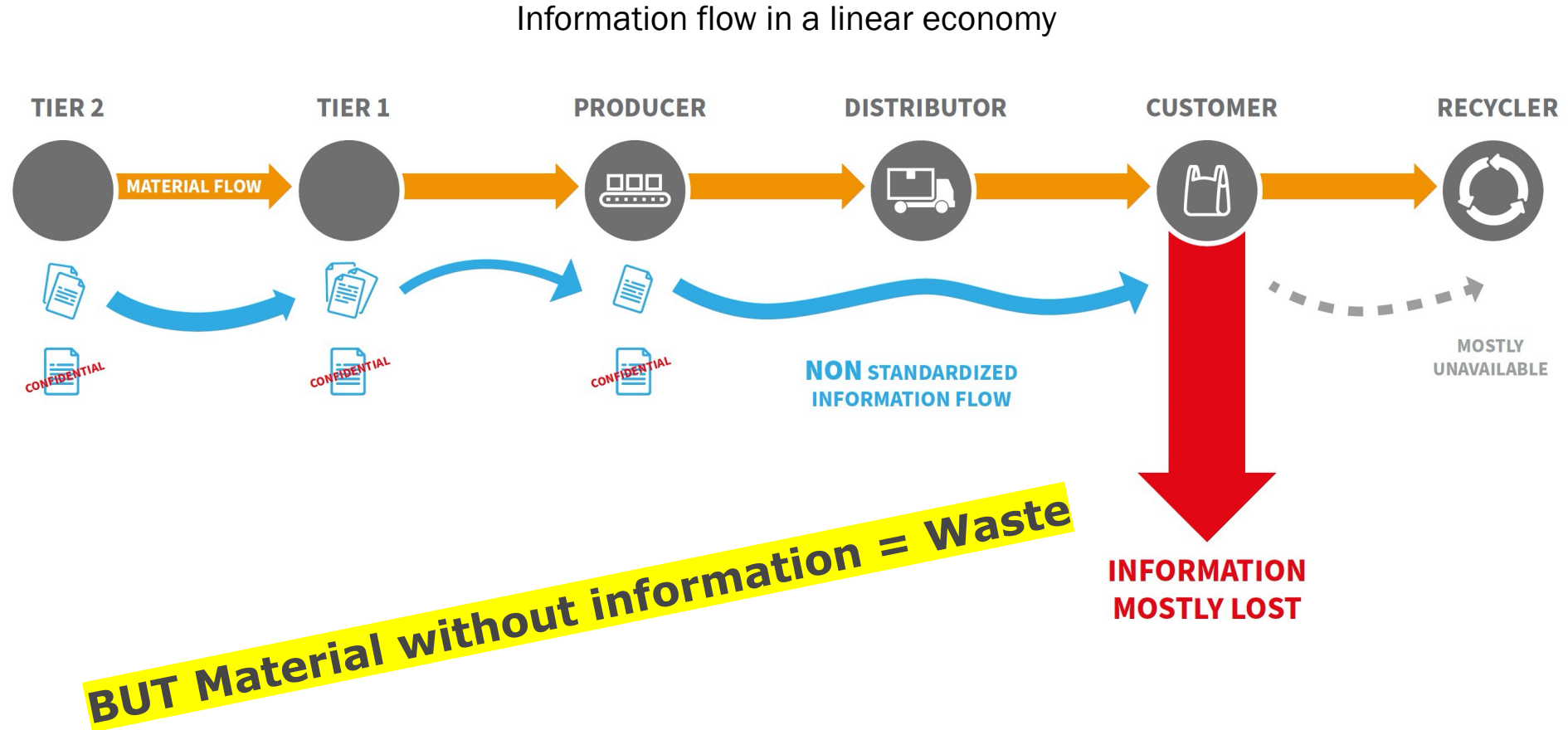*For the circular economy to work,*

not only resources are required to circulate…

…but also data on circularity of products along the value chain.

Problem statement
Collecting circularity data is expensive, difficult and non-standardized

Information flow in a linear economy

TIER 2   TIER 1   PRODUCER   DISTRIBUTOR   CUSTOMER   RECYCLER

MATERIAL FLOW

CONFIDENTIAL   CONFIDENTIAL   CONFIDENTIAL

NON STANDARDIZED INFORMATION FLOW

MOSTLY UNAVAILABLE

INFORMATION MOSTLY LOST

BUT Material without information = Waste

Problem statement
Communicating circularity data requires a cross-sectorial approach

