HSbooster.eu
Horizon Standardisation Booster

Boosting Plastic Packaging Recyclability: *Setting the Right Standards*

WEBINAR

27 April 2023

10:00 – 12:00 CEST

Funded by
the European Union

HSbooster.eu
Horizon Standardisation Booster

Webinar on Boosting Plastic Packaging Recyclability: Setting the Right Standards

Nicholas Ferguson

COMMpla, HSbooster.eu Coordinator

The HSbooster.eu has received funding from the European Union's Horizon Europe Framework Programme (HORIZON) - under grant agreement no 101058391.

EU Valorisation Week: New code of practice on standardisation in the European Research Area

- Knowledge, know-how and innovation – key for long-term competitiveness
- Standards key for getting innovative technologies and products to market
- "Standards are everywhere" Clean Hydrogen Alliance, De-carbonisation of industry
- Standards is relevant for all stages of research projects – from proposal, project start to final stages
- More training and support to improve knowledge and expertise in standardisation.
- Standards can open up markets, a lack of standards can close markets
- *"Learn about Standardisation Booster – Supporting projects to valorise results through standards" – Maive Rute*

Three wishes –

- Innovators – when working on ground-breaking tech- make sure standardisation is part of your project
- Research – Standards should be covered in research projects so it is supported by a broad base of stakeholders
- Universities – Education to form the next generation of standards professionals is needed.

- Maive Rute, Deputy Director-General and Chief Standardisation Officer, Directorate-General Internal Market, Industry, Entrepreneurship and SMEs, European Commission

27April 2023, EU Valorisation Week

HSbooster.eu
Horizon Standardisation Booster

Training Academy

HSbooster.eu
TRAINING ACADEMY

Jumpstart your experience with our training packs!

For beginner users

New to standards?
Check out our **beginner-level resources**!
Gain a **foundational understanding of standardisation** with easy-to-follow resources.
Perfect for both seasoned professionals and beginners starting out in their careers. Start learning today!

Start learning today!

For intermediate users

Ready to level up your **standardisation knowledge**?
Our **intermediate-level resources** provide **practical insights and strategies** to deepen your understanding and take your skills to new heights.
Whether you're a pro or a newcomer, start exploring our resources today and unlock your potential in standardisation!

Explore now!

For advanced users

Ready to learn from **real-world experiences in standardisation**? Our **advanced-level resources** feature in-depth case studies and practical examples from industry experts.
Gain **valuable insights and apply lessons to your own work**. Explore now and take your skills to the next level!

Level up your skills now!

Browse the training catalog for the resources you need

Search

Level of expertise
- [x] Beginner 1
- [ ] Beginner 2
- [ ] Intermediate
- [x] Advanced 1
- [ ] Advanced 2

Training format
- [ ] Case Study
- [ ] Training Course

Showing 1 - 8 out of 9 training contents found

Resource
Impact of standards on market creation: Case of medical/healthcare robot HAL by Cyberdyne
Author: Yoko Ikeda, Michiko Iizuka
Created on: March 2023
Level of expertise: Advanced 1
Format: Case Study

Resource
Unlocking new value from urban biowaste – VALUEWASTE & CWA 17866:2022
Author: Gemma Castejón, Martín Soriano
Created on: March 2023
Level of expertise: Advanced 1
Format: Case Study

Resource
Classifications of Standards
Author: Ivana Mijatovic, Biljana Tosic
Created on: March 2023
Level of expertise: Beginner 1
Format: Training Course

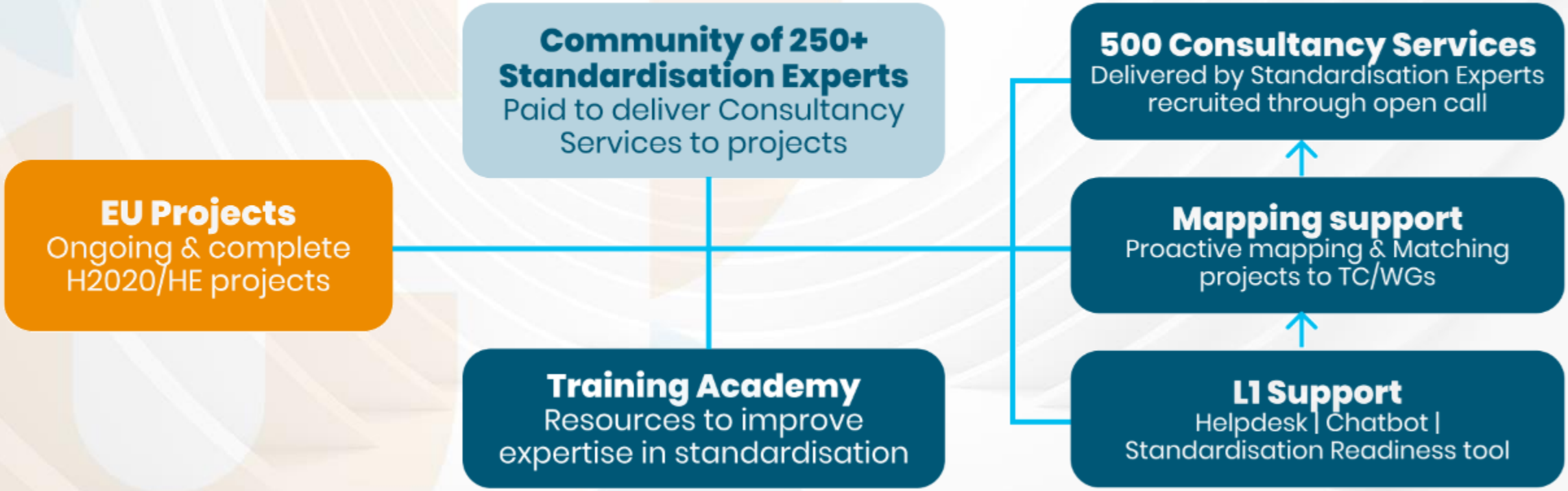
3 more training webinars by June

- EU Standardisation System – May 2023
- Standards in Use – June 2023
- Consortia & company based standardsiation – June 2023

Improving expertise in standardisation for R&I project consortia

HSbooster.eu
Horizon Standardisation Booster

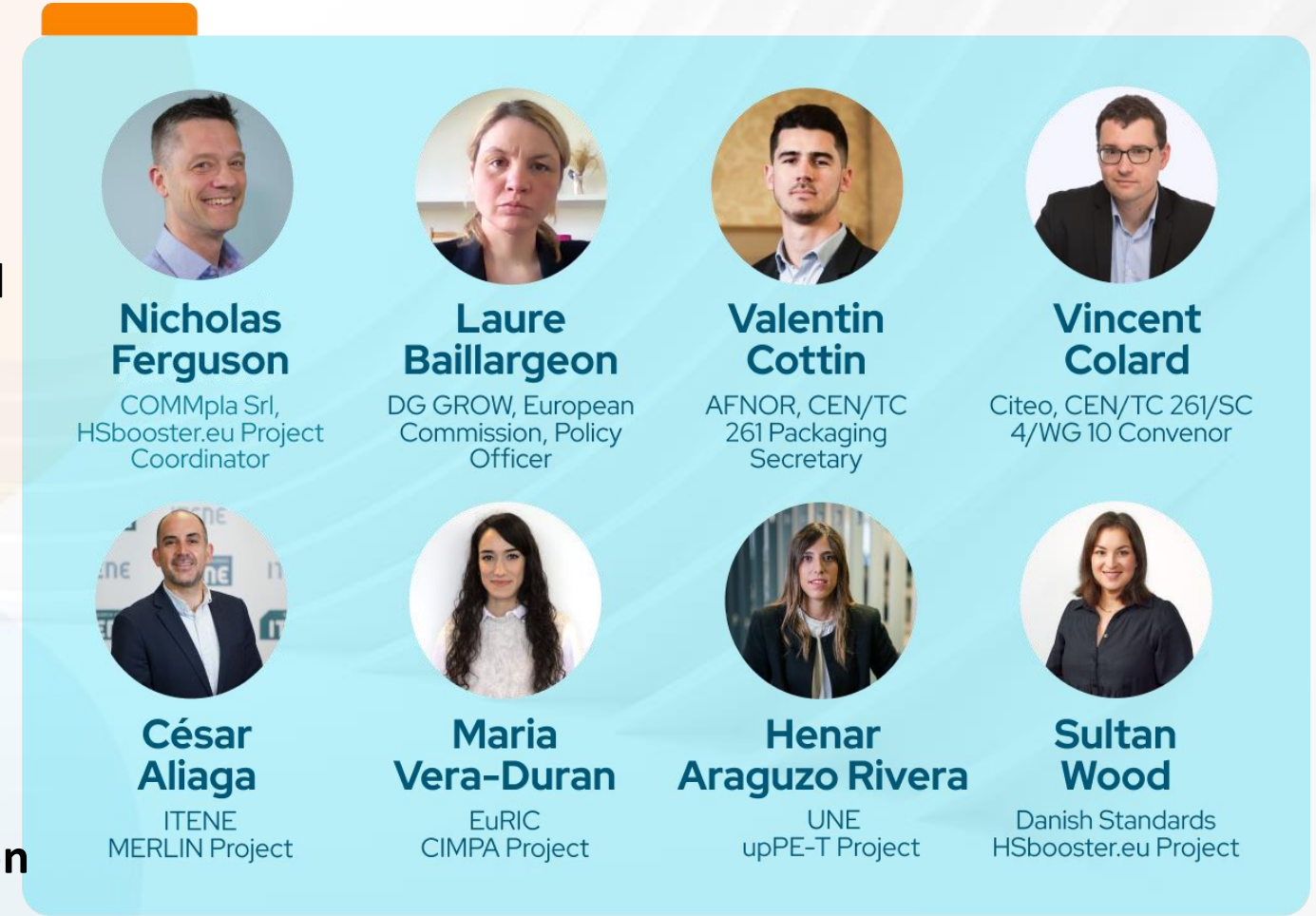
HSbooster.eu Service Matrix



Facilitating R&I innovation related stakeholders in EU projects towards EU standardisation and ensuring two-way flow of information that can contribute to identification of new areas for standardisation.

Agenda and Speakers

- 10:00 **Setting the Scene** – *Nicholas Ferguson*
- 10:10 **Plastic Packaging – Update on Regulation and M/584** - *Laure Baillargeon*
- 10:40 **Standardisation landscape: overview and how standardisation can pave the way** - *Valentin Cottin & Vincent Colard*
- 11:00 **Research and Innovation Projects: Making an Impact in Europe:**
  - **MERLIN -** *César Aliaga*
  - **CIMPA** – *Maria Vera-Duran*
  - **upPE-T –** *Henar Araguzo Rivera*
- 11:30 **Panel Discussion**
- 11:50 **Wrap-up: Linking Research and Innovation with Standardisation** – *Sultan Wood*

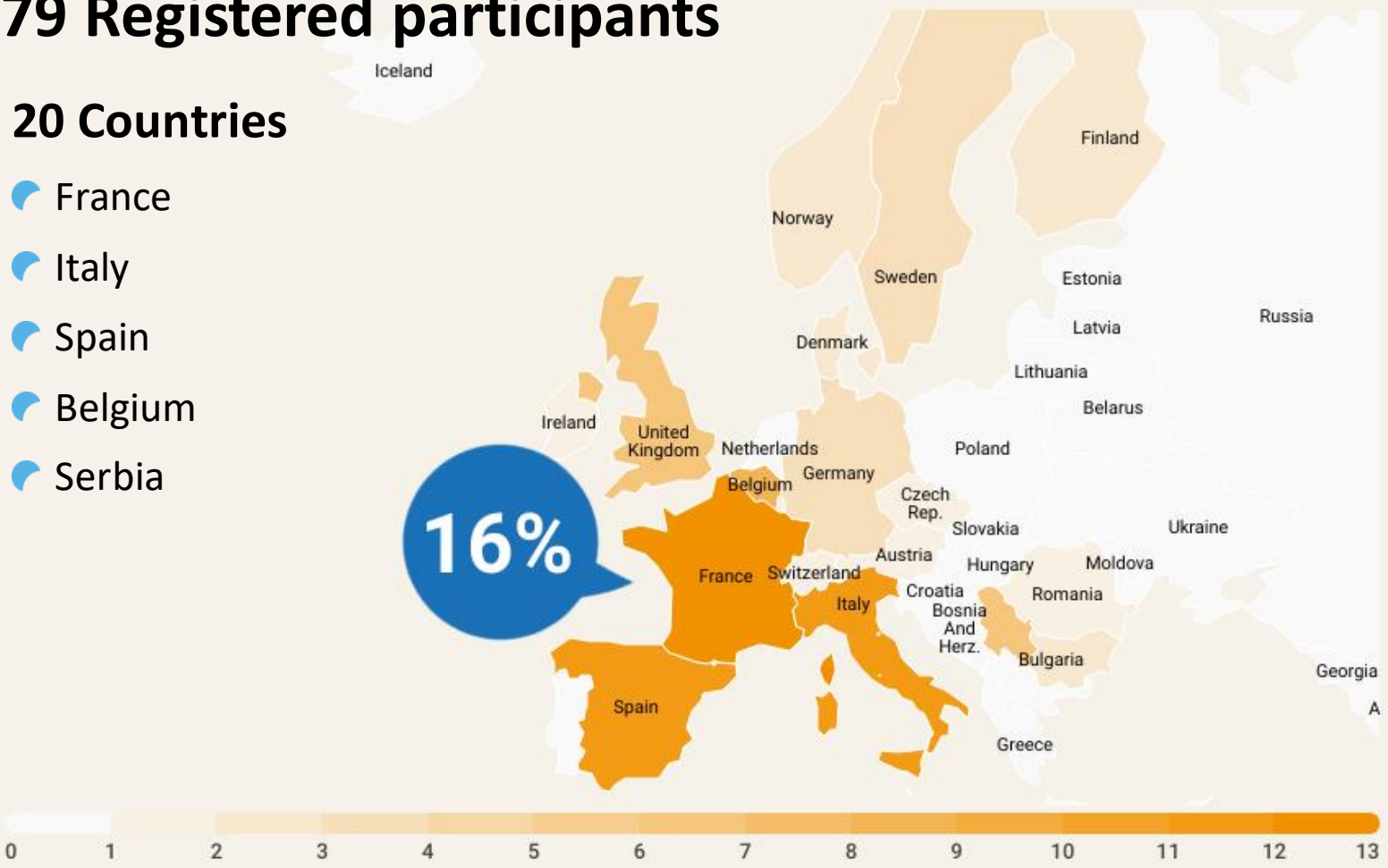


Participants

79 Registered participants

20 Countries

- France
- Italy
- Spain
- Belgium
- Serbia



21 R&I Projects represented

- BIOnTop
- BUDDIE-PACK
- CIMPA
- CICULAR FoodPack
- DigInTrace
- FF2S
- FlexFunction2Sustain
- HSbooster.eu
- InFormPack
- MANDALA
- MERLIN
- PLASTICE
- PRESERVE
- SEALIVE
- Sol-Rec2
- SWForum.eu
- UpLift
- upPE-T
- Agro2Circular
- Yangi
- ZeroF

