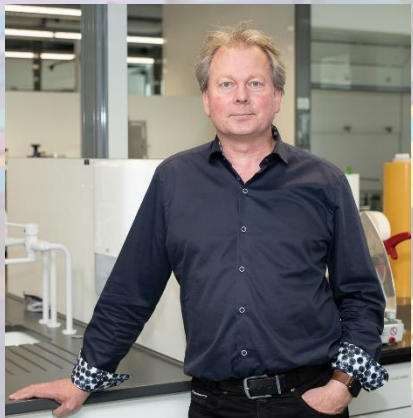


European trends in adhesive tapes: towards a **sustainable** industry



Dr. Evert Smit
President, Afera



The European Adhesive Tape Association


Agenda




1. Afera at a glance



2. Tape market: global and E.U.



3. E.U. regulatory update



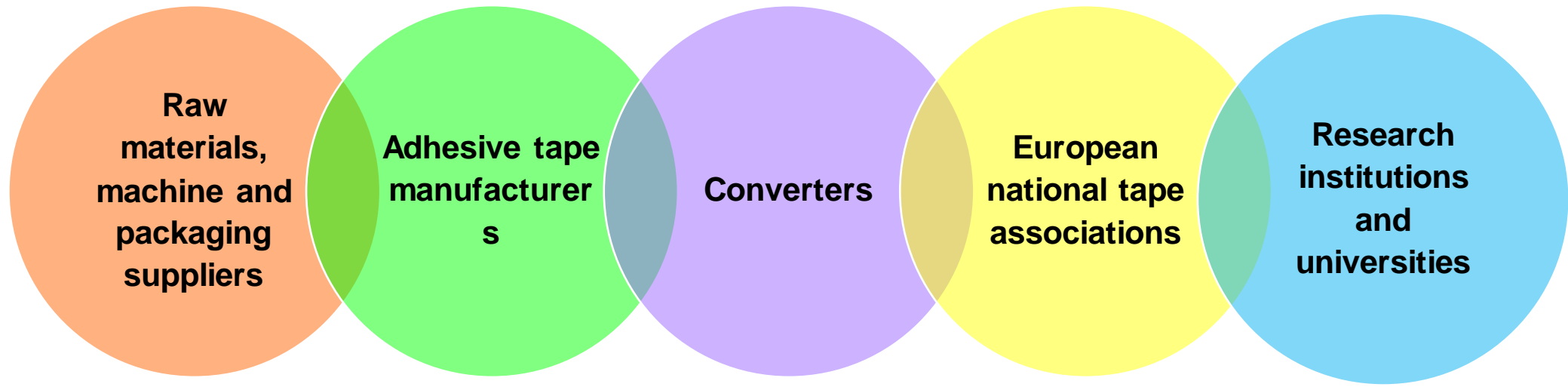
4. The future: sustainability and AFSP

The heart of the European tape network



Who we are

Afera is the European Adhesive Tape Association, a not-for-profit trade organisation representing the interests of 100+ best-in-class businesses within the adhesive tape value chain



Who we are

- Adhesive tape manufacturers with coating facilities in Europe and their non-coating subsidiaries
- Suppliers of raw materials, machines and packaging
- Converters, specialty non-graphic die cutters
- Distributors
- European national tape associations and groups
- Research institutions and universities



Our global and regional counterpart organisations in the GTF

Fellow members of the [Global Tape Forum](#)

- ✓ North America (PSTC, The Pressure Sensitive Tape Council)
- ✓ Japan (JATMA, The Japanese Adhesive Tapes Manufacturers Association)
- ✓ China (CATIA, The China Adhesives and Tape Industry Association)
- ✓ Taiwan (TAAT, The Taiwan Regional Association of Adhesive Tape Manufacturers)



Teaming up with associations in adjacent technologies



To learn, network and build influence in public affairs

- FEICA, The European Adhesive and Sealant Industry Association
- IVK, The German Adhesives Association
- ISGATEC, The International Sealing, Gasket and Adhesive Technology Knowledge Platform and Network
- FINAT, The European Self-Adhesive Label Industry Association
- Cefic, The European Chemical Industry Council
- CheMI, The European Platform for Chemicals Using Manufacturing Industries
- ERPC, The European Recovered Paper Council
- RadTech Europe, The European UV/EB Curing Technology Association



European Platform for Chemicals Using Manufacturing Industries



Standardisation and harmonisation projects: next-level test methods

Recently adopted by the GTF

- ✓ GTF 6001 (SAFT)
 - ✓ GTF 6002 (Thickness)
 - ✓ GTF 6003 (Widths & Lengths)
 - ✓ GTF 6004 (Measurement of Peel Adhesion)*
 - ✓ GTF 6005 (Breaking Strength & Elongation)*
 - ✓ GTF 6006 (Static Shear Adhesion)*
 - ✓ GTF 6007 (Loop Tack)
- * ISO certified

What we're working on

- ✓ Afera 4029 (Determination of Dynamic Shear Strength of Double-Sided PSA Tapes Test Method) – **completed**
- ✓ ISO-certified Peel Adhesion TM – **revising**
- ✓ CEPI Lab TM on recyclability of fibre-based packaging – **modifying**
- ✓ time-to-failure TM – **developing**



