# Solar E-waste management

**Philips Lighting Foundation** 



# Product to sustainability

Access to light value chain









	Product	Last mile distribution	User Ownership	Sustainability
Barriers	Affordable/Reliable	Availability	Consumer Finance	After-sales Support/EOL
Enablers	<ul><li>BoP Innovation</li><li>Frugal Manufacturing</li><li>Seed/Early Stage</li><li>Finance</li></ul>	<ul><li>Supply Chain Innovation</li><li>Micro Entrepreneur</li><li>Working Capital</li></ul>	<ul><li>Solar Sensitization</li><li>User Training</li><li>Consumer Micro- Finance</li></ul>	<ul><li>Technical Upskilling</li><li>End of Life Solutions</li><li>Infrastructure</li><li>Investments</li></ul>
Actors	BoP Focused Enterprises	Inclusive Marketing & Distributing Enterprises	Customer Support & Micro-Finance Institutions	Technical Experts



# End of Life

Our Approach

#### **LEARN**

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• Deep dive into current situation and practices

E- waste management: Setting the stage

#### **SCALE**

- Gather learnings
- Embed best practices
- Expand scope

#### **PIONEER**

- Build momentum through quick wins and pilots
- Support local solutions

#### **STRATEGIZE**

- Define unified cross-sector plan
- Organize resources

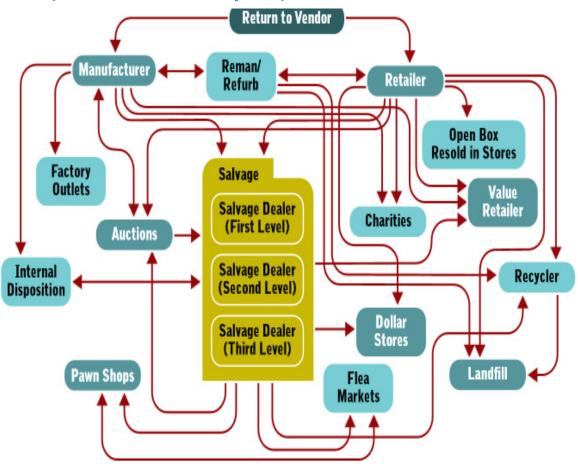
#### **LEAD & INFLUENCE**

- · Create industry standards
- · Influence regulation
- · Share best practices



## **Product Flow to Secondary Markets**

(Retail Example)



Adapted from: Dale S. Rogers, Zachary S. Rogers, Ronald Lembke, "Creating Value Through Product Stewardship and Take-Back," Sustainability Accounting, Management and Policy Journal, Vol.1, No. 2, , 2010.

- Logistics (packaging) is organized for top down, factory to end user
- Reverse logistics is even more expensive as optimization on transport/packaging very difficult
- Last mile distribution is already difficult, reversed last mile distribution seems almost impossible
- How to secure payment for encountered costs bottom up.
- Disparate volume ratio between new and reverse product
- Reversed paperwork, clearing documents will not be available
- Loss of value of products prevents return to factory,
- Who pays? without clear financial value of reversed products. Can we create a value?



### **EOL** value chain

### Local to local solutions











**Responsible Consumption** 

**Reverse Logistics** 

Recycling/Repurpose

Secondary product manufacturing

Barriers	Lack of incentives with extra effort and minimal financial gain  Lack of regulatory policy					
	Lack of sensitization	Gap in logistics	Local processing as per international standards	Lack of value proposition		
	Lack of collecting points	Cost for collection	Cost for recycling	Local/frugal manufacturing		
		Logistics	Volumes to drive revenue model			
Enablers	Financial Incentive					
	Customer Support & Training	Awareness Program	Design changes to reduce the recycling cost	Customer support & Training		
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