Housekeeping

- This event is being recorded in its entirety. A link to the full recordings will be shared with participants afterwards
- All presentations will be available at the HSbooster.eu website straight after the webinar
- Please **don't activate your microphone and videos unless the host gives you permission**
- **Please do ask questions.** Use the 

for any questions. **Indicate which speaker** you are putting the question to and we'll also try to answer things directly in the chat.
- If you do not see the buttons at the bottom of the Zoom window, move the mouse on that window and buttons will appear
- If you experience bad quality in audio, try switching off your video (webcam button at the bottom of your Zoom screen)
- Participate the interactive poll at Sli.do.com - **#HSboosterWebinar**

HSbooster.eu
Horizon Standardisation Booster

Thank you

Nicholas Ferguson – n.ferguson@commpla.com

Coordinator & COMMpla & Trust-IT

www.hsbooster.eu | @HSboosterEU

HSBooster webinar

Boosting Plastic Packaging Recyclability: Setting the Right Standards

27 April 2023

Laure Baillargeon, Unit 'Green and Circular Economy', DG GROW

Policy introduction

European Commission

Legislation, standards and innovation

- Innovation principle (better regulation)
- 2022 standardisation strategy

  ⇨ Launch of standardisation booster

- Environmental requirements to steer innovation (and vice-versa)

Recyclability of plastic packaging & innovation

Recyclability = packaging design + available infrastructure (+ secondary use)

- Packaging design innovation to stay within recyclability rules & standards
  - ✓ More performing packaging (e.g. new features)
  - ✓ Easier to recycle or other environmental improvements
  - ☒ Design innovation incompatible with existing rules on recyclability
- Infrastructure innovation can open new possibilities
  - ✓ Greater recyclability of existing packaging formats
  - ✓ **Allow more freedom in packaging design**

European Commission

Standardisation request on recycled plastics

M/584 of 1 August 2022

European Commission

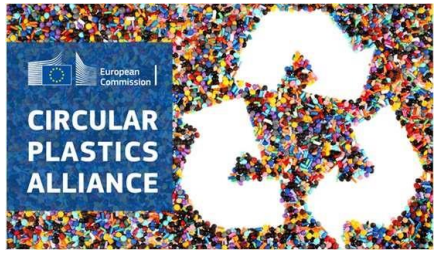
Why a request for European standards on design-for-recycling of plastic packaging?

European Commission

Commitment by the Circular Plastics Alliance

European Strategy for Plastics (2018)

Europe has examples of successful commercial partnerships between producers and plastics recyclers (e.g. in the automotive sectors), showing that quantity and quality issues can be overcome if the necessary investments are made. To help tackle these barriers, and before considering regulatory action, the Commission is launching an EU-wide pledging campaign to ensure that by 2025, ten million tonnes of recycled plastics find their way into new products on the EU market. To achieve swift, tangible results, this exercise is addressed to both private and public actors, inviting them to come forward with substantive pledges by June 2018. The details are presented in Annex III.

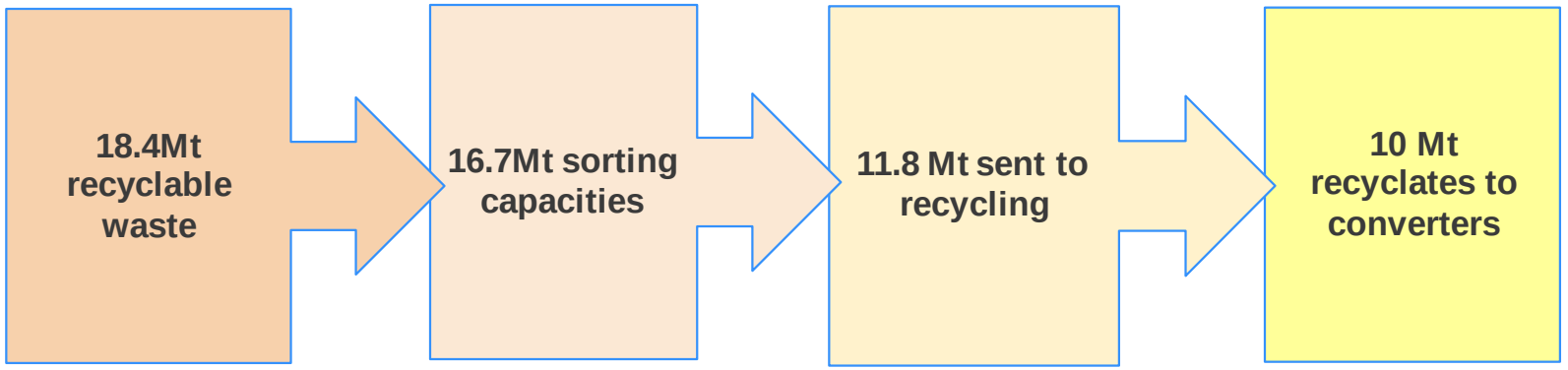


CPA declaration (2019)

The Circular Plastics Alliance endorses the ambitious target that by 2025 at least 10 million tonnes of recycled plastics should find their way into products and packaging in Europe each year (hereafter referred to as "the 10 million tonnes target"), helping to deliver the circular economy with a life cycle approach.

European Commission

Roadmap to 10Mt

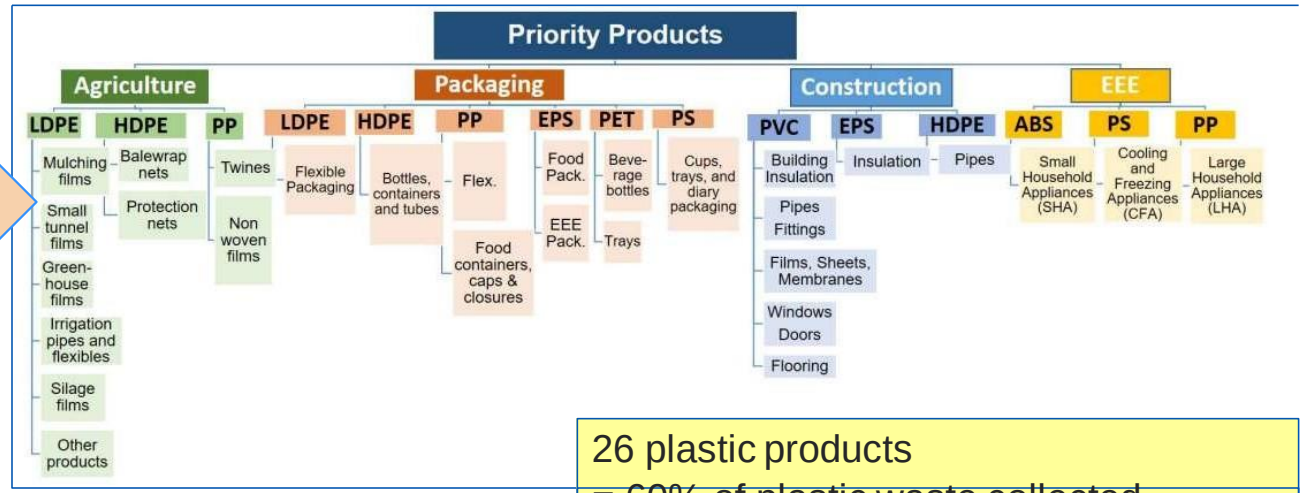


(Source: CPA untapped potential report)

European Commission

Recyclability is the first step

18.4Mt recyclable waste



Source: CPA Design Work Plan

26 plastic products
= 60% of plastic waste collected
= 18.4Mt of plastic waste generated, including **15Mt of plastic packaging waste**

Follow up

⇨ Standardisation request C(2022)5372 of 1 August 2022 (M/584)

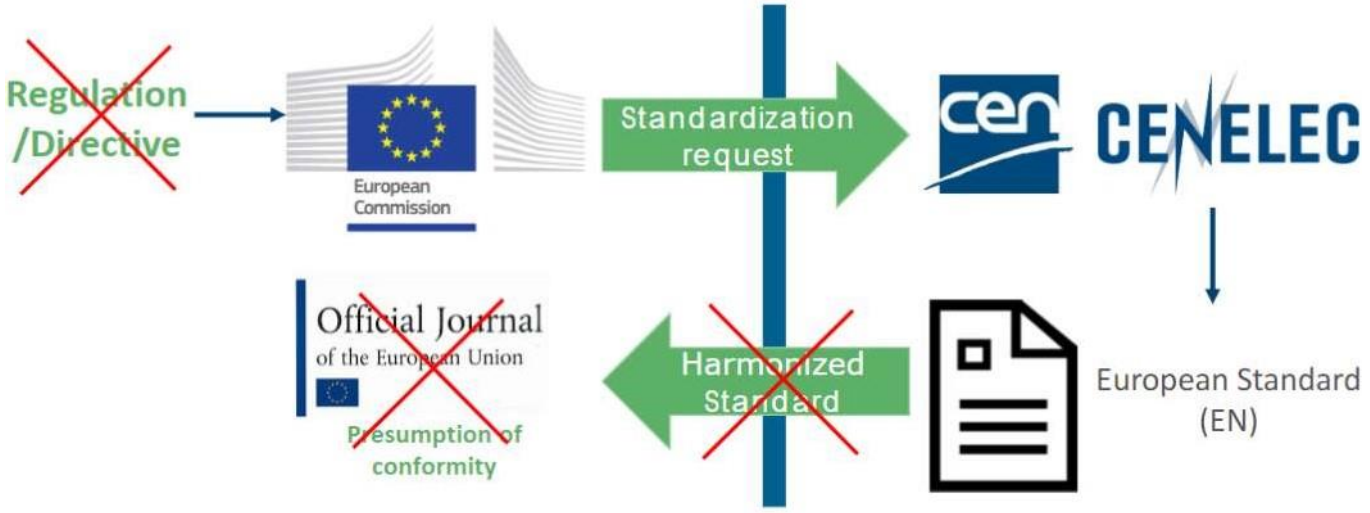
ANNEX I

European standards and European standardisation deliverables referred to in Article 1

Table 1. List of new European standards and European standardisation deliverables to be drafted and deadlines for their adoption

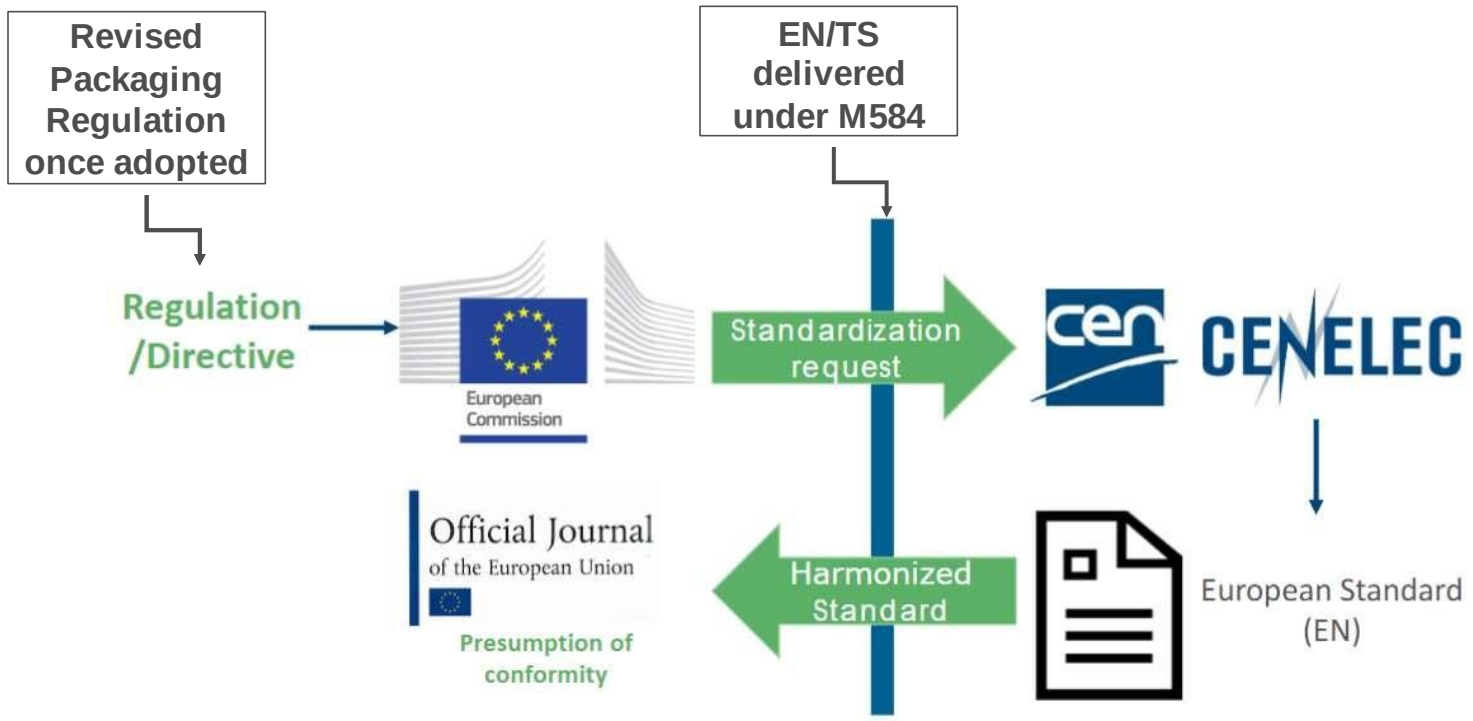
	Reference information	Deadline for the adoption by the ESOs
1.	European standard(s) on the process and criteria to evaluate the recyclability of plastic packaging.	2 August 2025
2.	European standard(s) on the definitions and principles for design-for-recycling of plastic packaging.	2 August 2025
3	European standardisation deliverables on design-for-recycling guidelines for plastic packaging products: polyolefins flexibles; polystyrene (PS) cups, trays and dairy packaging; polyolefins rigids; polyethylene terephthalate (PET) beverage bottles; PET trays; expanded polystyrene (EPS) packaging.	2 August 2025

M/584: request for European standards (**not** harmonised standards)



European Commission

M/584: possible follow up



European Commission

M/584: coordination between Commission and standardisers is crucial

- Recital 14

In order to achieve the objectives of the European Strategy for Plastics in a Circular Economy2, the Commission announced in A new Circular Economy Action Plan for a cleaner and more competitive Europe[5] that it will propose mandatory requirements on recycled plastic content for key products such as packaging, construction materials and vehicles. It is therefore necessary to provide for establishment of close cooperation between CEN and CENELEC and the Commission to ensure consistency between the requested documents and those regulatory developments.