Afera events

Networking | Education

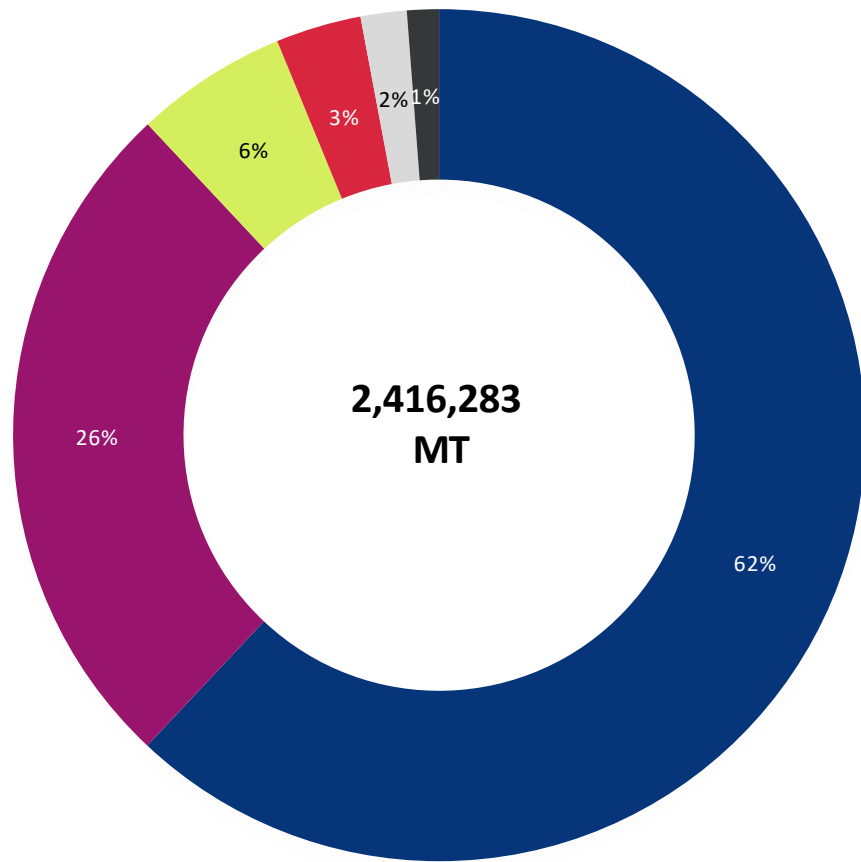
COMING
SOON

- **Afera Committee + Sustainability Project Meetings**
24-25 September | Thessaloniki, Greece
- **67th Afera Annual Conference**
25-27 September | Thessaloniki, Greece
- **Afera Annual General Assembly 2024**
November | TBA





Pressure sensitive adhesives use per segment

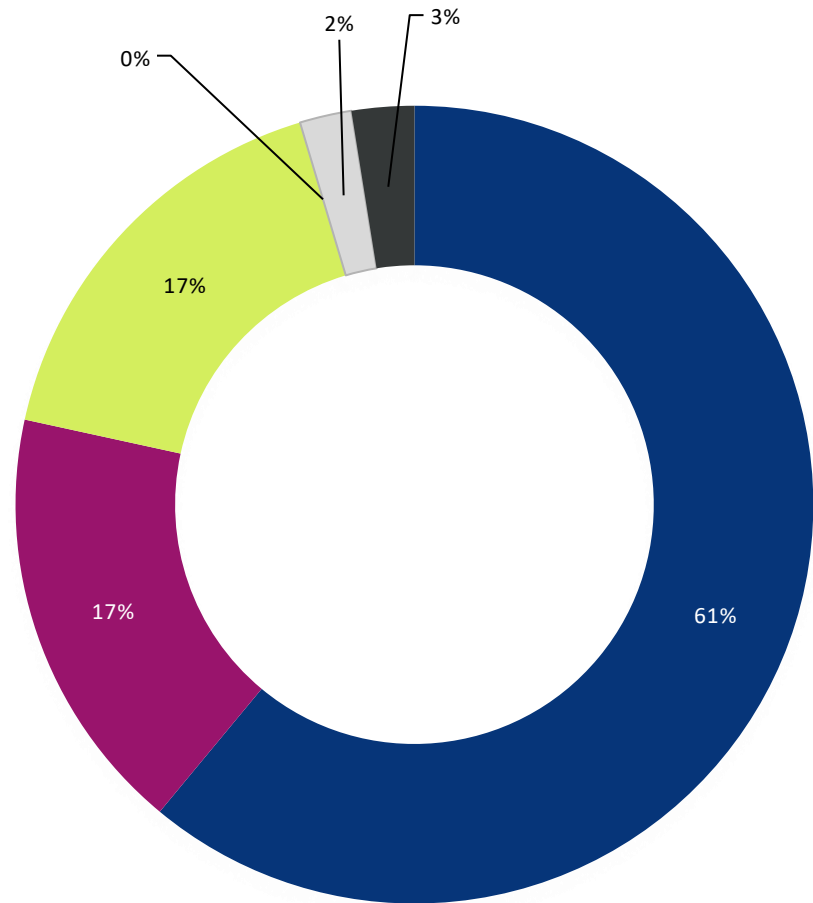


- Tapes
- Labelstock
- Hygiene
- Graphic Films
- Medical
- Other

End-use	Dry Tonnes
Tapes	1.498.397
Labelstock	628.334
Hygiene	139.675
Graphic Films	78.401
Medical	42.216
Other	29.260
Grand Total	2.416.283

Used with permission:

