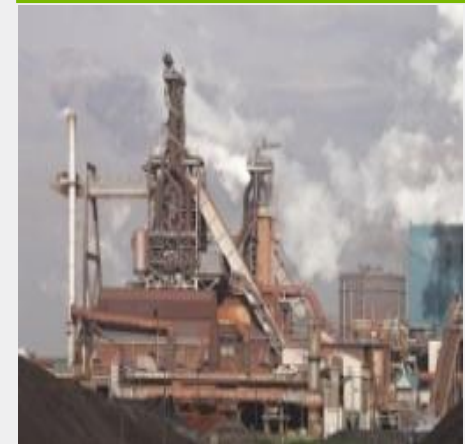
Metal separation

Post Shredder Technology (PST)



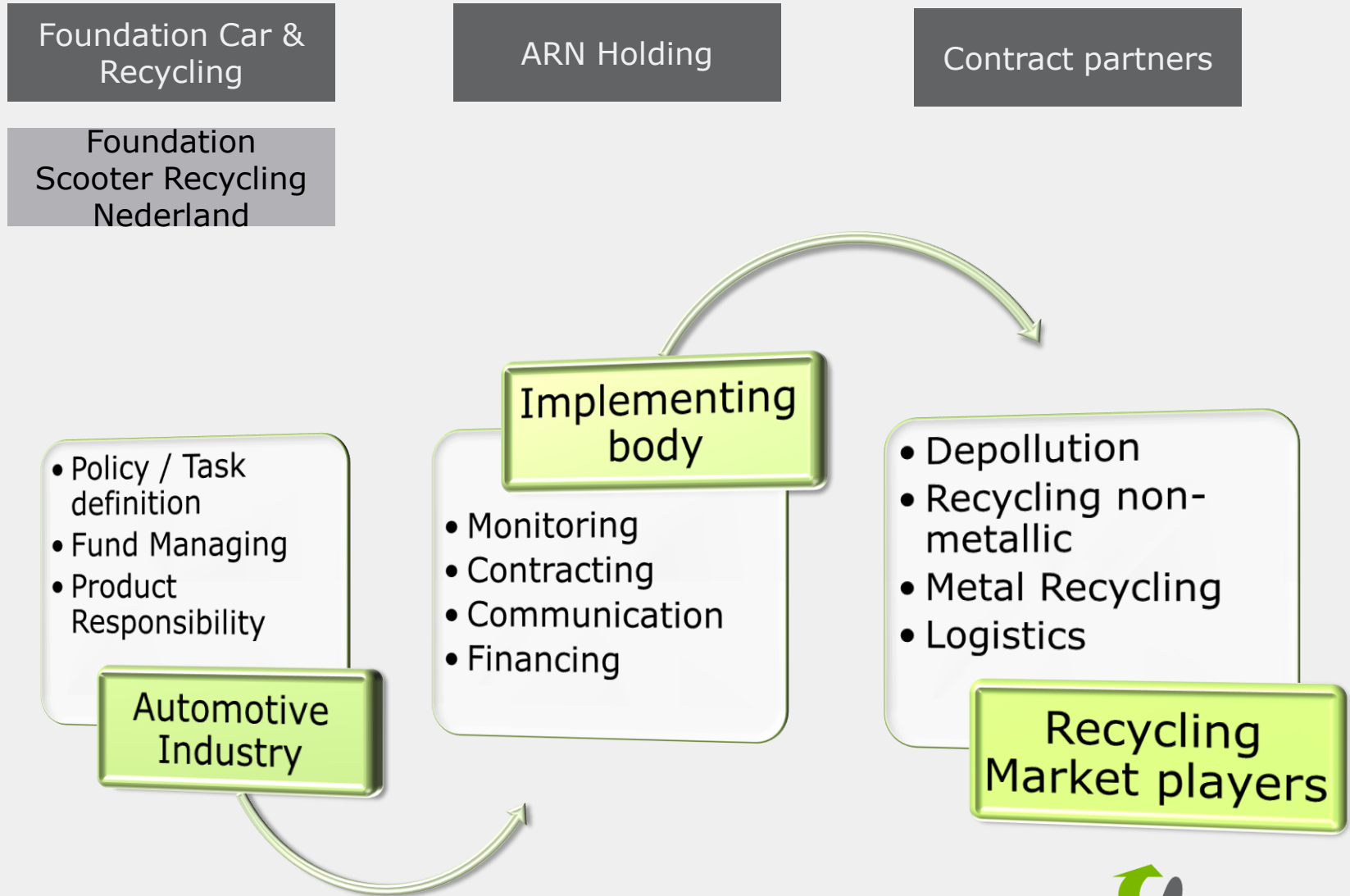
Shredder residue

Industry



New products

3. Producer Responsibility Organisation



3. Producer Responsibility Organisation: ARN background

- ELV's had a **negative** value for scrap processors, especially in remote locations
- No **designated** depollution infrastructure
- Political **pressure** towards car industry
- **Absence** of commercial problem solvers
- **Loss** of materials and energy

3. Producer Responsibility Organisation: Success factors

- **Deregistration** procedures connected to recycling system
- Tight **network** of depollution stations / 'ATF's' and shredders
- A **transparent** and controlled recycling chain
- 96% **vehicle recycling**, including 9.9% energy recovery
- The ELV has become **more positive** in value
- Recycling **fee** to finance negative value operations

Success of Dutch vehicle recycling is based upon tight collaboration between various car industry, authorities and recycling chain

4. Recommendations for the ELB's

- **Collective** action reduces cost and effort
- Financing mechanism for **negative value** action (e.g. transportation, processing, etc.)
- Positive **and** negative incentives for (yacht) owners
- **Holistic** approach: yachts are collected and processed irrespective from who, where and how
- Take action in pragmatic **step by step** approach

...take industry action, before policymakers are developing "standards"

Thank you!

What does ARN take out your old car?



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