- Article 2

CEN and CENELEC shall provide the Commission with access to an overall project plan. The project plan shall include arrangements ensuring cooperation between CEN and CENELEC and the Commission for the execution of the requested standardisation activities.

Definition of recyclability of plastics packaging

Commission proposal for a revised Packaging and Packaging Waste Regulation of 30 November 2022

European Commission

What is the Commission proposal on packaging saying on recyclability?

European Commission

Revised PPWR: recyclability definition (1/5)

Article 6
Recyclable packaging

1. All packaging shall be recyclable.

2. Packaging shall be considered recyclable where it complies with the following:

   (a) it is designed for recycling;

   (b) it is effectively and efficiently separately collected in accordance with Article 43(1) and (2);

   (c) it is sorted into defined waste streams without affecting the recyclability of other waste streams;

   (d) it can be recycled so that the resulting secondary raw materials are of sufficient quality to substitute the primary raw materials;

   (e) it can be recycled at scale.

Point (a) shall apply from 1 January 2030 and point (e) shall apply from 1 January 2035.

European Commission

Revised PPWR: recyclability definition (2/5)

(31) 'design for recycling' means design of packaging, including individual components of packaging, in order to ensure its recyclability with state-of-the-art collection, sorting and recycling processes;

(32) 'recycled at scale' means collected, sorted and recycled through installed state-of-the-art infrastructure and processes, covering at least 75 % of the Union population, including packaging waste exported from the Union that meets the requirements of Article 47(5);

(33) 'packaging category' means a combination of material and specific packaging design, which determines the recyclability with the state of the art collection sorting and recycling processes and is relevant for the definition of the design for recycling criteria;

Recyclability definition in M/584
(Annex II, Part B, 1.1)

For the purposes of defining 'recyclable plastic packaging or other product' CEN and CENELEC may consider the following definition: a packaging or other product which can be sorted and recycled in practice and at scale with state-of-the-art technology and infrastructure, and deliver recycled plastic of suitable quality to be integrated into new products.

For the purposes of defining 'design-for-recycling' CEN and CENELEC may consider the following definition: packaging or other product design aiming to ensure that the packaging or other product is recyclable. When defining 'design-for-recycling', CEN and CENELEC shall take due account of the concept of a circular economy where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste is minimised, and of the objective of design-for-recycling to maintain the product's value after recycling, including by ensuring that the quality of the recycled materials is suitable for use back into the same product category or, where the latter is proven not technically or economically feasible, nor the best environmental option, into applications of equivalent quality or economic utility.

Revised PPWR: recyclability definition (3/5)

3. Recyclable packaging shall, from 1 January 2030, comply with the design for recycling criteria as laid down in the delegated acts adopted pursuant to paragraph 4 and, from 1 January 2035, also with the recyclability at scale requirements laid down in the delegated acts adopted pursuant to paragraph 6. Where such packaging complies with those delegated acts, it shall be considered to comply with paragraph 2, points (a) and (e).

4. The Commission is empowered to adopt delegated acts in accordance with Article 58 to supplement this Regulation in order to establish design for recycling criteria and recycling performance grades based on the criteria and parameters listed in Table 2 of Annex II for packaging categories listed in Table 1 of that Annex, as well as rules concerning the modulation of financial contributions to be paid by producers to comply with their extended producer responsibility obligations set out in Article 40(1), based on the packaging recycling performance grade, and for plastic packaging, the percentage of recycled content. Design-for-recycling criteria shall consider state of the art collection, sorting and recycling processes and shall cover all packaging components.

Revised PPWR: recyclability definition (4/5)

Table 2: Recyclability performance grades

Recyclability Performance Grade	Assessment of recyclability per unit, in weight
Grade A	higher or equal to 95 %
Grade B	higher or equal to 90 %
Grade C	higher or equal to 80 %
Grade D	higher or equal to 70 %
Grade E	lower than 70 %

Revised PPWR: recyclability definition (5/5)

5. From 1 January 2030, packaging shall not be considered recyclable if it corresponds to performance grade E under the design for recycling criteria established in the delegated act adopted pursuant to paragraph 4 for the packaging category, to which the packaging belongs.

   These criteria shall be based at least on the parameters as listed in Table 2 of Annex II.

11. The financial contributions to be paid by producers to comply with their extended producer responsibility obligations as referred to in Article 40 shall be modulated on the basis of the recyclability performance grade, as determined in accordance with the delegated acts referred to in paragraphs 4 and 6 of this Article and, as regards plastic packaging, also in accordance with the Article 7(6).

In summary…

Recyclable =

designed for recycling (inter alia) =

compliant with delegated act, which may refer to a standard

Expected content of CEN deliverables under M/584

As formulated in Annex II, Part A and Part B, 1.1, of M/584

European Commission

M/584 – expectations on deliverables

(Annex II, Part A and Part B, 1.1)

- ✓ Based on test protocols and neutral, independent interpretation of reproducible results
- ✓ Take into account existing methods and guidelines
- ✓ Qualitative and quantitative assessment of recyclability (e.g. % of a plastic packaging unit that is recyclable)

- ✓ Rules to identify reference sorting and recycling technology for the assessment (« state-of-the-art »)

- ✓ Do's and don'ts in guidelines to ensure recyclability, « *including target values and performance ranges where applicable* »

European Commission

M/584 – expectations on deliverables

(others)

- ✓ Governance
- ✓ Regular updates (based on test results)
- ✓ Innovation principle (new sorting and recycling technology)
- ✓ Cover the whole life cycle of a plastic packaging unit
- ✓ Deliver visible results on the market within a few years
- ✓ Make the methodology usable/clear to any market operator

Background

Circular Plastics Alliance documents transmitted to CEN/TC261/SC4/WG10 as inputs for the deliverables under M/584

European Commission

Circular Plastics Alliance documents

- « Umbrella » **recyclability evaluation process** for plastic packaging, including e.g.
  - Task sharing between steering group and expert pools
  - 3 categories (green, yellow, red)
  - Recyclability ↔ intended application
  - Determination of critical points and necessary testing
  - Publicly accessible register with test results and members lists
  - Standardised communication with manufacturer

European Commission

Circular Plastics Alliance documents

- « Umbrella » **methodology to develop design-for-recycling guidelines** per plastic packaging category, including e.g.
  - General considerations (mono-polymer design, all components shall be either separable or recyclable)
  - Content of D4R guideline (list of elements to assess and classification in green, yellow, red, determination of separate and integrated components
  - *Regular update* and multi-stakeholder involvement

European Commission

Circular Plastics Alliance documents

Per plastic packaging category: draft design and evaluation guidelines (follow-up on CPA Design for Recycling Work Plan)

PET bottles/containers	EBPB and Petcore design guidelines List of unit operations and testing requirements Yearly update
PE-based and PP-based flexibles (natural, coloured)	Do's and don'ts (design guidelines) Recyclass assessment protocols List of unit operations and testing requirements Yearly update
HDPE bottles, containers and tubes, and PP bottles and containers (natural, coloured)	Recyclass design guidelines List of unit operations and testing requirements (WIP) Yearly update
PS trays and dairy packaging	Recyclass design guidelines and assessment protocols List of unit operations and testing requirements Yearly update
EPS Food contact and protective (white goods)	Do's and don'ts (design guidelines) and ref. to Recyclass design guidelines for fish boxes

Thank you

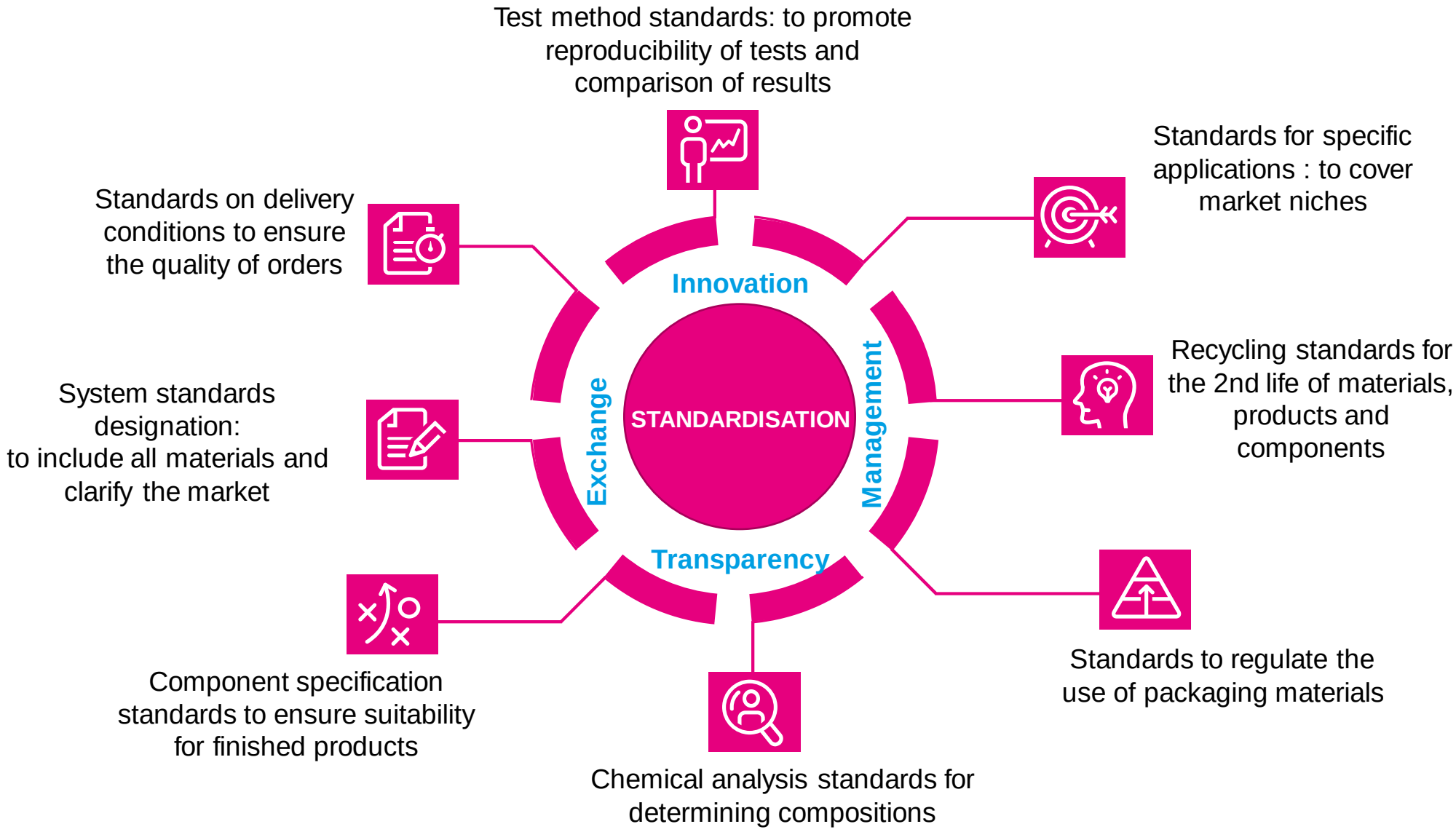
European Commission

HSbooster Webinar

27/04/2023

Valentin Cottin **AFNOR**
Vincent Colard **CITEO**

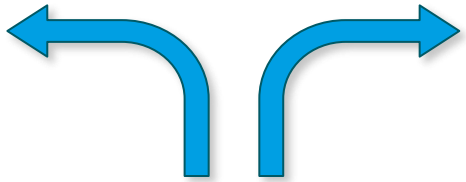
What is the purpose of a standard?