PSA use Europe: 538 kT



- Tapes
- Labelstock
- Hygiene
- Graphic Films
- Medical
- Other

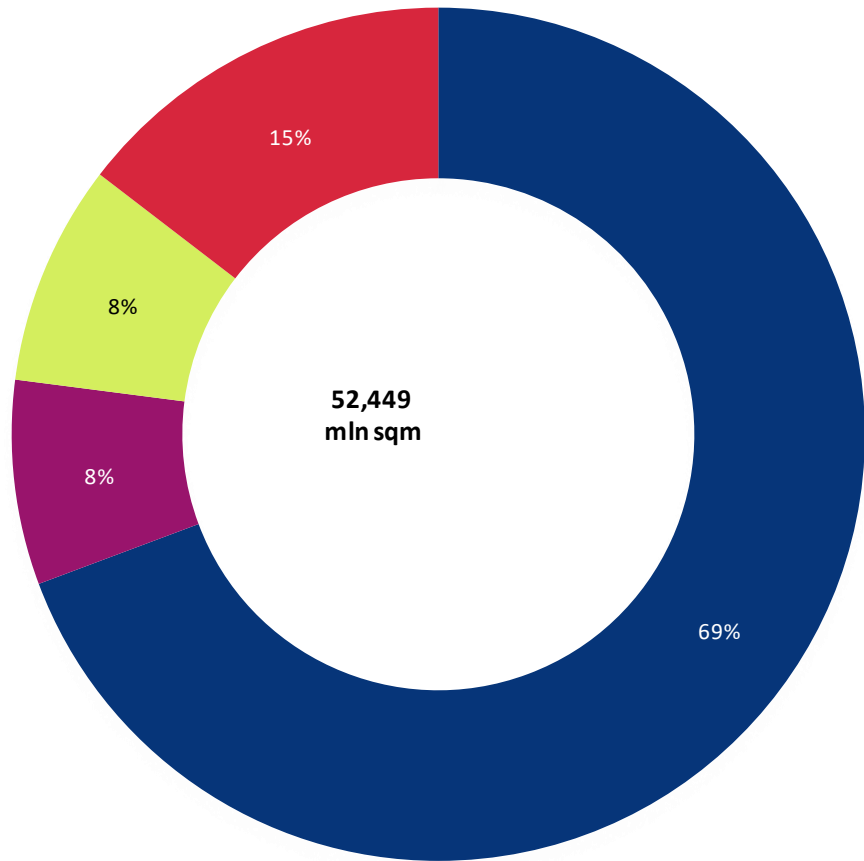
End-use	Dry Tonnes
Tapes	274.774
Labelstock	175.638
Hygiene	50.747
Graphic Films	19.087
Other	11.535
Medical	6.514
Grand Total	538.294

15,872 mln sqm

Used with permission:

AWA
Alexander Watson Associates

Tape market (global)



■ Packaging Tapes

■ Masking Tapes

■ Consumer/Office Tapes

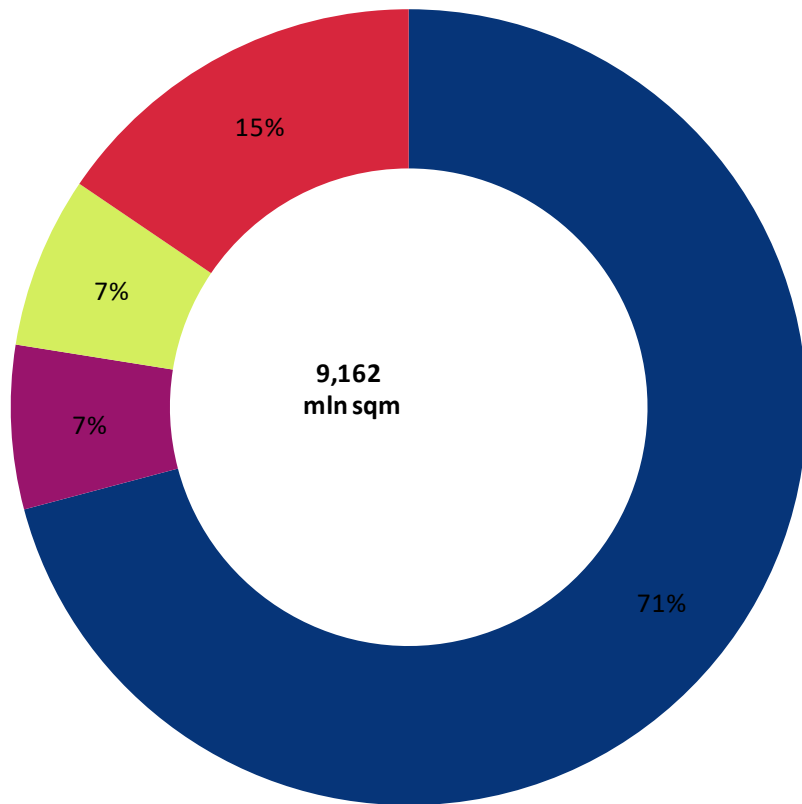
■ Specialty Tapes

Product Type	Mln Sqm
Packaging Tapes	36.346
Masking Tapes	4.065
Consumer/Office Tapes	4.392
Specialty Tapes	7.647
Total	52.449

Used with permission:

AWA
Alexander Watson Associates

Tape market (Europe)



■ Packaging

■ Masking

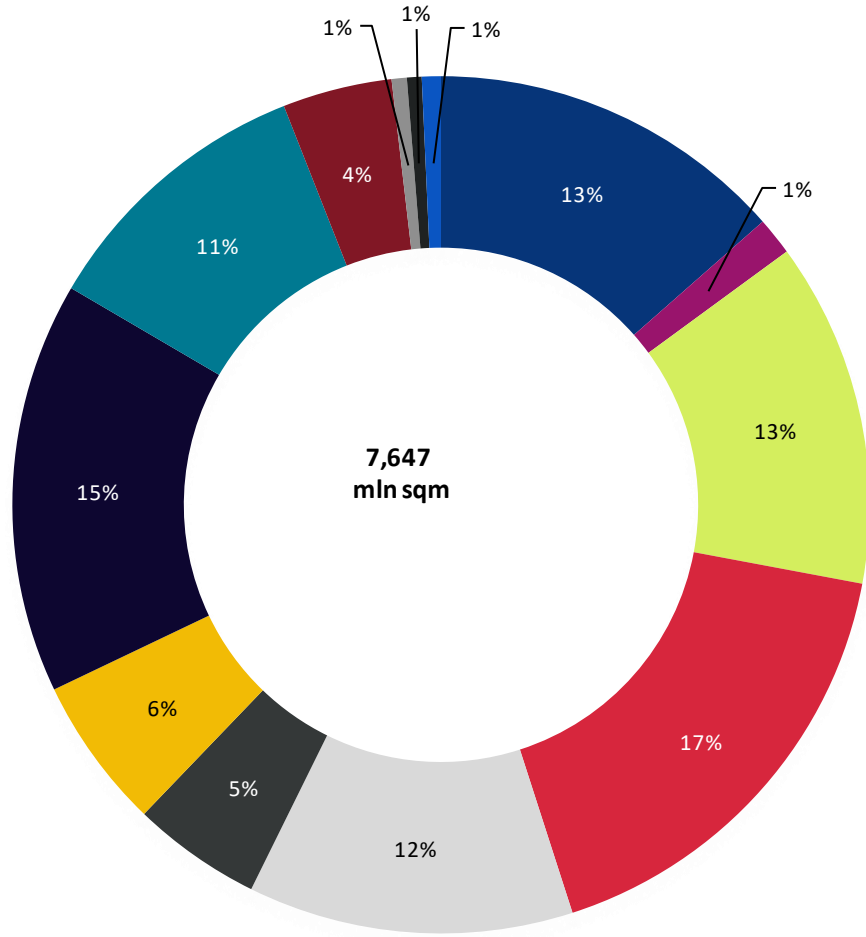
■ Consumer/Office

■ Specialty

Product Type	Mln Sqm
Packaging	6.493
Masking	610
Consumer/Office	639
Specialty	1.421
Total	9.162