The complexity from a producer's point of view, anywhere in the supply chain:
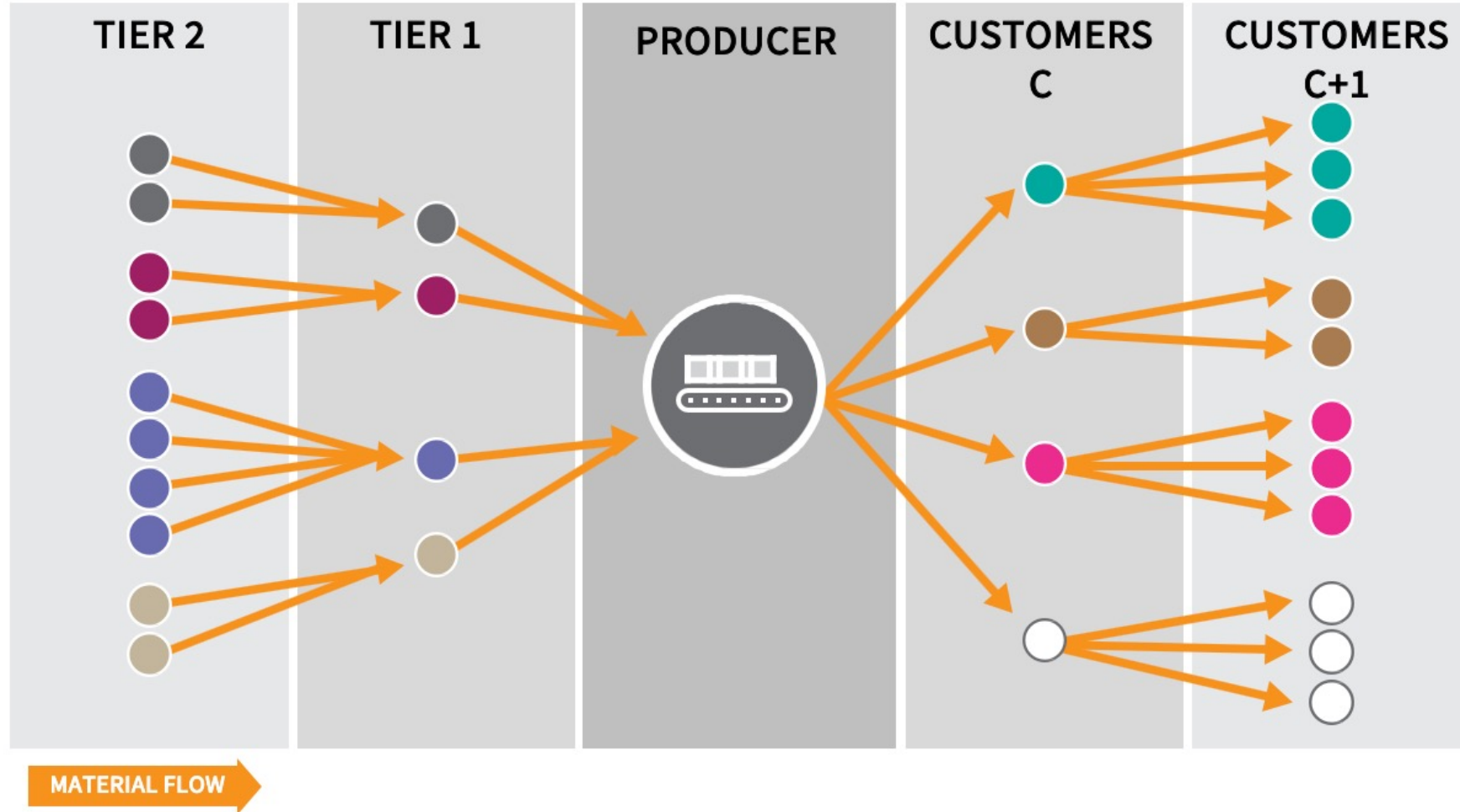
Circularity Dataset Standardization Initiative

Objectives

Establish A) unofficial then B) official industry standard for communicating data on the circularity of products, in order to:

1. Save significant costs to manufacturers and their suppliers by providing a standardized approach to offer product information to their customers
2. Co-establish and align with a common language on how to describe the circularity features
3. Support the design of circular and healthier products
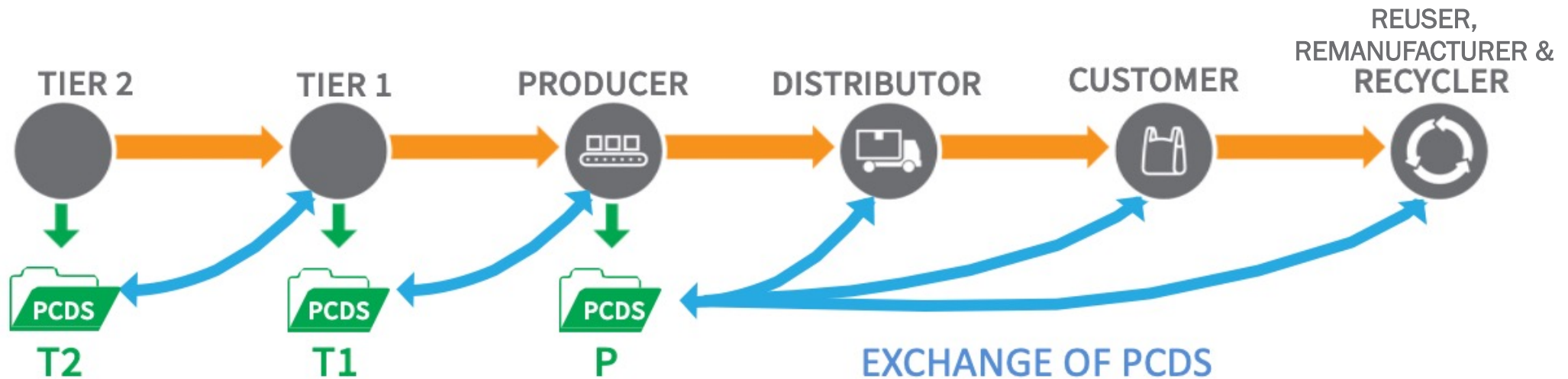4. Support the implementation of cost-effective circular business models

Period: 06/2018 – now and moving forward

Stakeholders and governance

- Sponsor: Luxembourg Ministry of the Economy

- Project Management: +ImpaKT Luxembourg

- Working Groups: 50+ companies & organizations from 12 European countries & US

- Website   http://pcds.lu/

The solution

Standardized way to share circularity reliable data at each step of the value chain

TIER 2 → TIER 1 → PRODUCER → DISTRIBUTOR → CUSTOMER → REUSER, REMANUFACTURER & RECYCLER

PCDS T2

PCDS T1

PCDS P

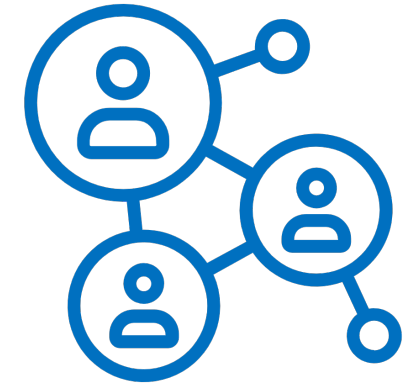EXCHANGE OF PCDS

The solution
The Product Circularity Data Sheet (PCDS) System

A **data template** with standardized product information on the circularity properties without infringing *Intellectual Property*

A **third-party verification process** to validate the content of the PCDS

A **standardized IT exchange protocol & format** to share efficiently trusted data without relying on a centralized database

What does the PCDS contain ?

SECTION			STATEMENTS (Example)
1	📁	GENERAL INFORMATION	• Global Trade Item Number (GTIN) • Global Location Number (GLN)
2		COMPOSITION	• The product contains >75-95 % post-consumer recycled content by weight. • The product does not contain Substances of Very High Concern from the REACH Candidate list in concentration above 0.1% by weight.
3		DESIGNED FOR BETTER USE	• The product can be maintained & repaired by untrained personnel at the location of the product use.
4		DESIGNED FOR DISSASSEMBLY	• The product is designed to be installed and demounted using reversible connectors.
5		DESIGNED FOR REUSE	• The product is designed for re-use as-is or with minimal modification. • The product is designed for composting in a home composter.

Why use the PCDS ?

The PCDS allows to:

1. Create a common language about product circularity

2. Make product information more transparent without infringing IP

3. **Facilitate the collection of trustworthy data** from your suppliers

4. Support your design team to improve product circularity

5. Reduce redundant labor with a standardized format published once for all your customers

6. Save time with an automated process allowing the assembly of information from your suppliers' PCDS

Who contributed to the development of the PCDS ?
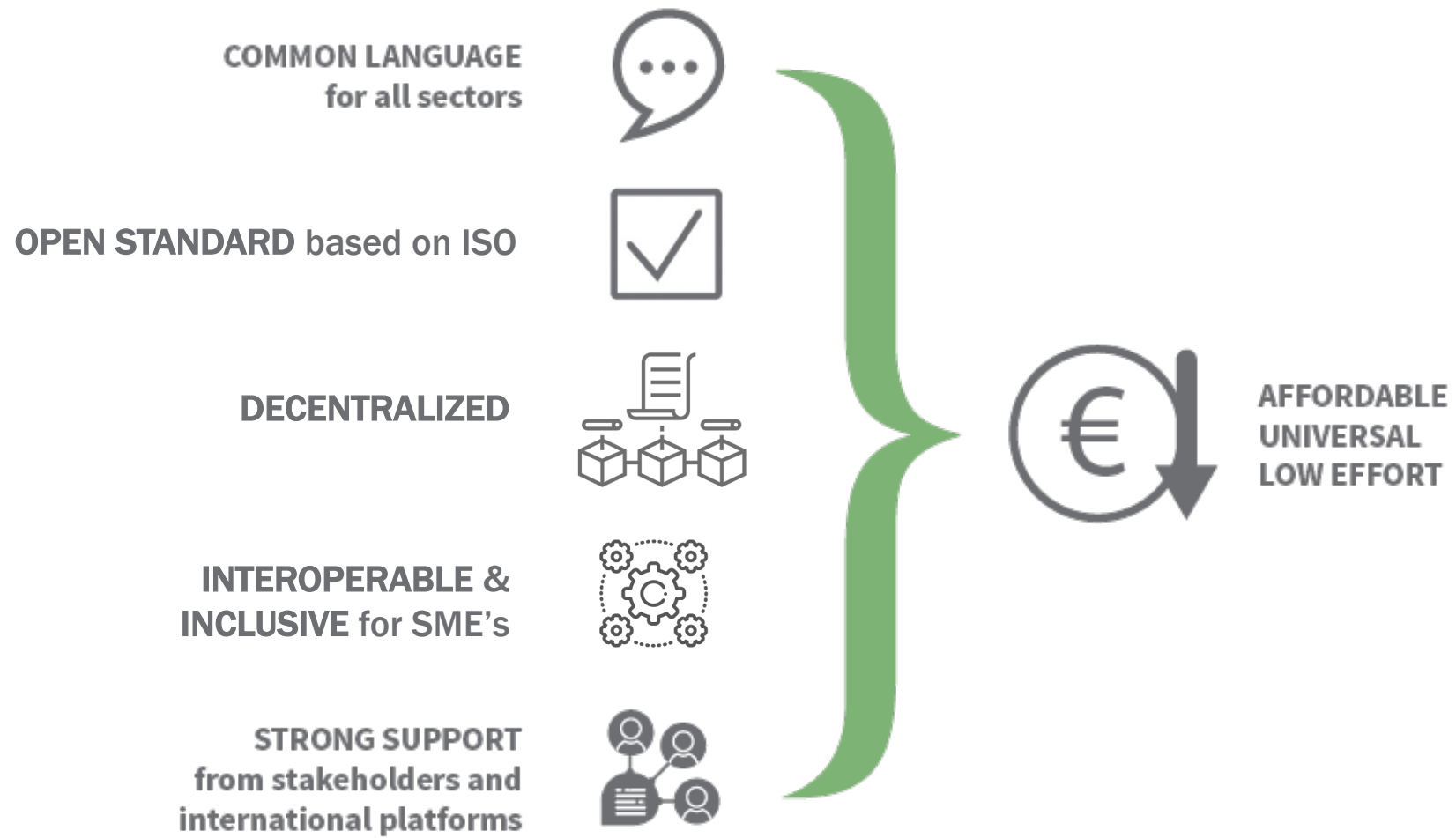
50+ companies & organizations from 12 European countries & USA

Non-exhaustive list of the initiative stakeholders

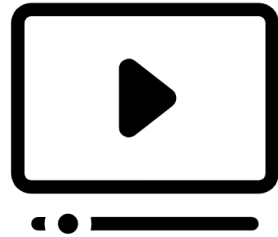# What makes the PCDS system effective ?

COMMON LANGUAGE
for all sectors

OPEN STANDARD based on ISO

DECENTRALIZED

INTEROPERABLE &
INCLUSIVE for SME's

STRONG SUPPORT
from stakeholders and
international platforms

€

AFFORDABLE
UNIVERSAL
LOW EFFORT

Where we stand today

06/2018   04/2019   06/2020   06/2021

PHASE 0	PHASE 1	PHASE 2	Standalone initiative

**DEMONSTRATE
THE DEMAND**

**DEVELOP A PROOF
OF CONCEPT OF
INDUSTRY STANDARD**

**PILOT INDUSTRY STANDARD
FOR CIRCULARITY DATASETS**

■ PHASES SUPPORTED BY THE MINISTRY OF THE ECONOMY OF LUXEMBOURG WITH POTENTIAL CO-FUNDING   ■ Non-profit organization

Achievements towards objectives :
1. Proposal to *ISO TC 323 – Circular Economy* approved
2. Checked added values via pilot projects in packaging, construction and textile
3. Drafted IT structure (including xml scheme)
4. Creation of a non-profit organization

So, is your organization **ready to get started** and **use the PCDS** ?

I need to know more

I'm (almost) ready

Visit our website (pcds.lu) and **read the PCDS story** (click here).
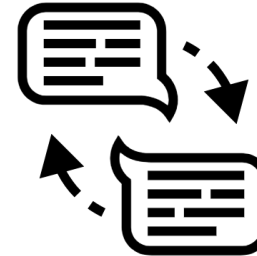
Get in contact (pcds@eco.etat.lu) with us to discuss potential next steps and **how to scale up the PCDS** within your organization.