International standardisation

FOLLOW, PARTICIPATE AND INFLUENCE INTERNATIONAL STANDARDS

CEN
European level



ISO
International level

National delegation

UNE
Spain

AFNOR
France

BSI
United Kingdom)

… (other national standards bodies)

35.000 standardisation documents in the world | **90%** of published standards are international

Europe (CEN)

International (ISO)

JOIN AN INTERNATIONAL WORKING GROUP NOW

- **CEN/TC 261/WG 1 :** Management standards for packaging of foodstuffs
- **CEN/TC 261/WG 7 :** Reuse
- **CEN/TC 261/SC 5/WG 1** : Packaging of dangerous goods
- **CEN/TC 261/SC 4/WG 10** : Design for recycling for plastic packaging products

- **ISO/TC 122/WG 12 :** Supply chain applications of logistics technology
- **ISO/TC 122/WG 18 :** Active and intelligent packaging
- **ISO/TC 122/SC 4** : Packaging and the environment
- **ISO/TC 122/WG 5** : Terminology and vocabulary

CEN/TC 261

THE EUROPEAN STANDARDISATION STRUCTURE FOR PACKAGING

Chaimanship : France ; Mr. Emmanuel Guichard (FEBEA)

Committee management : France ; Mr. Valentin Cottin (AFNOR)

Creation date : 1990

Participating countries : 34

Several European partner organisations : (PRE, FEVE, eucp, CEFLEX, ECOS, EUROPEN …)

Published standards : 346

“Packaging”

MAIN STANDARDS RECENTLY PUBLISHED OR IN THE PROCESS OF BEING PUBLISHED :

- **EN 17428**, Packaging - Determination of the degree of disintegration under simulated home composting conditions

- **EN XXXXX**, Packaging - Protocol to assess plastic packaging sorting

- **EN 17665:2022**, Packaging - Test methods and requirements to demonstrate that plastic caps and lids remain attached to beverage containers

- **EN 13048:2022**, Packaging - Flexible aluminium tubes - Internal lacquer film thickness measurement method

- **EN 17220:2019**, Packaging - Flexible aluminium tubes - Tube nozzles

- **EN 15421:2021**, Packaging - Flexible aluminium tubes - Determination of the adhesion of the internal and external protective lacquering

From standardisation to regulation

CEN/TC 261/SC 4/WG 10 IS RESPONDING TO THE STANDARDISATION REQUEST M/584 FROM THE EUROPEAN COMMISSION

- European standard(s) on the process and criteria to evaluate the recyclability of plastic packaging
- European standard(s) on the definitions and principles for design-for-recycling of plastic packaging
- European standardisation deliverables on design-for-recycling guidelines for plastic packaging products: polyolefins flexibles; polystyrene (PS) cups, trays and dairy packaging; polyolefins rigids; polyethylene terephthalate (PET) beverage bottles; PET trays; expanded polystyrene (EPS) packaging

Too many recyclability guidelines in Europe ! (non exhaustive list)

The Consumer Goods FORUM

Dríade Soluciones Medioambientales

ELLEN MACARTHUR FOUNDATION

National pact guidelines

interzero zero waste solutions

RecyClass

EPBP

Attestation de Conformité OK Recycle

RECOUP

TRAY CIRCULARITY EVALUATION PLATFORM (TCEP)

flustix PLASTIKFREI

CYCLOS-HTP

COTREP

PLASTIC SENSE FOUNDATION

CEFLEX A CIRCULAR ECONOMY FOR FLEXIBLE PACKAGING

WAGENINGEN UNIVERSITY & RESEARCH

RECYCLABILITY LABEL

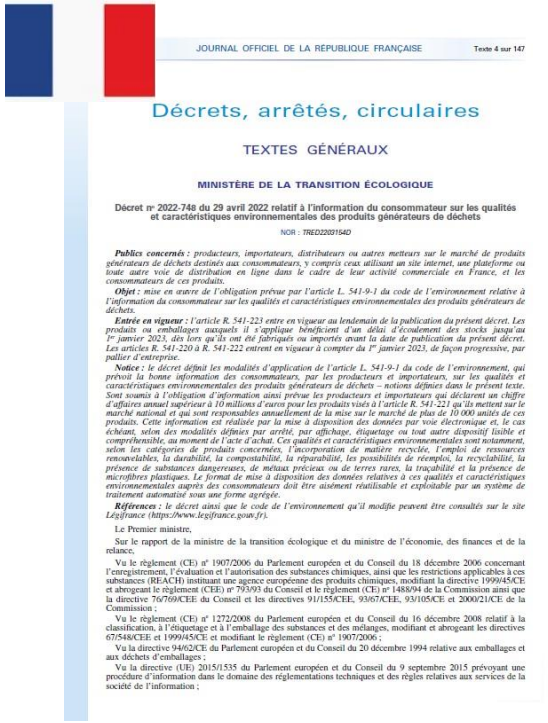
Retailer guidelines

CERTIFIED cradle to cradle

ECR COMMUNITY EFFICIENT CONSUMER RESPONSE

WPO WORLD PACKAGING ORGANISATION

National “recyclability” definitions (non exhaustive list)



JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE Texte 4 sur 147

Décrets, arrêtés, circulaires

TEXTES GÉNÉRAUX

MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE

Décret n° 2022-748 du 29 avril 2022 relatif à l'information du consommateur sur les qualités et caractéristiques environnementales des produits générateurs de déchets

NOR : TREO2203154D

Publics concernés : producteurs, importateurs, distributeurs ou autres metteurs sur le marché de produits générateurs de déchets destinés aux consommateurs, y compris ceux utilisant un site internet, une plateforme ou toute autre voie de distribution en ligne dans le cadre de leur activité commerciale en France, et les consommateurs de ces produits.

Objet : mise en œuvre de l'obligation prévue par l'article L. 541-9-1 du code de l'environnement relative à l'information du consommateur sur les qualités et caractéristiques environnementales des produits générateurs de déchets.

Entrée en vigueur : l'article R. 541-223 entre en vigueur au lendemain de la publication du présent décret. Les produits ou emballages auxquels il s'applique bénéficient d'un délai d'écoulement des stocks jusqu'au 1er janvier 2023, des lors qu'ils ont été fabriqués ou importés avant la date de publication du présent décret. Les articles R. 541-220 à R. 541-222 entrent en vigueur à compter du 1er janvier 2023, de façon progressive, par pallier d'entreprise.

Notice : le décret définit les modalités d'application de l'article L. 541-9-1 du code de l'environnement, qui prévoit la bonne information des consommateurs, par les producteurs et importateurs, sur les qualités et caractéristiques environnementales des produits générateurs de déchets – notions définies dans le présent texte. Sont soumis à l'obligation d'information ainsi prévue les producteurs et importateurs qui déclarent un chiffre d'affaires annuel supérieur à 10 millions d'euros pour les produits visés à l'article R. 541-221 qu'ils mettent sur le marché national et qui sont responsables annuellement de la mise sur le marché de plus de 10 000 unités de ces produits. Cette information est réalisée par la mise à disposition des données par voie électronique et, le cas échéant, selon des modalités définies par arrêté, par affichage, étiquetage ou tout autre dispositif lisible et compréhensible, au moment de l'acte d'achat. Ces qualités et caractéristiques environnementales sont notamment, selon les catégories de produits concernées, l'incorporation de matière recyclée, l'emploi de ressources renouvelables, la durabilité, la compostabilité, la réparabilité, les possibilités de réemploi, la recyclabilité, la présence de substances dangereuses, de métaux précieux ou de terres rares, la traçabilité et la présence de microfibres plastiques. Le format de mise à disposition des données relatives à ces qualités et caractéristiques environnementales auprès des consommateurs doit être aisément réutilisable et exploitable par un système de traitement automatisé sous une forme agrégée.

Références : le décret ainsi que le code de l'environnement qu'il modifie peuvent être consultés sur le site Légifrance (https://www.legifrance.gouv.fr).

Le Premier ministre,

Sur le rapport de la ministre de la transition écologique et du ministre de l'économie, des finances et de la relance,

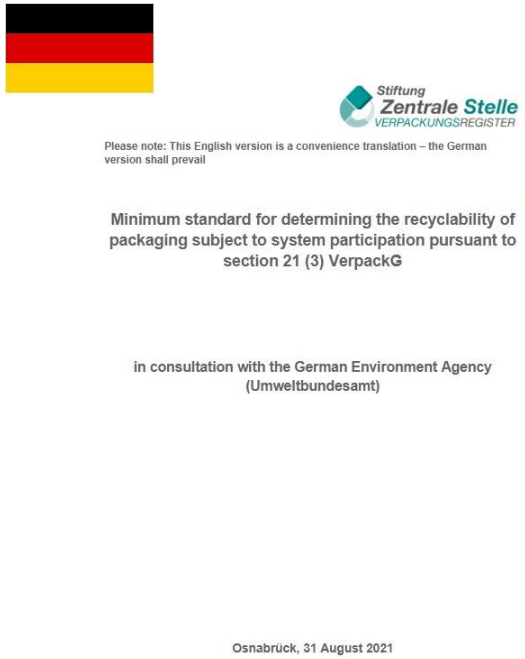
Vu le règlement (CE) n° 1907/2006 du Parlement européen et du Conseil du 18 décembre 2006 concernant l'enregistrement, l'évaluation et l'autorisation des substances chimiques, ainsi que les restrictions applicables à ces substances (REACH) instituant une agence européenne des produits chimiques, modifiant la directive 1999/45/CE et abrogeant le règlement (CEE) n° 793/93 du Conseil et le règlement (CE) n° 1488/94 de la Commission ainsi que la directive 76/769/CEE du Conseil et les directives 91/155/CEE, 93/67/CEE, 93/105/CE et 2000/21/CE de la Commission ;

Vu le règlement (CE) n° 1272/2008 du Parlement européen et du Conseil du 16 décembre 2008 relatif à la classification, à l'étiquetage et à l'emballage des substances et des mélanges, modifiant et abrogeant les directives 67/548/CEE et 1999/45/CE et modifiant le règlement (CE) n° 1907/2006 ;

Vu la directive 94/62/CE du Parlement européen et du Conseil du 20 décembre 1994 relative aux emballages et aux déchets d'emballages ;

Vu la directive (UE) 2015/1535 du Parlement européen et du Conseil du 9 septembre 2015 prévoyant une procédure d'information dans le domaine des réglementations techniques et des règles relatives aux services de la société de l'information ;

French definition by law for communication purpose, link with EPR methodology, Cotrep for plastic packaging



Stiftung Zentrale Stelle VERPACKUNGSREGISTER

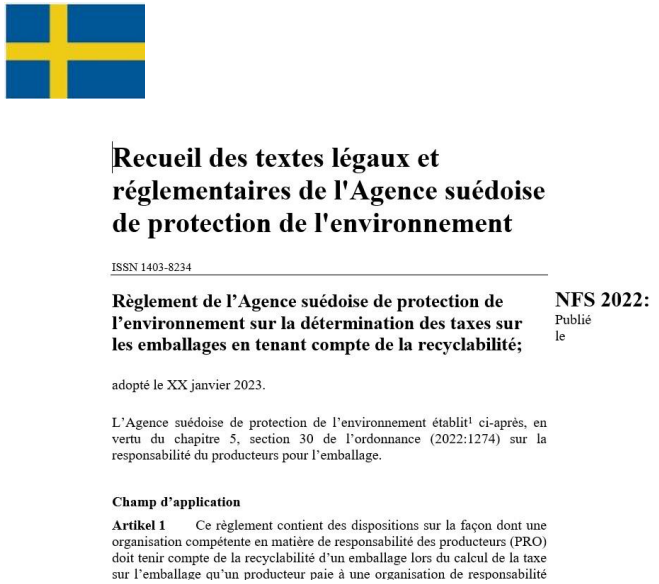
Please note: This English version is a convenience translation – the German version shall prevail

Minimum standard for determining the recyclability of packaging subject to system participation pursuant to section 21 (3) VerpackG

in consultation with the German Environment Agency (Umweltbundesamt)

Osnabrück, 31 August 2021

German approach for design and bonus/malus system, based on single methodology and experts



Recueil des textes légaux et réglementaires de l'Agence suédoise de protection de l'environnement

ISSN 1403-8234

Règlement de l'Agence suédoise de protection de l'environnement sur la détermination des taxes sur les emballages en tenant compte de la recyclabilité;

NFS 2022:
Publié
le

adopté le XX janvier 2023.

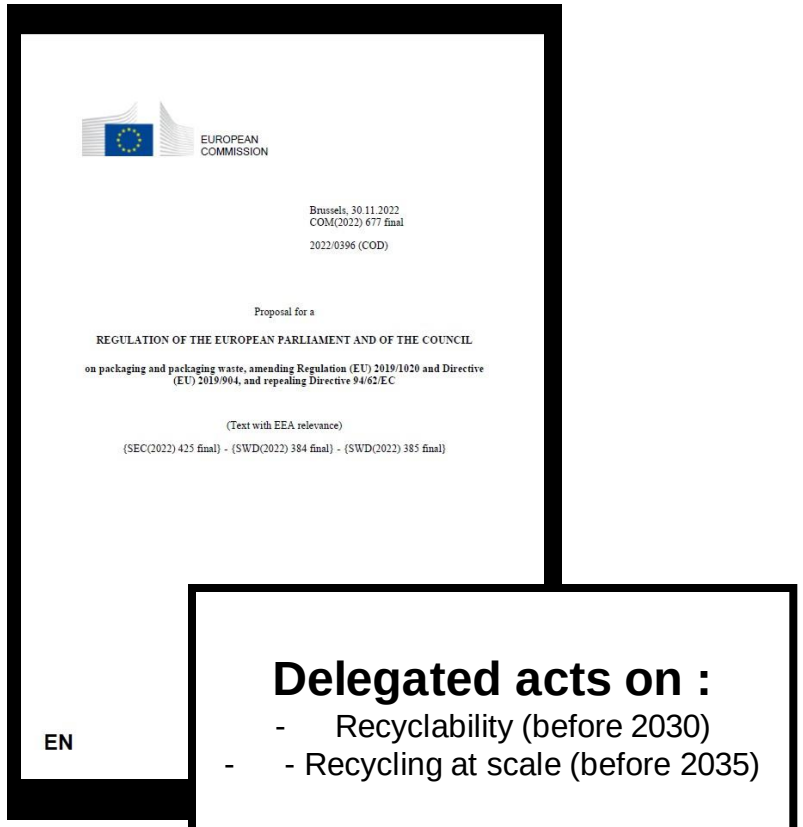
L'Agence suédoise de protection de l'environnement établit[1] ci-après, en vertu du chapitre 5, section 30 de l'ordonnance (2022:1274) sur la responsabilité du producteurs pour l'emballage.