Used with permission:

Specialty tape market (global)



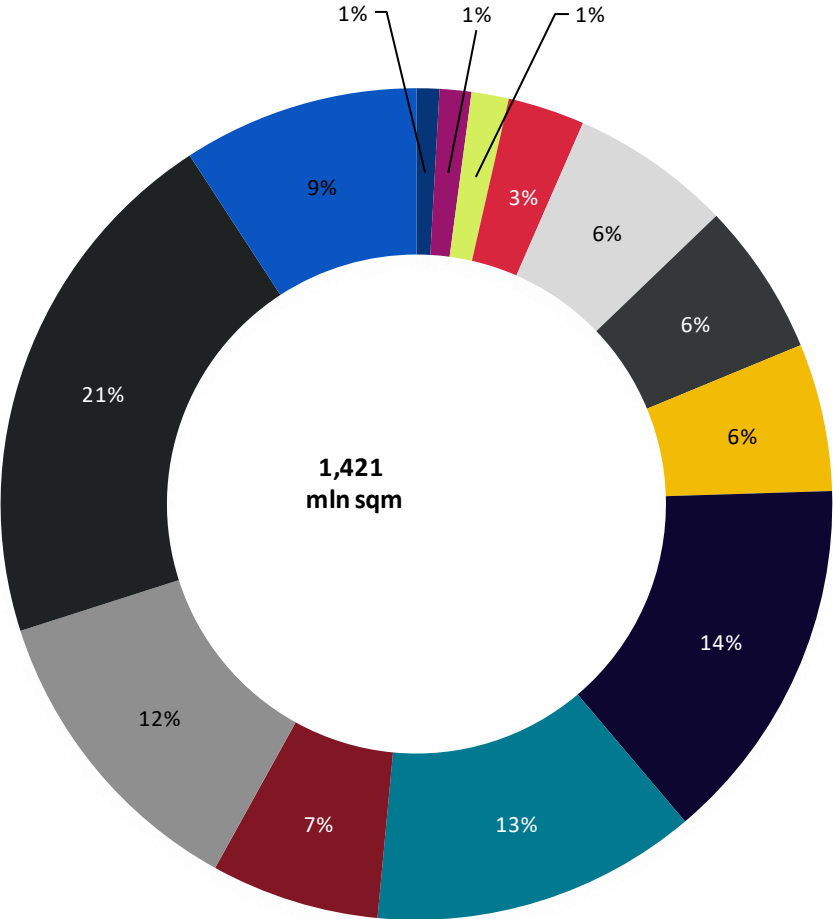
- Automotive
- Aerospace
- White Goods
- Electronics
- Electrical
- Building/construction
- Paper/printing
- Medical
- Hygiene
- Retail/Graphics
- Defense/military
- Sports/entertainment
- Miscellaneous

End-use	Mln Sqm
Defense/military	44
Sports/entertainment	42
Miscellaneous	55
Aerospace	109
Retail/Graphics	316
Building/construction	373
Paper/printing	438
Hygiene	810
Electrical	938
White Goods	995
Automotive	1.033
Medical	1.187
Electronics	1.307
Total	7.647

Used with permission:



Specialty tape market (Europe)



- Defense/military
- Sports/entertainment
- Miscellaneous
- Aerospace
- Retail/Graphics
- Building/construction
- Paper/printing
- Hygiene
- Electrical
- White Goods
- Automotive
- Medical
- Electronic

End-use	Mln Sqm
Defense/military	13
Sports/entertainment	18
Miscellaneous	21
Aerospace	42
Retail/Graphics	89
Building/construction	84
Paper/printing	82
Hygiene	204
Electrical	180
White Goods	93
Automotive	171
Medical	295
Electronic	130
Total	1.421



