

RAW MATERIAL FLOW IN INFORMAL SECTORS IN INDIA - with reference to ELV Recycling

Session 7: Resource Efficiency for Circular Economy – SS 7.7

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Introduction - Recycling in Informal Sector

Most recycling in India takes place in the Informal Sector studies on: Lead Acid Battery Recycling ; E-waste Recycling ; Ship Recycling motivated to study **Automobile Scrap Recycling** perhaps the oldest one and most neglected.

Automobile Scrap dealers recycling in informal sector is a huge scrap market and salvaging activity employ 100,000 persons located in densely populated areas in cities of Delhi, Chennai, Mumbai, etc.

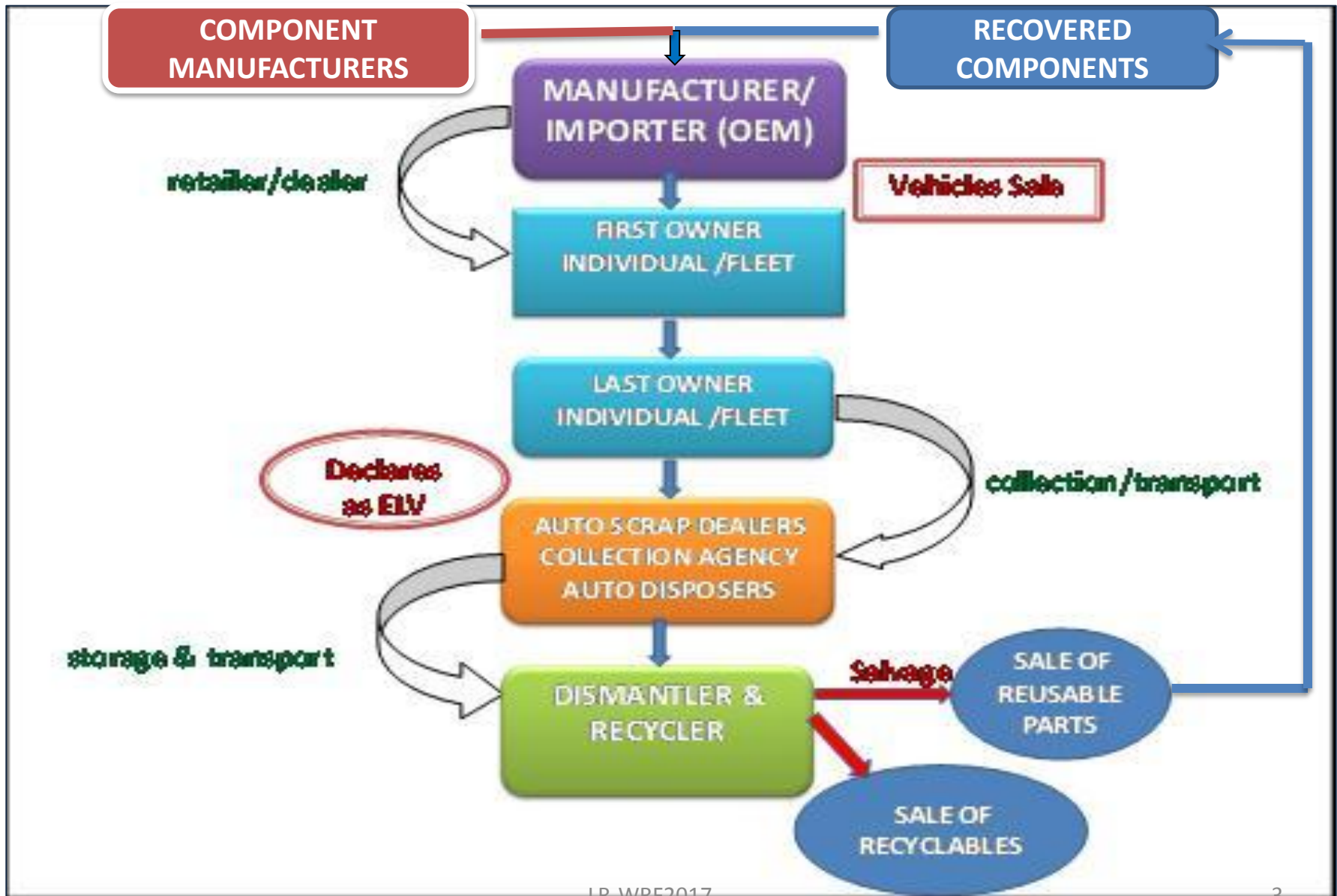
Issues & challenges

- Bad working conditions - Health & Environmental contamination;
- Poor and in-efficient Resource Recovery; good intent bad practice
- Absence of Collection Channels;
- No access to Best Available Technologies (BAT)
- Absence of Policy/regulations/guidelines ELV Recycling