Champ d'application

Artikel 1 Ce règlement contient des dispositions sur la façon dont une organisation compétente en matière de responsabilité des producteurs (PRO) doit tenir compte de la recyclabilité d'un emballage lors du calcul de la taxe sur l'emballage qu'un producteur paie à une organisation de responsabilité

Swedish draft law for packaging design, which introduce the 5% rule barrier and foreign material

Strong need of harmonization at European level

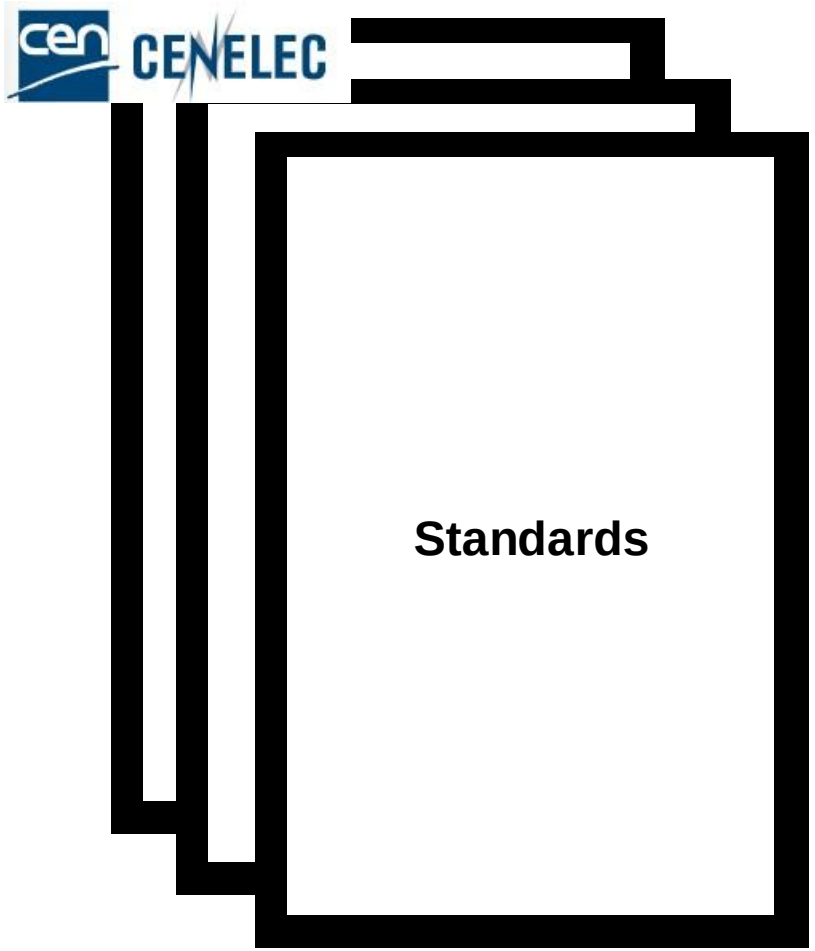


Delegated acts on :

- Recyclability (before 2030)
- - Recycling at scale (before 2035)

Closed planning

Possible link



Moving from « voluntary » design criteria to enforced one to reach 100% of recyclable packaging

Our ambition

Deliver consensual standards which could be used by PPWR

A unique opportunity for plastic packaging

Committee Internal Balloting on NWI

2 items on methodology
- Definition and principles
- Process and criteria

6 items on guidelines
- PET bottle
- PET other rigid packaging
- PE and PP rigid packaging
- PE and PP flexible packaging
- PS rigid packaging
- EPS packaging

7 items on protocols
- Sorting
- PET bottle recycling
- PET other rigid packaging recycling
- PE and PP rigid packaging recycling
- PE and PP flexible packaging recycling
- PS rigid packaging recycling
- EPS packaging recycling

Decision from TC and Convenor on project leaders

PET bottles (2 standards)	PET rigid (2 standards)	PE & PP rigid (2 standards)	PE & PP flexible (2 standards)	PS rigid (2 standards)	EPS (2 standards)
PETCORE	SULAYR		CEFLEX	SYNDIFRAIS	BEWI

Methodology (2 standards)	Sorting (1 standard)
CITEO	P&G

Methodology – recyclability scope

VS

Recyclability criteria – table construction

- Most of the recyclability tables look like :

Perfect	Intermediate	Not recyclable or disturb recycling

Planning


End of NWI ballot
First draft standard consultation and 5th WG10 meeting
6th WG10 meeting to launch the second consultation
28/03
01/05
24/05
30/06 for draft standards
06/07 for WG10 meeting
Septembre
05/10 &
06/10
3rd WG10 meeting
4th WG10 meeting on NWI comments
Each subgroup have to answer comments on draft standards

upPE-T

Upcycling of PE & PET wastes to generate biodegradable bioplastics for food and drink packaging

UNE

Henar Araguzo Rivera
27/04/2023

Contents

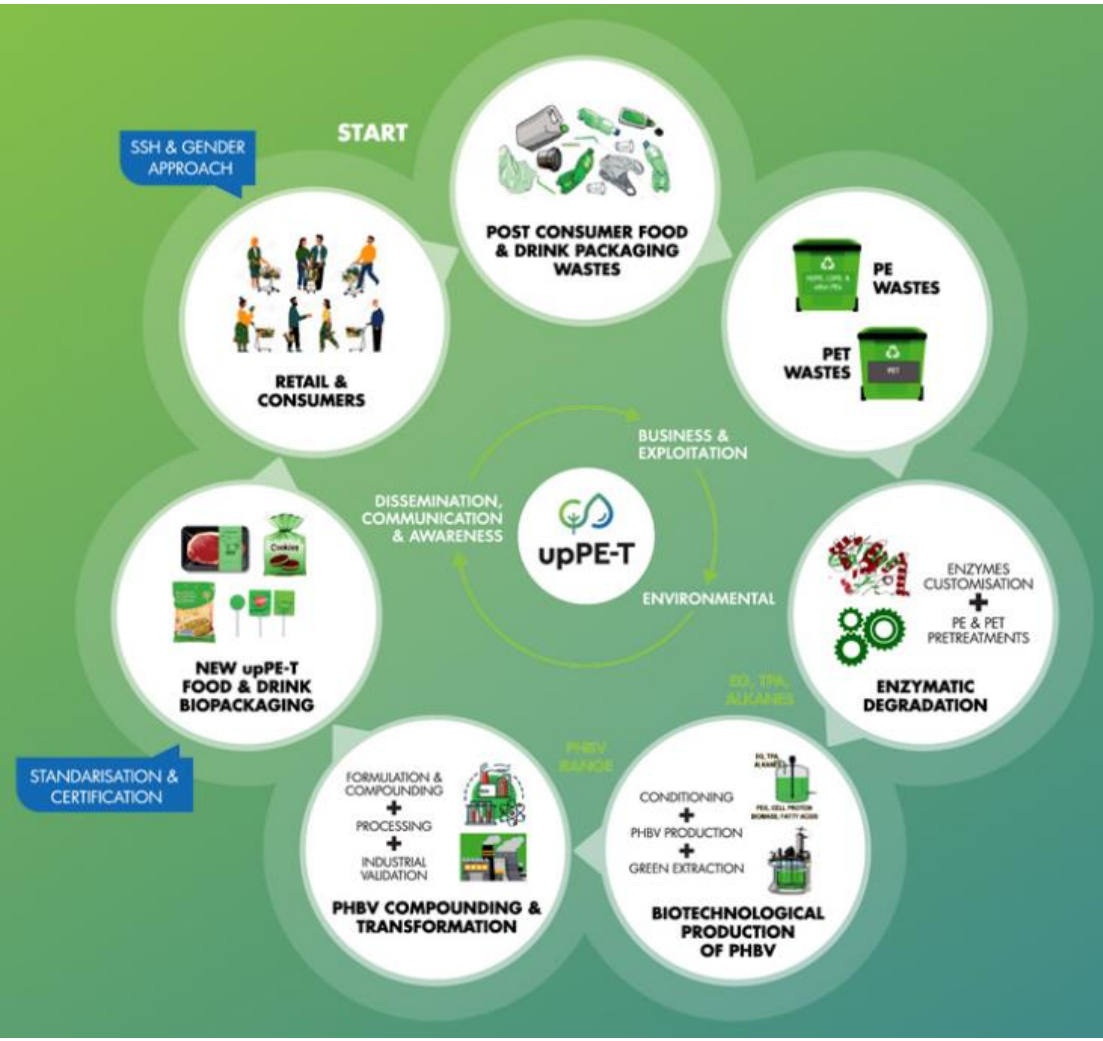
- upPE-T project overview
- UNE, Spanish Association for Standardization
- Activities in the context of European Horizon projects (and upPE-T)
- Activities of UNE and success stories

An overview of upPE-T project

upPE-T

UNE

An overview of upPE-T project



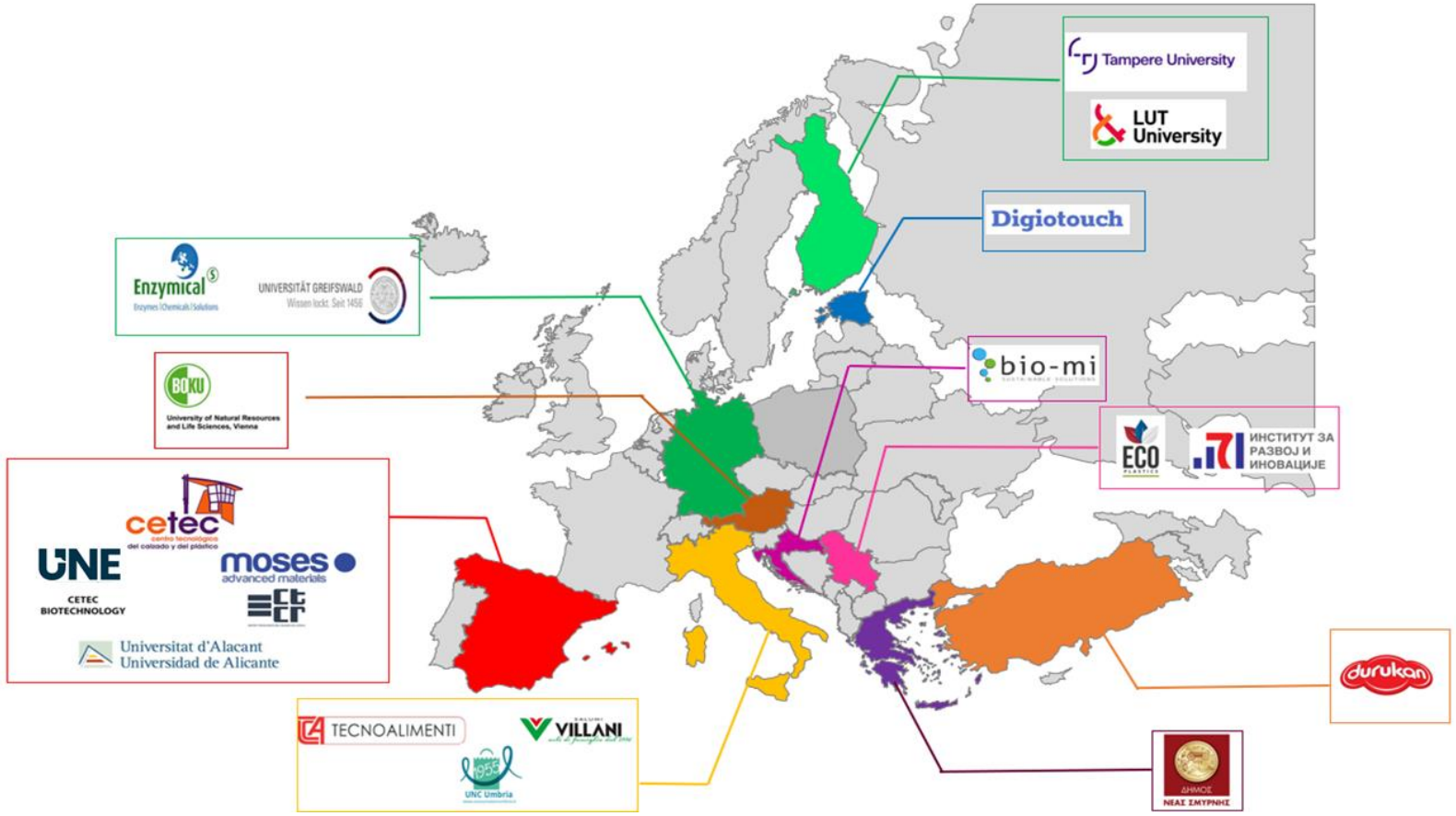
upPE-T

Upcycling of PE & PET wastes

to generate biodegradable bioplastics

for food and drink packaging

An overview of upPE-T project



Grant agreement ID: 953214

Funded under: H2020-EU.2.1.4

Status: Ongoing project

- Start date: 1 November 2020
- End date: 31 October 2024

Coordinated by:

ASOCIACIÓN EMPRESARIAL DE INVESTIGACIÓN CENTRO TECNOLÓGICO DEL CALZADO Y DEL PLÁSTICO DE LA REGIÓN DE MURCIA (CETEC)

UNE, Spanish Association for Standardization

UNE, Spanish Association for Standardization

- ✓ **Non-profit, private** and independent organization
- ✓ Spanish official **National Standardization Body** since 1986 (formerly known as AENOR)
- ✓ Location: **Madrid**.
- ✓ **Staff**: 70 persons (60% female)
- ✓ **Activities**: National, European & International **Standardization**, Integration of **standardization in R&I (>100 projects)**

UNE, Spanish Association for Standardization

Main role in upPE-T project:

- ✓ UNE provides support to the Consortium regarding standardization aspects
- ✓ Not participating as national organization, but as member of European and International Standards Organizations:

Main objectives of standardization activities within the project:

- ✓ Facilitate exploitation and dissemination of project results by **using** standards and **generating** new standards
- ✓ Increase the **long-term impact of the project outside the consortium**

Activities in the context of European Horizon projects (and upPE-T)

Activities in the context of European Horizon projects (and upPE-T)

1. Analysis of the applicable standardization landscape

Identification of:
- **Published standards and standards under development** relevant for the project
- Technical **Committees (TCs)** and other standardization bodies related to the project.