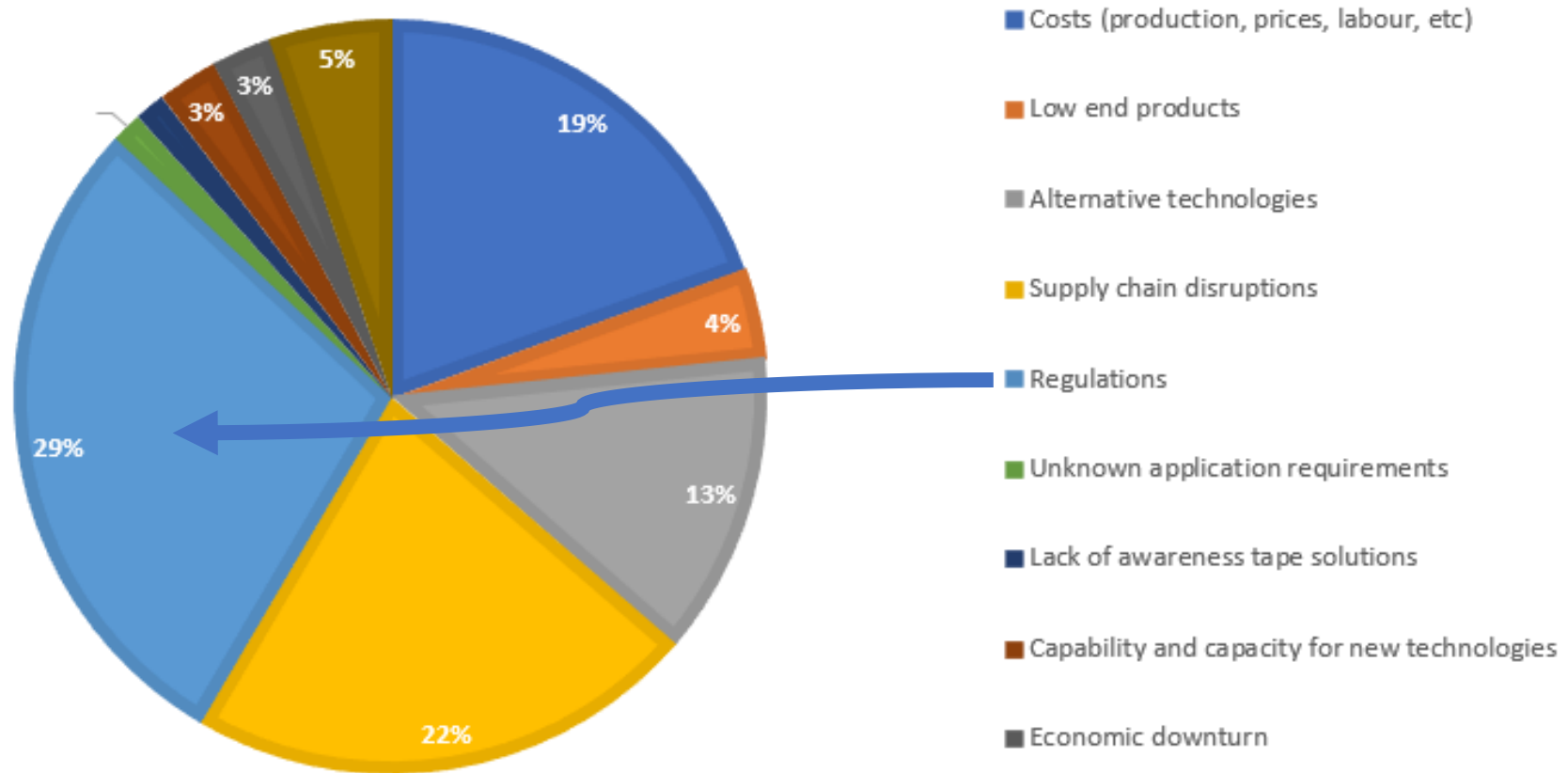
Regulatory affairs

- Actively monitoring and participating in regulatory legislative processes
- A Technical Committee expert group focussed on regulatory affairs, led by Afera Regulatory Affairs & Sustainability Manager Pablo Englebienne
- Leveraging ties with associations in adjacent technologies to increase relevant direct and indirect influence with regulatory bodies
- A Rapid Alert Protocol to notify and act quickly on behalf of Afera Members in the event of a public relations or public affairs crisis affecting the tape industry
- Current focus on Packaging and Packaging Waste Regulation (PPWR), Deforestation Regulation and others