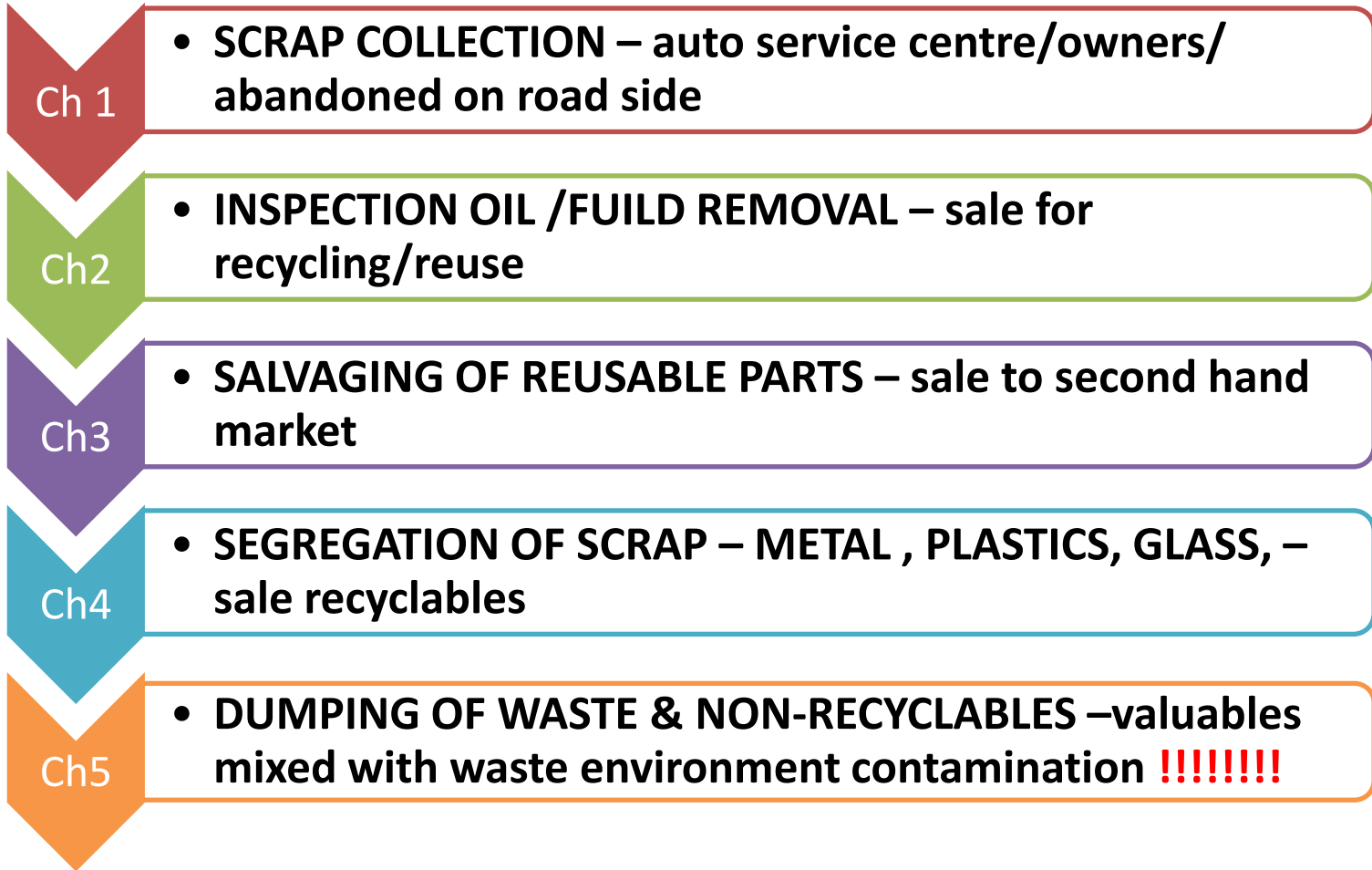
Need - Best Practices and mainstreaming informal sector.