2. Contribution to ongoing and future standardization

Definition of the strategy

- Selection of TCs to contact with and content to disseminate
- Planning

Interaction with standardization TCs

- Follow-up TC activities and update TCs
- Participation of experts, project liaison…

Standardization process

- Via Workshop: Development of CWA/IWA (new, fast-track standard)
- Via TC:
  - Contribution to an ongoing standard (new or under revision)
  - Request for modifying a standard
  - Development of new standard(s)

3. Main contact for everything related to standardization

Activities in the context of European Horizon projects (and upPE-T)

1. Analysis of the applicable standardization landscape

Identification of:
- **Published standards and standards under development** relevant for the project
- Technical **Committees (TCs)** and other standardization bodies related to the project.

2. Contribution to ongoing and future standardization

Definition of the strategy

- Selection of TCs to contact with and content to disseminate
- Planning

Interaction with standardization TCs

- Follow-up TC activities and update TCs
- Participation of experts, project liaison…

Standardization process

- Via Workshop: Development of CWA/IWA (new, fast-track standard)
- Via TC:
  - Contribution to an ongoing standard (new or under revision)
  - Request for modifying a standard
  - Development of new standard(s)

3. Main contact for everything related to standardization

Activities in the context of European Horizon projects (and upPE-T)

1. Analysis of the applicable standardization landscape

Identification of:
- **Published standards and standards under development** relevant for the project
- Technical **Committees (TCs)** and other standardization bodies related to the project.

2. Contribution to ongoing and future standardization

Definition of the strategy

- Selection of TCs to contact with and content to disseminate
- Planning

Interaction with standardization TCs

- Follow-up TC activities and update TCs
- Participation of experts, project liaison…

Standardization process

- Via Workshop: Development of CWA/IWA (new, fast-track standard)
- Via TC:
  - Contribution to an ongoing standard (new or under revision)
  - Request for modifying a standard
  - Development of new standard(s)

3. Main contact for everything related to standardization

Activities in the context of European Horizon projects (and upPE-T)

1. Analysis of the applicable standardization landscape

Identification of:
- **Published standards and standards under development** relevant for the project
- Technical **Committees (TCs)** and other standardization bodies related to the project.

2. Contribution to ongoing and future standardization

Definition of the strategy

- Selection of TCs to contact with and content to disseminate
- Planning

Interaction with standardization TCs

- Follow-up TC activities and update TCs
- Participation of experts, project liaison…

Standardization process

- Via Workshop: Development of CWA/IWA (new, fast-track standard)
- Via TC:
  - Contribution to an ongoing standard (new or under revision)
  - Request for modifying a standard
  - Development of new standard(s)

3. Main contact for everything related to standardization

Activities in the context of European Horizon projects (and upPE-T)

upPE-T project:

8 Technical Committees contacted	Participation of experts in 5 working groups:
• **CEN/TC 249** Plastics • **CEN/TC 261** Packaging • **CEN/TC 261/SC 4** Packaging and Environment • **ISO/TC 61** Plastics • **ISO/TC 122** Packaging • **ISO/TC 122/SC 4** Packaging and the environment • **ISO/TC 61/SC 14** Environmental aspects • **ISO/TC 207** Environmental management	• **CEN/TC 249/WG 9** BioBased and biodegradable plastics • **CEN/TC 249/WG 11** Plastics recycling • **CEN/TC 261/SC 4/WG 2** Degradability and organic recovery of packaging and packaging materials • **CEN/TC 261/SC 4/WG 10** Design for recycling for plastic packaging products • **ISO/TC 61/WG 14** Environmental aspects

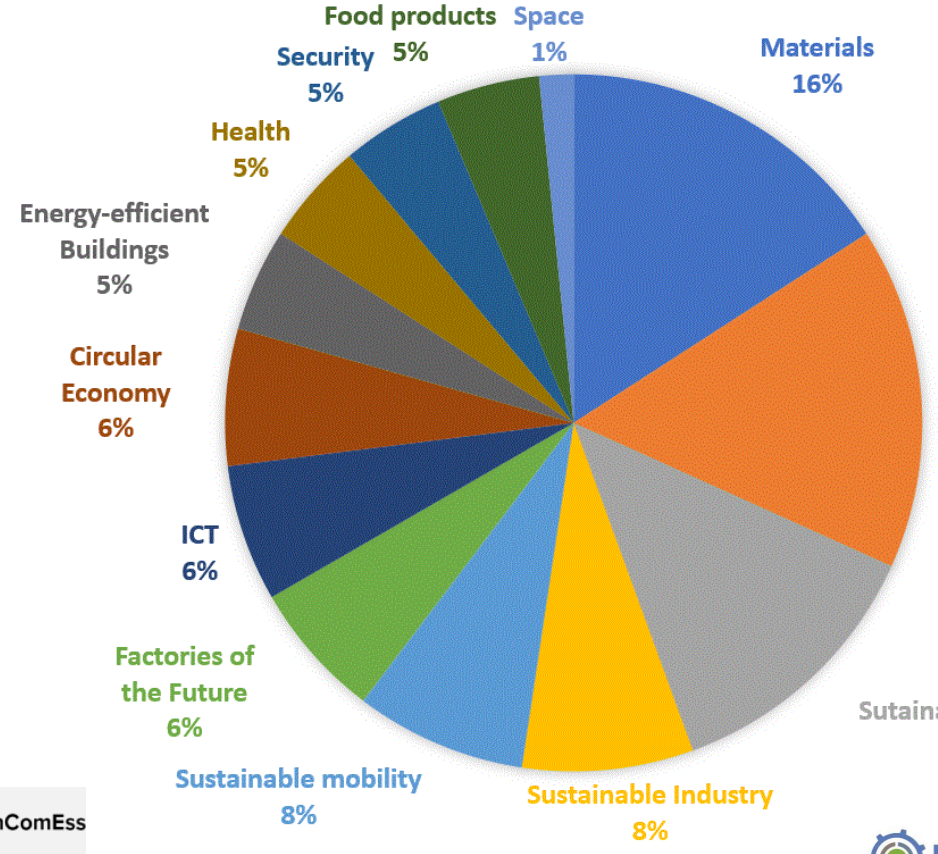
PLANNED: Development of a "CWA" (CEN/CLC WORKSHOP AGREEMENT)

Activities of UNE and success stories

upPE-T

UNE

Activities of UNE and success stories



Activities of UNE and success stories

Circular Process for Eco-Designed Bulky Products and Internal Car Parts

- 2 CWAs developed on recyclability of composite materials in the automotive sector (CWA 17806 and CWA 17807)

Standard method and online tool for assessing and improving the energy efficiency of wastewater treatment plants

- CEN/TR 17614:2021 on measurement and improvement of energy efficiency in wastewater treatment plants, published in CEN/TC 165.

Advanced materials solutions for next generation high efficiency CSP tower systems

- CWA 17726 on accelerated ageing of ceramic tiles for solar receivers.
- Leading the review of ISO 18755.

Next-generation Dynamic Digital EPCs for Enhanced Quality and User Awareness

- Creation of CEN/TC 371/WG 5 Operational rating of energy performance of buildings.

Thank you!

Henar Araguzo Rivera
27/04/2023

MERLIN

y and rate of Multi-layer packaging
ecycling waste

Increasing the quality and rate of MultilayER packaging recycLINg waste

César Aliaga

RESEARCH CENTER ITENE

HS BOOSTER 27/04/2023

The MERLIN project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 101003883

MERLIN

MERLIN: Increasing the quality and rate of MultilayER packaging recycLINg waste

Call: **H2020-SC5-2020-2** - Improving the sorting, separation and recycling of composite and multi-layer materials

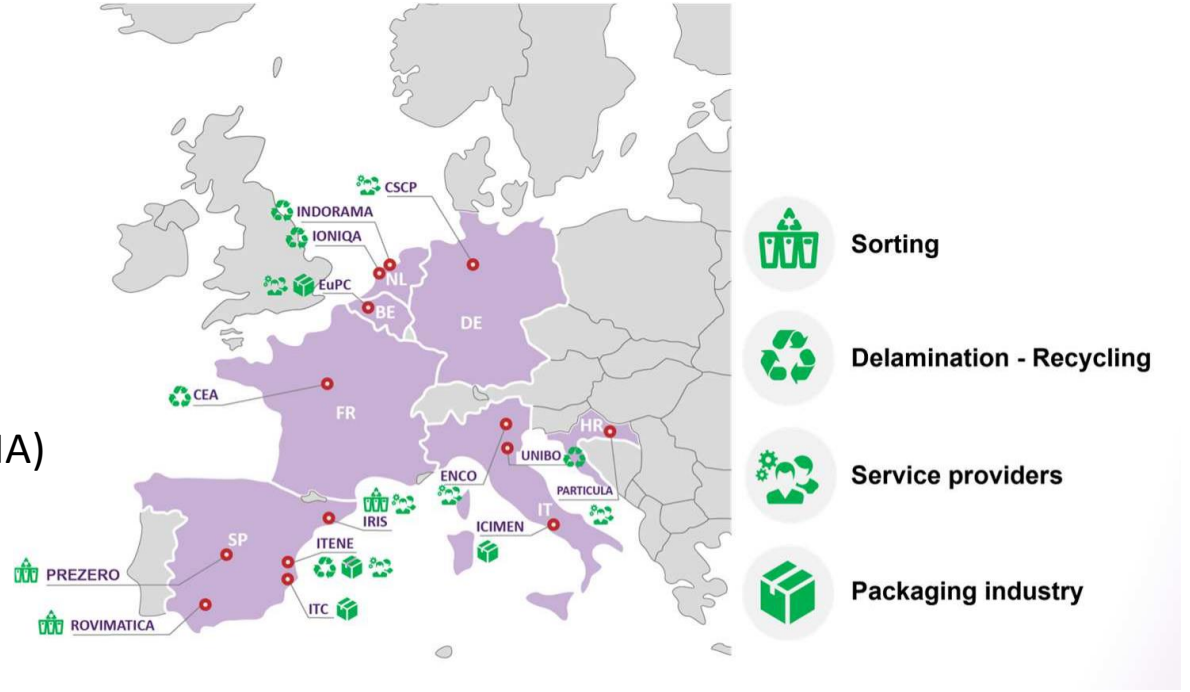
36 Months

Budget: **4.9 Million €**

14 Partners

7 Countries

Research and Innovation Action (RIA)