Afera 2023 trend survey results

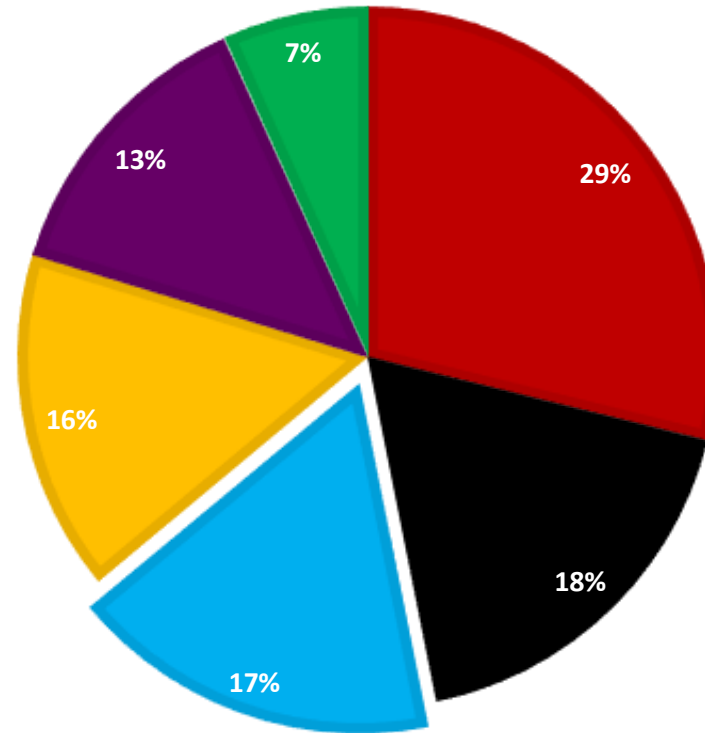
GREATEST THREATS IN TAPE BUSINESSES



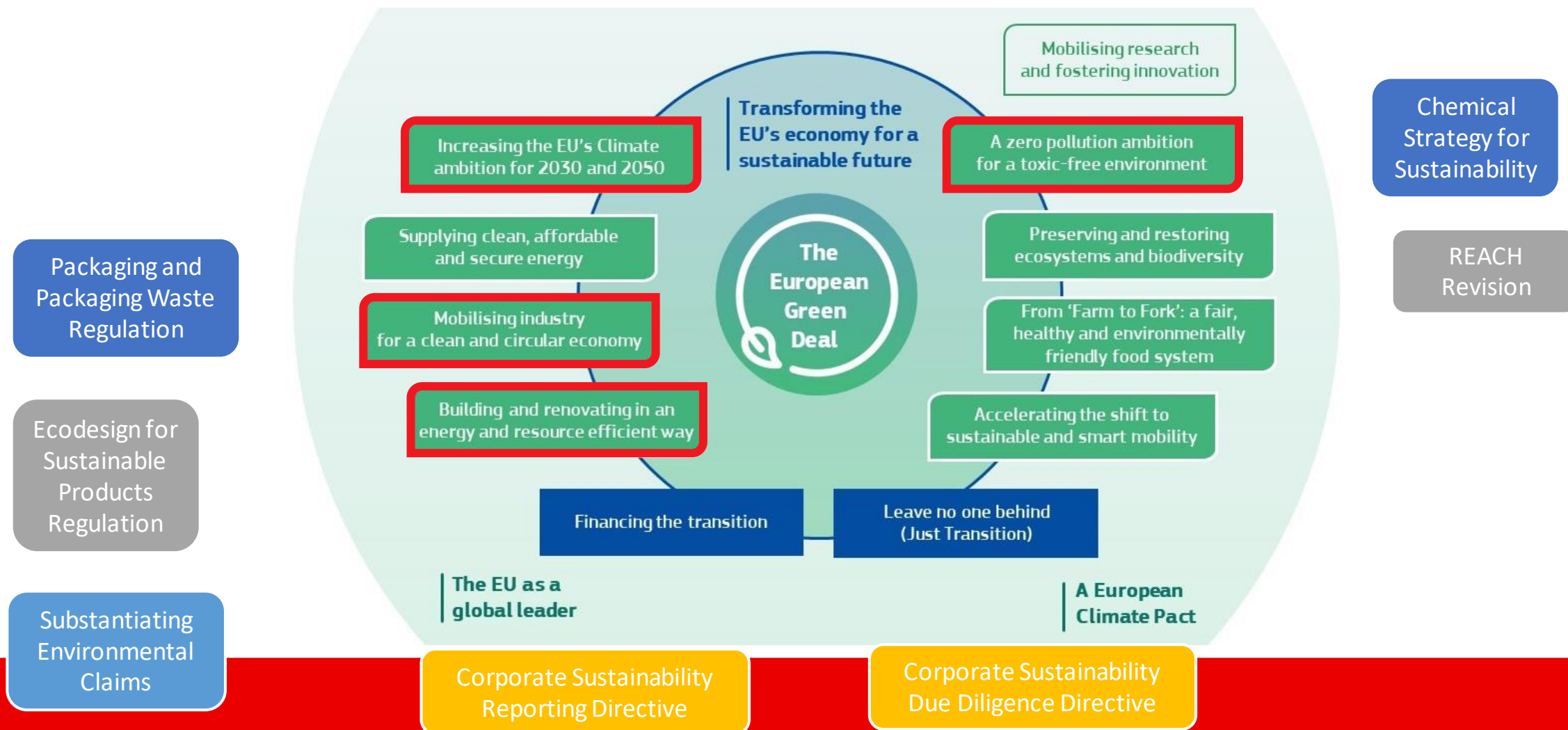
Afera 2023 trend survey results

FOREMOST TRENDS AFFECTING TAPE BUSINESS

- Working towards a circular economy
- Demand for debonding (end-of-life, repairability)
- Dealing with tape waste (complex mixture of non-separate plastics)
- Developing functionalised tapes
- Demand for tape-parts recycling (liner)
- Other



European Green Deal: 2019-2024



Regulatory affairs

Stepping up relevant direct and indirect influence with regulatory bodies re: initiatives and legislation

European Green Deal (continued)

- Chemicals Strategy for Sustainability
 - ✓ REACH revision
 - ✓ Safe and Sustainable by Design
 - ✓ Essential uses for chemicals
 - ✓ REACH Registration of Polymers
- REACH restrictions
 - ✓ Intentionally added microplastics
 - ✓ Secondary microplastics
 - ✓ PVC and PVC additives



Packaging and Packaging Waste Regulation (PPWR)

1

**Restrict
unnecessary
packaging**

2

**Promote
reusable and
refillable
packaging**

3

**Make all
packaging
recyclable**

4

**Increase use of
recycled plastics
in packaging**

5

**Harmonize
labelling of
packaging to
support recycling**

Waste & CO₂ reduction



15% reduction packaging waste
by 2040 (vs. 2018)