- Policy & Guidelines for ESM of ELVs

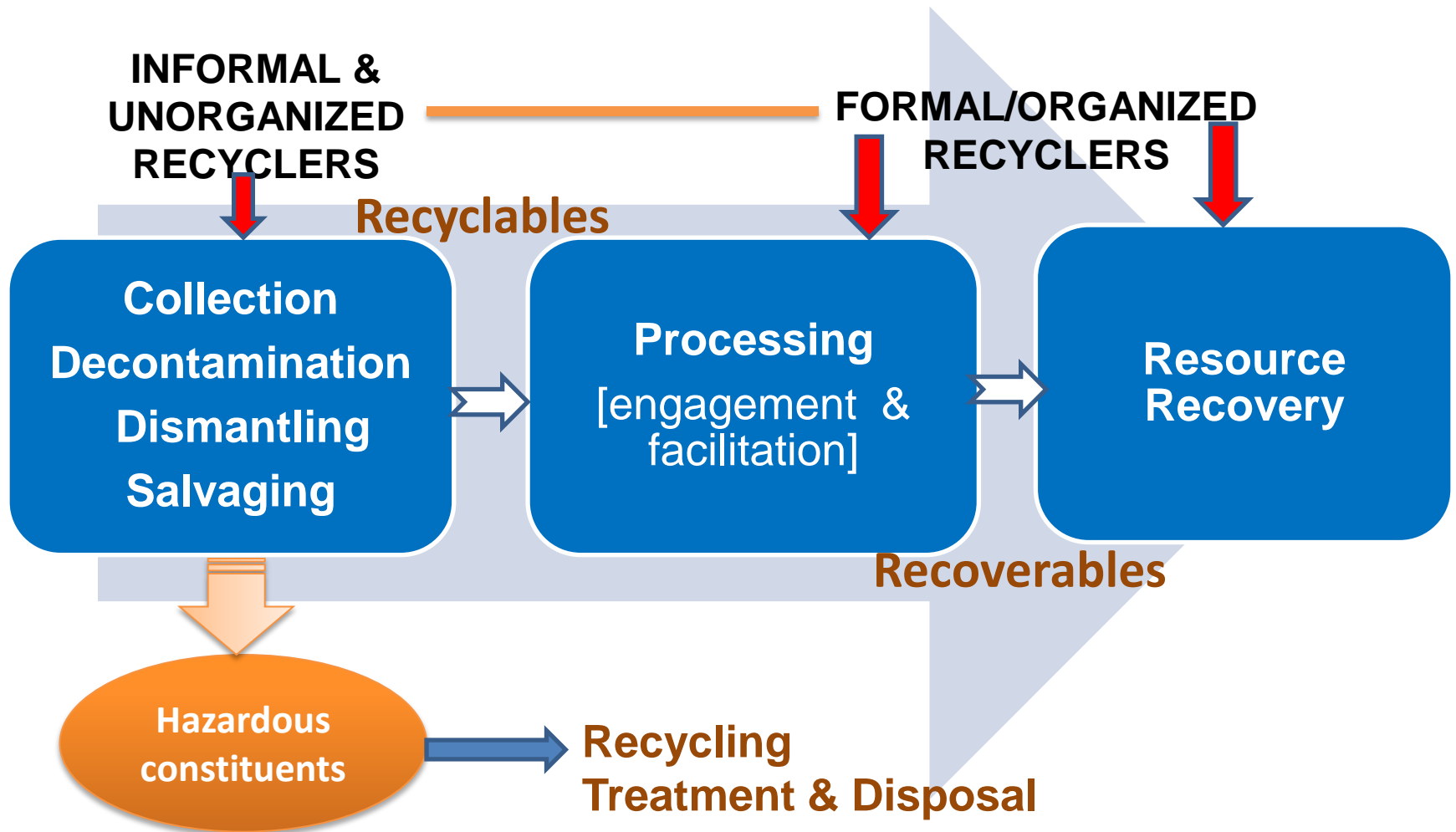
Automobile Value Chain



Material Flow in Informal Sector



Best Options in ELV Recycling in India



Recycling Infrastructure Requirements

- # Collection & Channelization of ELV
- # Facilitating Recycling Activities
 - Dismantling & salvaging facility (Informal)
 - Recycling & recovery facility (Formal)
 - Access to Technology (Formal)
 - R&D for innovative Technology (Formal)
- # Integration of Informal-Formal Sector
- # Financial system for Recycling Facility - Public Private Partnership (PPP), entrepreneurship or government facilitated
- # **Implementation of EPR** – **SHARED** responsibility of manufacturer, consumer, recycler, regulator responsible for ELV management



Future Perspectives

- Design for Recycling
- Design for Environment – Reusable & Recyclables
- Recycled components used
- Life Cycle Assessment (LCA)
- R&D for Environmentally Sound Recycling
- Marketability of recovered and recycled parts

GRAVE to CRADLE



Thank You for listening

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