MERLIN consortium

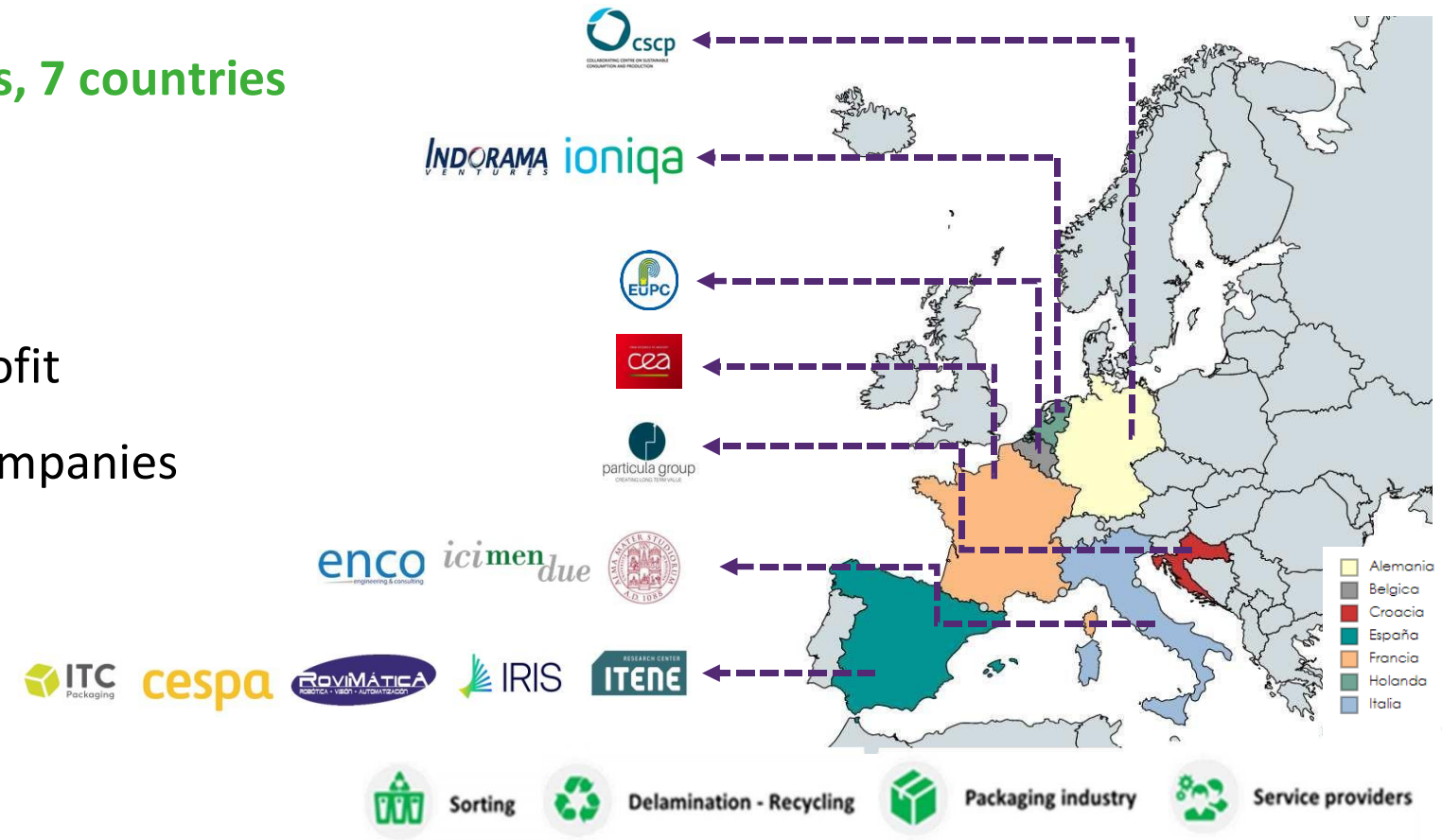
14 partners, 7 countries

6 SME

4 RTOs

1 Non - profit

3 Large Companies



www.merlinproject.eu

Summary of Merlin

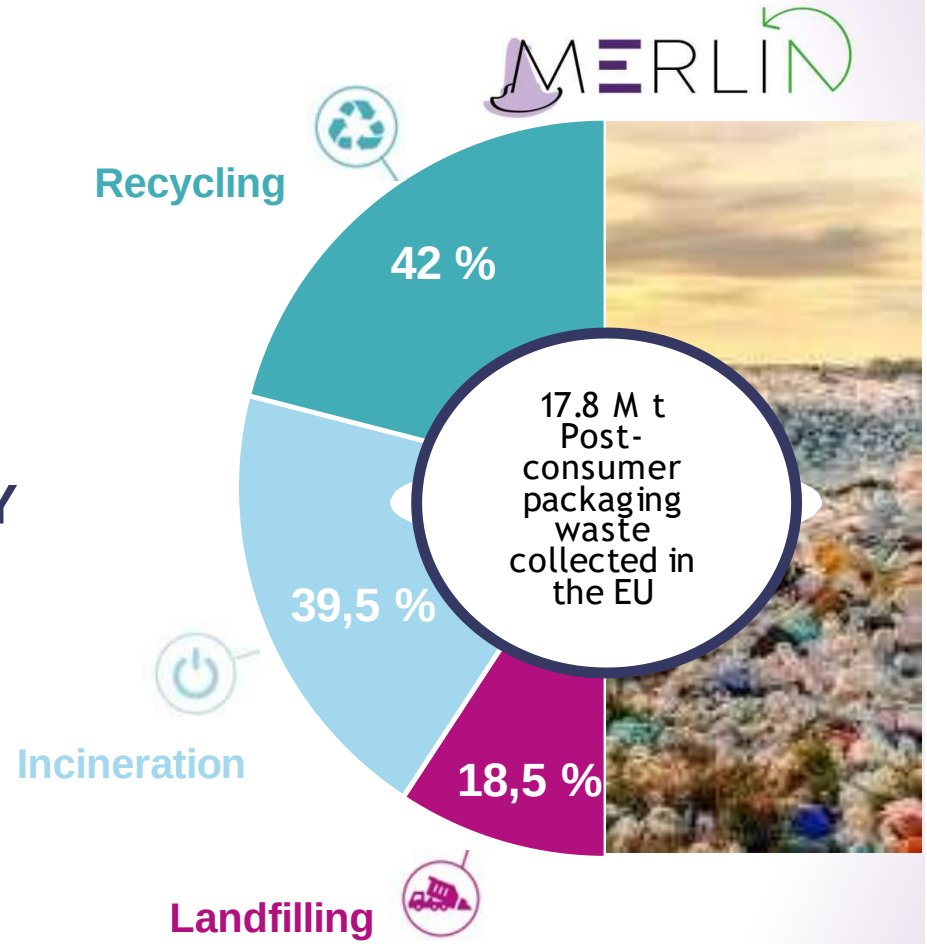
PROBLEM

- Post-consumer packaging waste in the EU - 17.8 M Tn (2018)
- Recycling rate - 42%.
- Economic impact - 10.605 M€.
- Environmental Impact - 7.42 MT of CO2

FRACTIONS CURRENTLY NOT WIDELY RECYCLED

- Rigid multilayer packaging (PET/PE)
- Flexible packaging (PET/POs(i))
- Metallised flexible packaging (PET/met/POs)

(i) POs: poliolefins.

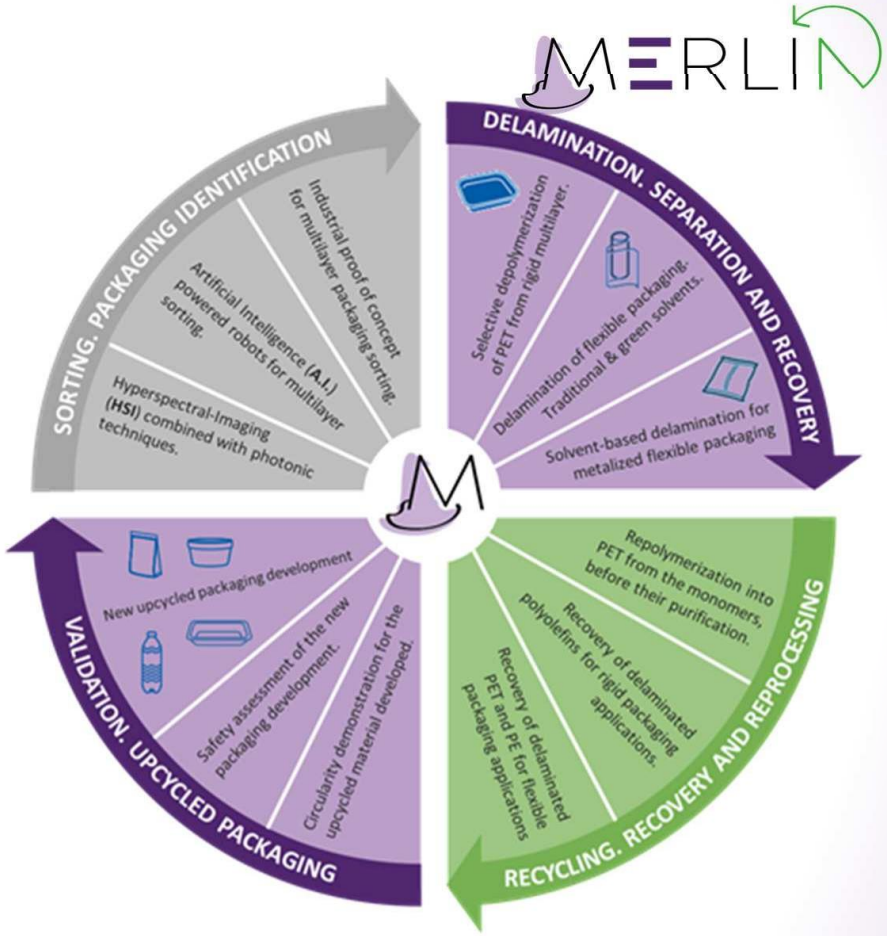


WHY multilayer packaging **?**

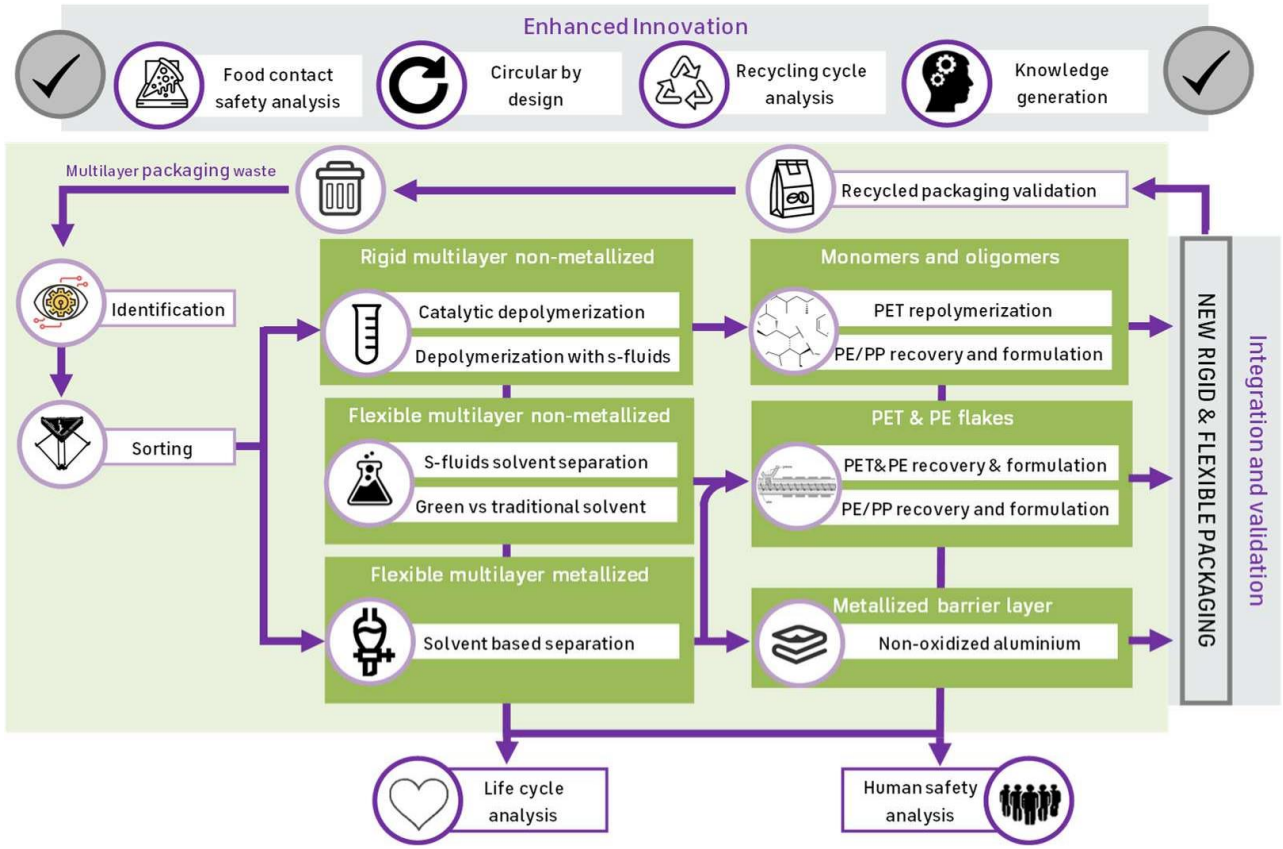
- Type of packaging widely used due to its high performance (17% of packaging).
- Its identification in plant is complex and inaccurate (only external side).
- Different nature of the layers (e.g. PET/PE) makes recycling difficult (need for additivation).
- Delamination suitable for certain very specific structures (certain adhesives and layer configurations).

Summary of Merlin

MERLIN's overall objective is the development of new **sorting**, **delamination** and **recycling processes** for both flexible and rigid **multilayer post-consumer packaging**, in order to produce new packaging solutions (flexible and rigid) for food packaging.



Summary of Merlin



MERLIN

CONTRIBUTION TO THE EU PLASTICS STRATEGY

MERLIN's overall objective is the development of new **sorting**, **delamination** and **recycling processes** for both flexible and rigid **multilayer post-consumer packaging**, in order to produce new packaging solutions (flexible and rigid) for food packaging.

Expand the emerging **smart waste management sector** introducing smart technologies in sorting plants.

Delaminate multilayer structure in packaging: **rigid**, **flexible**, and **metallized flexible** multilayer.

Develop and **promote** new **sorting, delamination, recycling and validation processes** for both flexible and rigid **multilayer post-consumer packaging**, in order to produce new packaging solutions (flexible and rigid) for food packaging.

Improve the properties of the recovered material PET and PE.

Produce new packaging protype to value **retention** in the economy, rather than downgrading the multi-layer materials.

MERLIN Clustering opportunities

What we are looking for

- Industry inputs on **MERLIN**'s developments
- Validation of how **MERLIN**'s is in accordance with the European Legislation
- Inputs from policy makers on where legislation is heading in the future
- Extrapolation of the value chain for other types of plastic waste
- Adding new members to the **Advisory Board**

Contact information

https://merlinproject.eu/

info@merlinproject.eu

https://linkedin.com/company/merlinproject/

@MERLINProject21

César Aliaga - ITENE
cesar.aliaga@itene.com

The MERLIN project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 101003883

cimpa

a circular
multilayer plastic approach
for value retention of end-of-life
multilayer films

CIMPA: Making multilayer plastics more circular

Maria Vera Duran
EuRIC – European Recycling Industries' Confederation

Hsbooster.eu webinar "Boosting Plastic Packaging Recyclability: Setting the Right Standards", 27 April 2023

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°101003864.