Packaging and Packaging
Waste Regulation

All packaging recyclable/reusable
by 2030



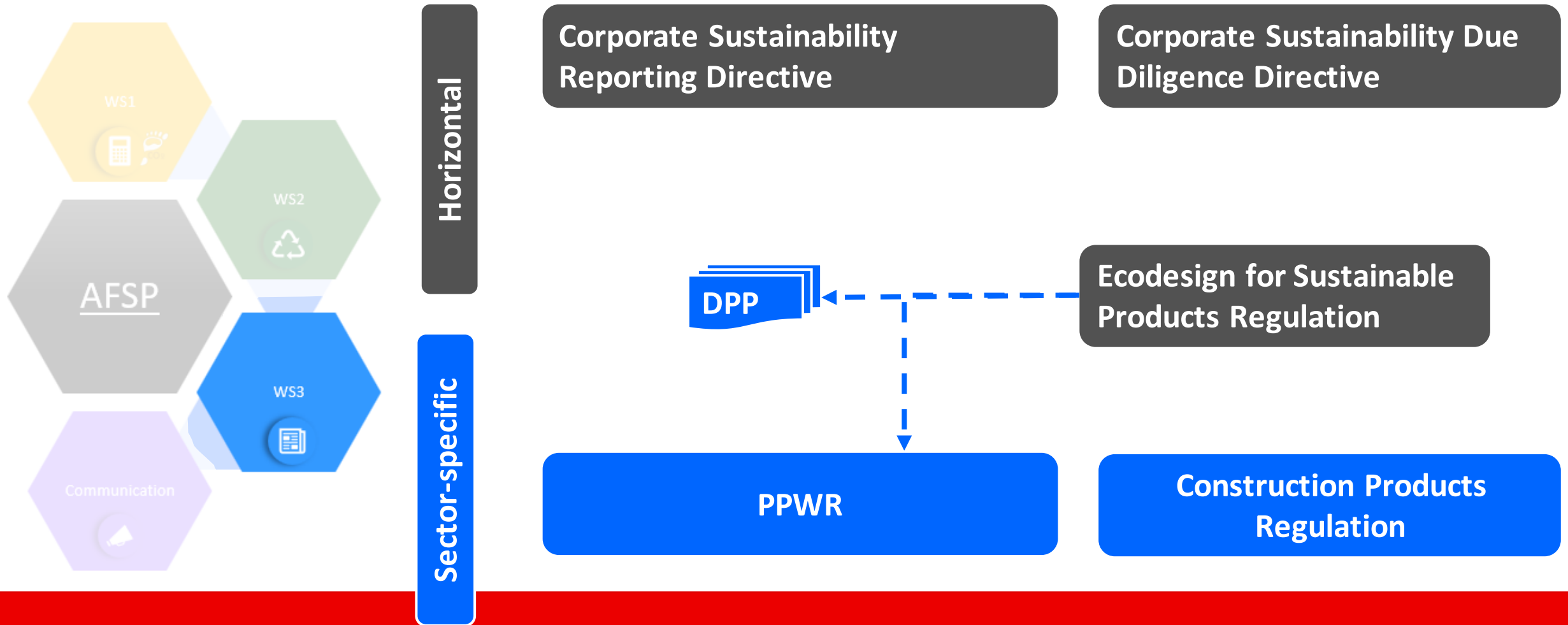
Climate Neutral
in 2050

EU Climate Law

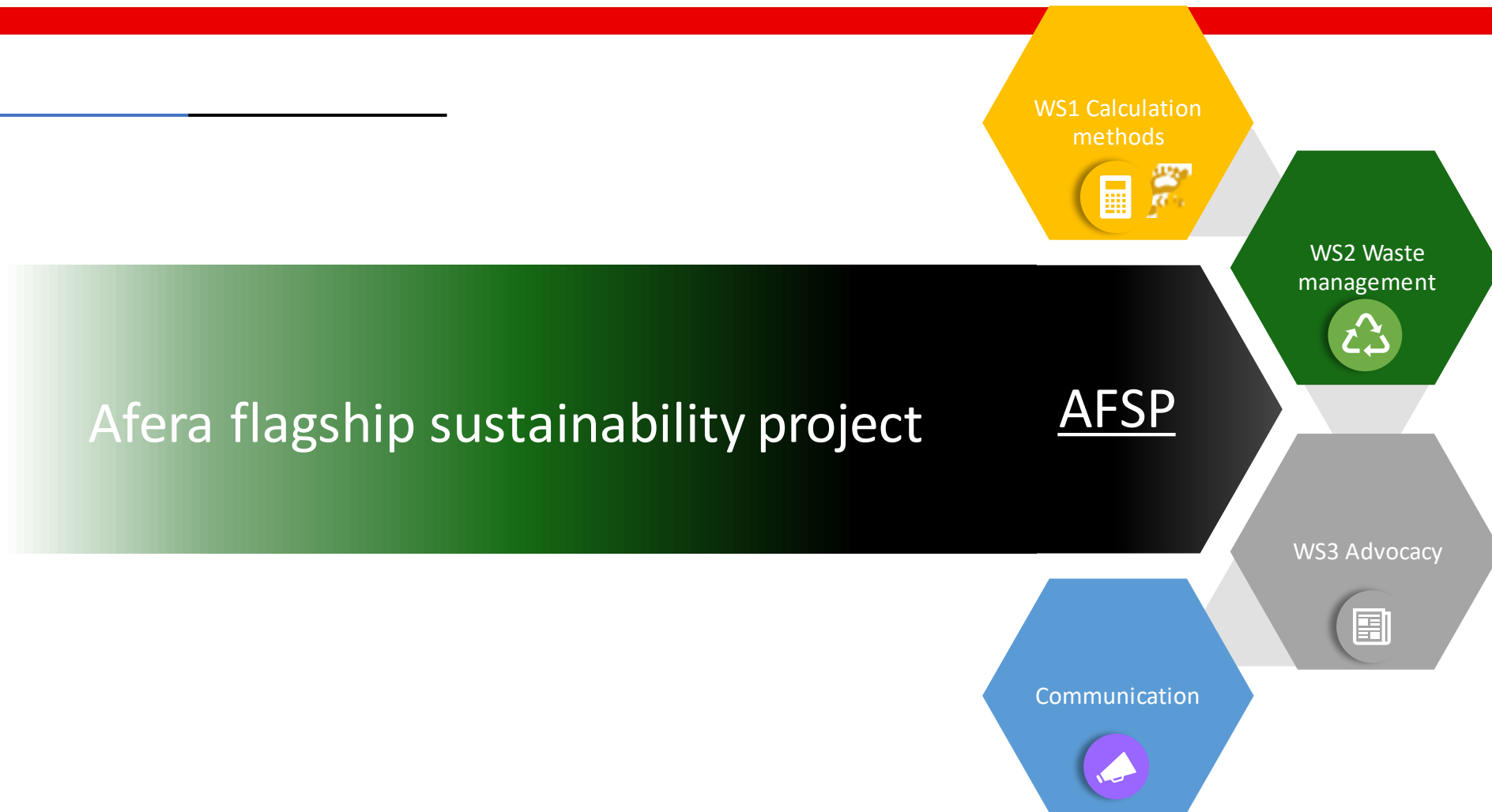


CO₂ emission
↓55% by 2035

Regulatory requirements