“Our goal is to turn multimaterial films waste into valuable and circular resources through cutting-edge technology and contribute to Europe’s Green Deal agenda

cimpa

CIMPA AT A GLANCE

Grant agreement ID: 101003864

Start date: 1 June 2021

End date: 31 May 2024

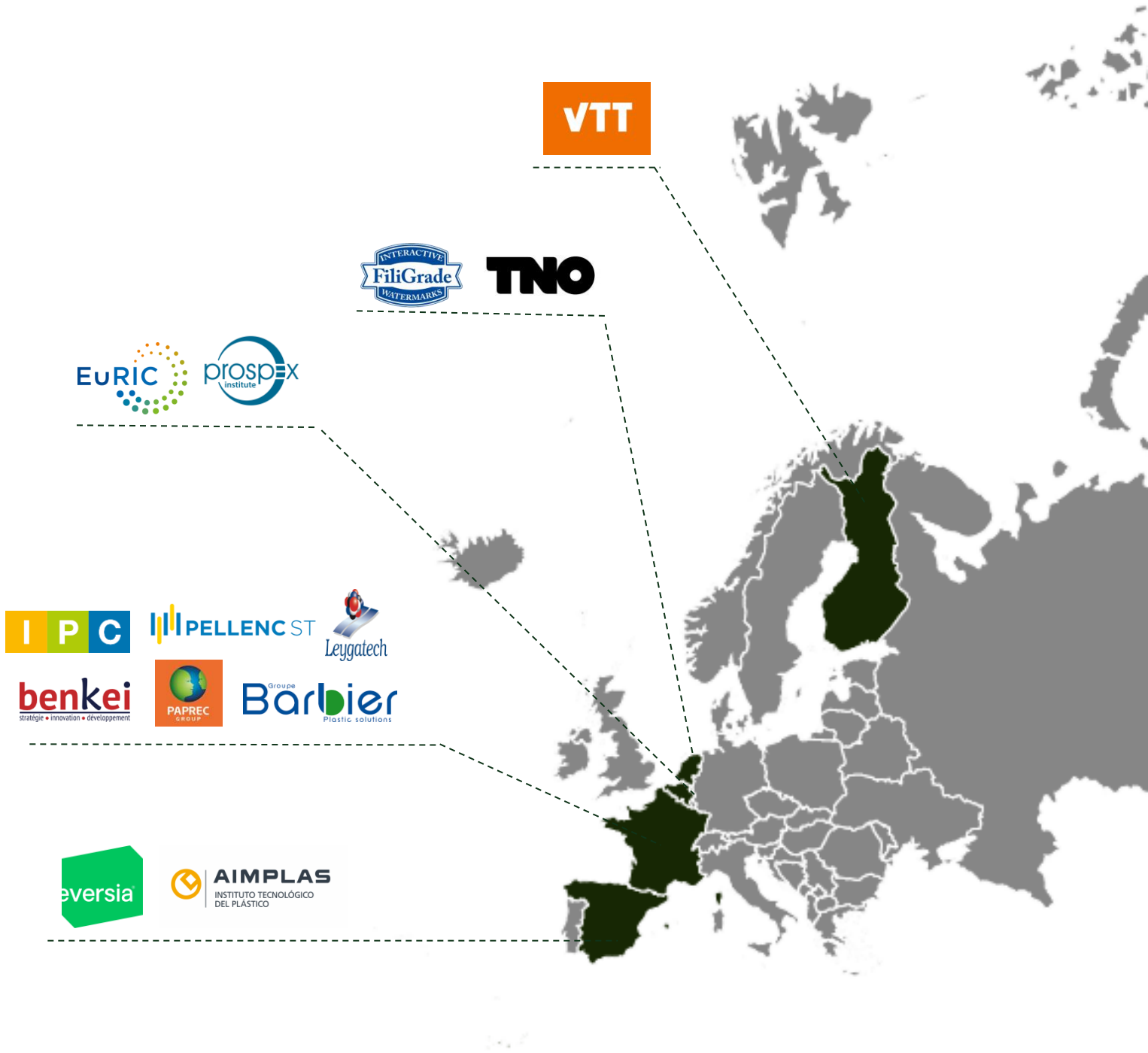
Funded under: H2020 programme

Overall budget: € 4 984 396,25

EU contribution: € 4 984 396,25

Coordinated by:

CENTRE TECHNIQUE INDUSTRIEL DE LA PLASTURGIE ET DES COMPOSITES, France



EU PLASTICS & PACKAGING STRATEGY

50% plastic packaging recycling rate in 2025 (actual rate=38%, 2020)
Packaging and Packaging Waste Directive

All packaging is recyclable on the EU market by 2030
Circular Economy Action Plan

By 2025 at least **10 million tonnes of recycled plastics** should find their way into products in Europe each year.
Circular Plastic Alliance

Plastic recycled content targets by 2030
New EU Regulation on Packaging and Packaging Waste

cimpa

EXAMPLE OF FOOD PACKAGING

Recyclable Non Recyclable

PET bottles
PET punnets

3.6 Mt

HDPE, PP bottles
PE, PP punnets & pots

2.5 Mt

HDPE and LDPE flexible films

1.2 Mt

PS, XPS pots and tubs

1.2 Mt

Complex packaging (mainly multilayers and mutimaterials)

2.1 Mt

20 %t

PVC packaging

0.3 Mt

cimpa

EU estimations based on CITEO data

MULTILAYER FILMS APPLICATIONS

Multimaterial plastic films are used as **packaging for the protection of food** (2Mt/year) and **agriculture for crops** (0.6Mt/year)

FOOD

PA/PE
Vacuum packaging

PET/PE
Cheese, cooked food

BOPPmet/BOPP
Snacks, candies

PET/Alu/PE
Crisps, pet food

PE/EVOH/PE
Stand up pouches

PE/EVOH/PA/PE
Fresh meat,
cooked meat

PP/PA/EVOH/PA/PE
Snacks, baby, frozen food

PET/PVDC/PA/PP
Coffee

AGRI.

PE/PA/PE
Barrier fumigation film

PE/EVOH/PE
Barrier fumigation film,
cover silage film

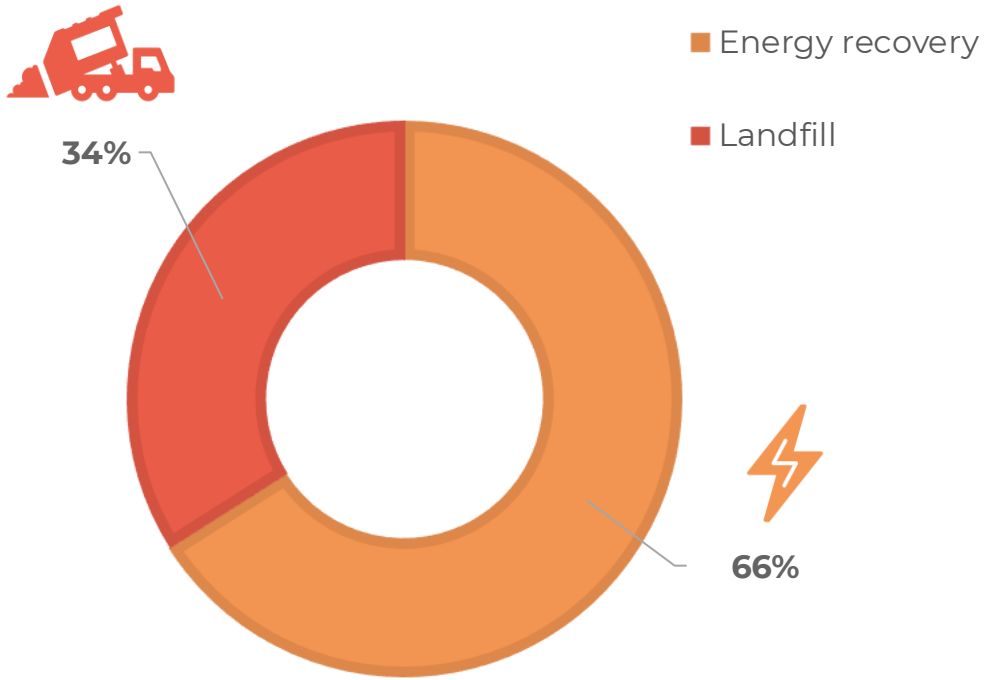
cimpa

AN ENVIRONMENTAL AND ECONOMIC ISSUE

In the last decades, development has focused on the improvement of multi-layer materials properties (barrier, mechanical resistance etc) rather than their recyclability

- Due to current lack of sorting and recycling technologies, multilayer films are mostly incinerated or worse landfilled

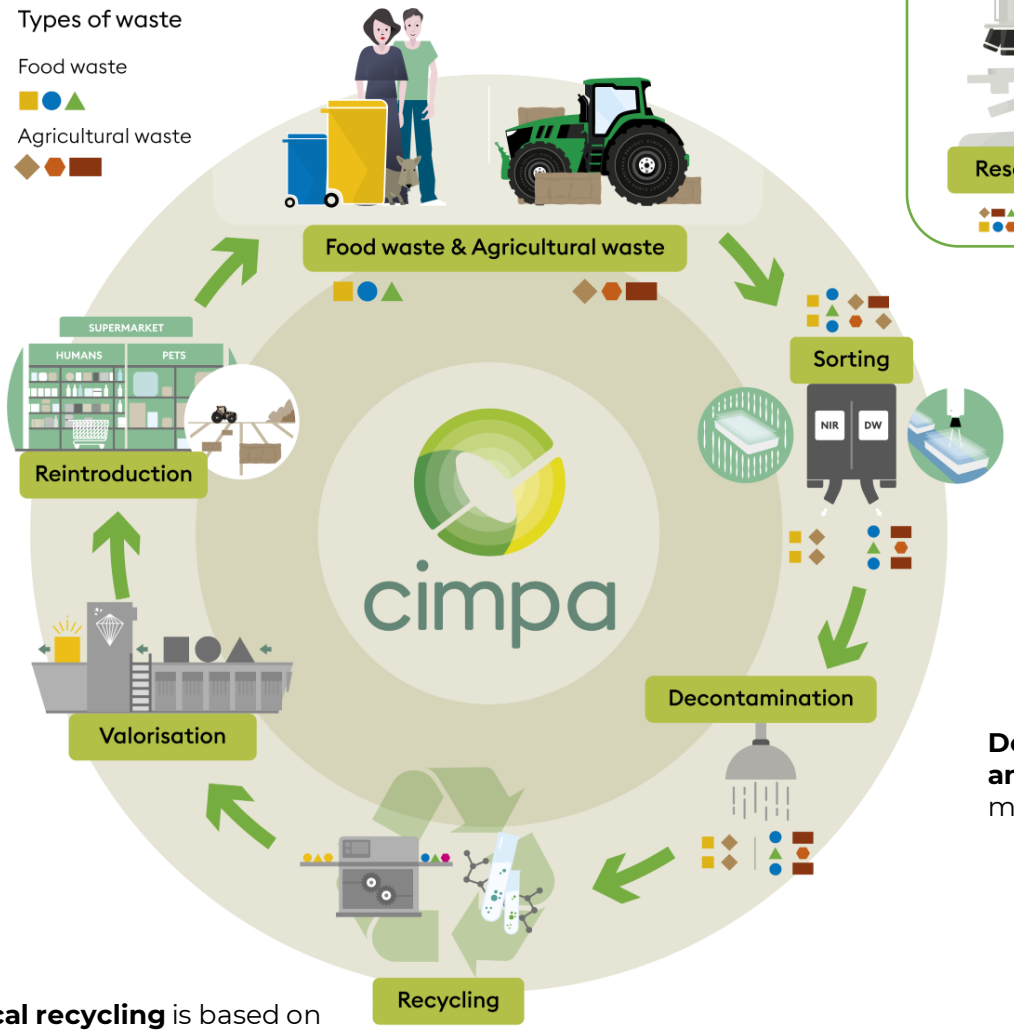
- As a consequence, each year, the equivalent of 650M€ to 950M€ economic value is not recovered for the EU economy.



To create a value chain for multilayers recycling and reuse in the food and agriculture packaging markets, in a systemic way, considering all aspects of the value chain

Normalization

Review of **legislation and standards and updates will be proposed** to increase multilayer films recyclability.



Research

New designs will be proposed including :
Multilayer structures more recyclable
Multilayer compositions including recycled materials

Innovative compositional sorting: combination of NIR and Digital Watermarking is used

A novel pilot recycling line with in-line adaptive melt rheology control and additivation will be used **to stabilize and upgrade targetted properties of recycled stream**

Decontamination will remove toxic and hazardous substances, but also more than 80% reduction of VOCs

Physical recycling is based on dissolution and precipitation of the polyolefin contained **in the *Multilayer films that cannot be mechanically recycled***.

Mechanical recycling to make new high gas barrier films

cimpa

CIMPA Value Chain

Waste characterisation — Report on Characterization of multilayer in incoming waste flows

Sorting solutions — Joint Prototype FiliGrade and Pellenc ST

Mechanical recycling | **Decontamination** | **Physical recycling** | **Upgrading**

Pre-normative studies

Report on legislative and pre-normative actions

This report offers a panoramic description of the legislative context in Europe and at national level in some specific CIMPA partner countries, as well as the standardization landscape.

Available here

HSbooster

European Standardisation Booster: expert assigned to CIMPA project

CIMPA partners involved in CEN/TC249/WG11 and CEN/TC261 Packaging

Dissemination and clustering activities

Workshop in Brussels gathering industry, policy makers, NGOs, etc.

Online webinar with PRIMUS project on the food contact regulation and PPWR

CIMPA IMPACT

- Moving from ~ 2% of ML recycling to a projected **recycling rate** between **12%** (short-term worst-case scenario) **up to 72%** (in a high impact scenario including return to food contact)

- **Reduction of virgin material use** by to 1.17M ton / year

- **Reduction of waste incinerated or landfilled** by up to 2.34M ton / year

- **Reductions of CO_2 emissions** by 2 to 4Mt/y

- **Average value retentions in EU** (= economic value saved in a circular vision) between 0.3B€ / y up to 2.2B€ /y

cimpa

cimpa

a circular
multilayer plastic approach
for value retention of end-of-life
multilayer films

Do you have any questions? Follow the project updates

cimpa-h2020.eu

This project has received funding from
the European Union's Horizon 2020 research and innovation programme
under grant agreement N° 101003864.

HSbooster.eu
Horizon Standardisation Booster

GET IN TOUCH WITH US!

www.hsbooster.eu

@HSboosterEU

/company/hsbooster-eu

HSboosterEU