Translating the externalities into Afera



We cannot solve
our problems with
the same thinking
we used when
we created them

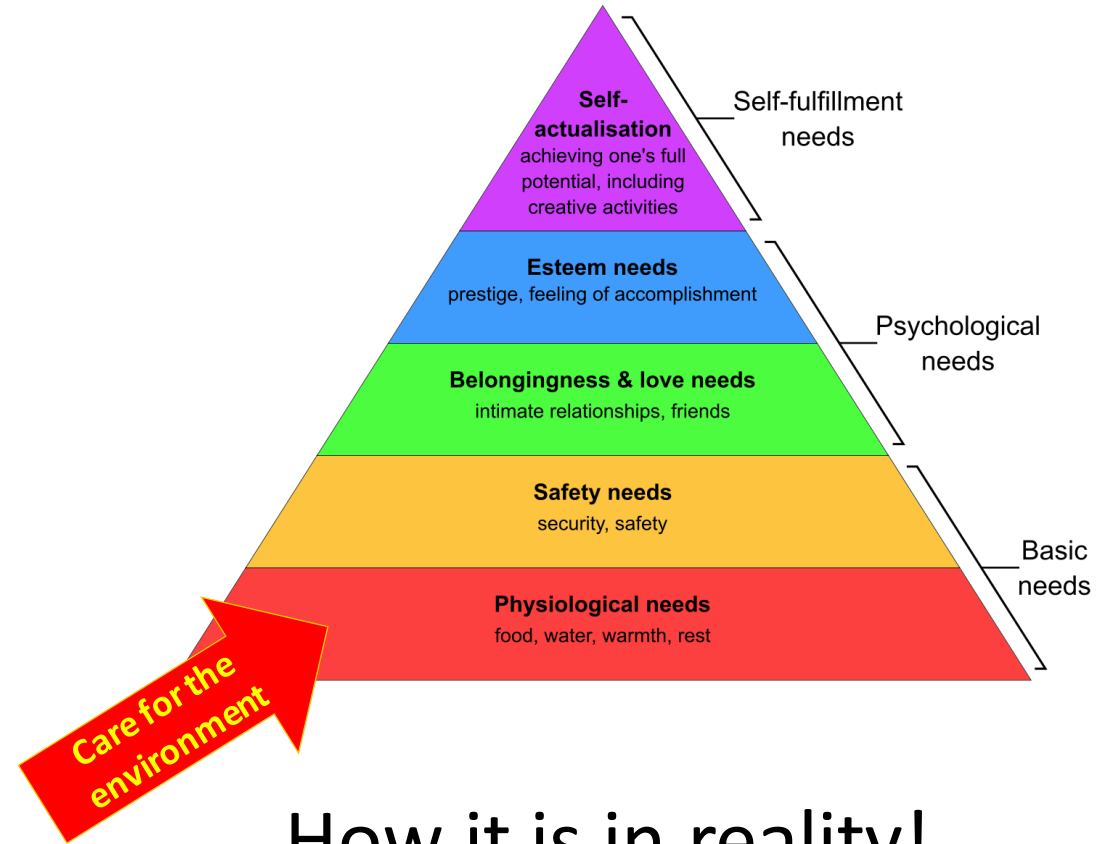
Albert Einstein



Re-thinking the Maslov Pyramid



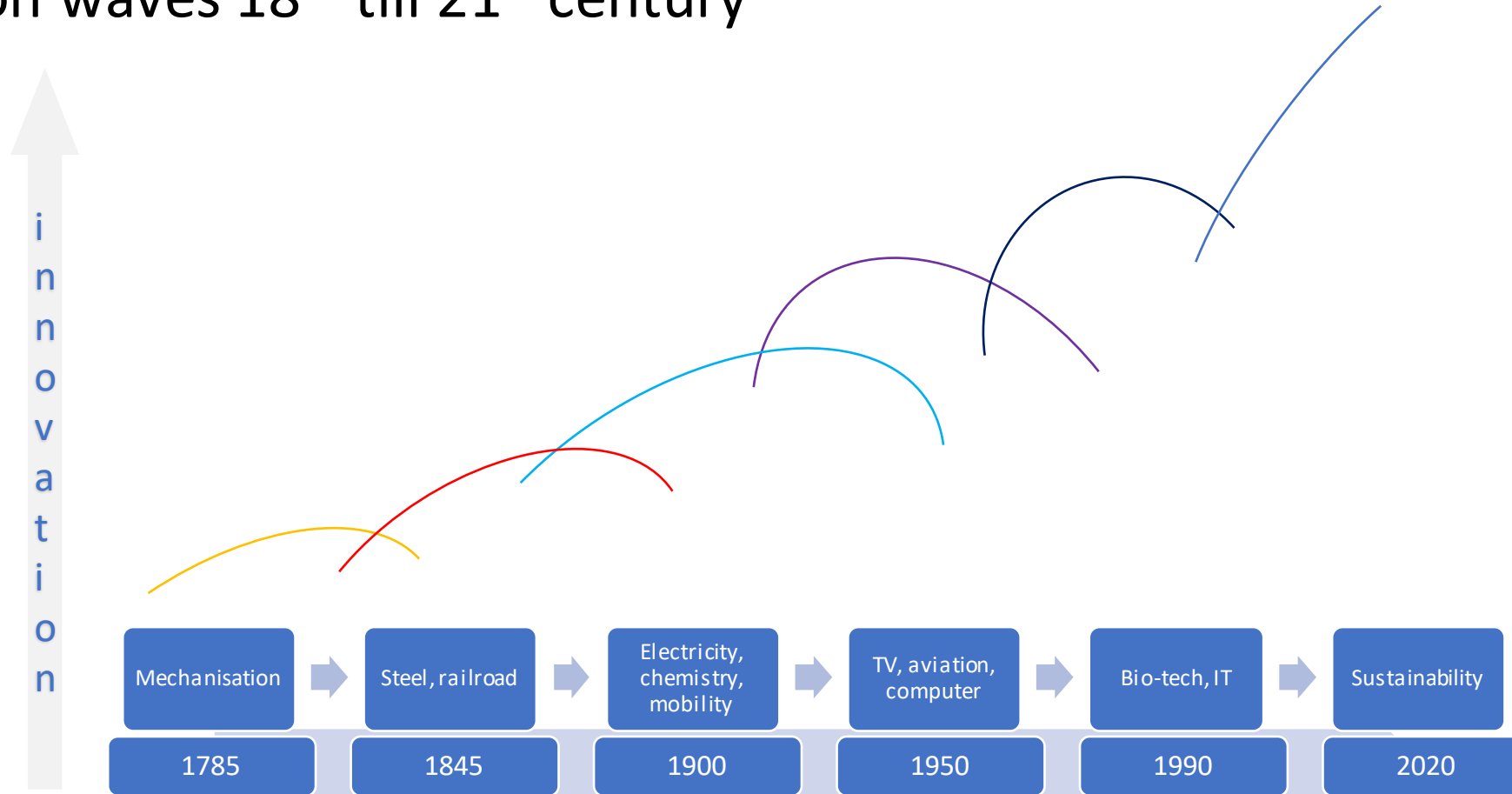
How “we” were raised to think



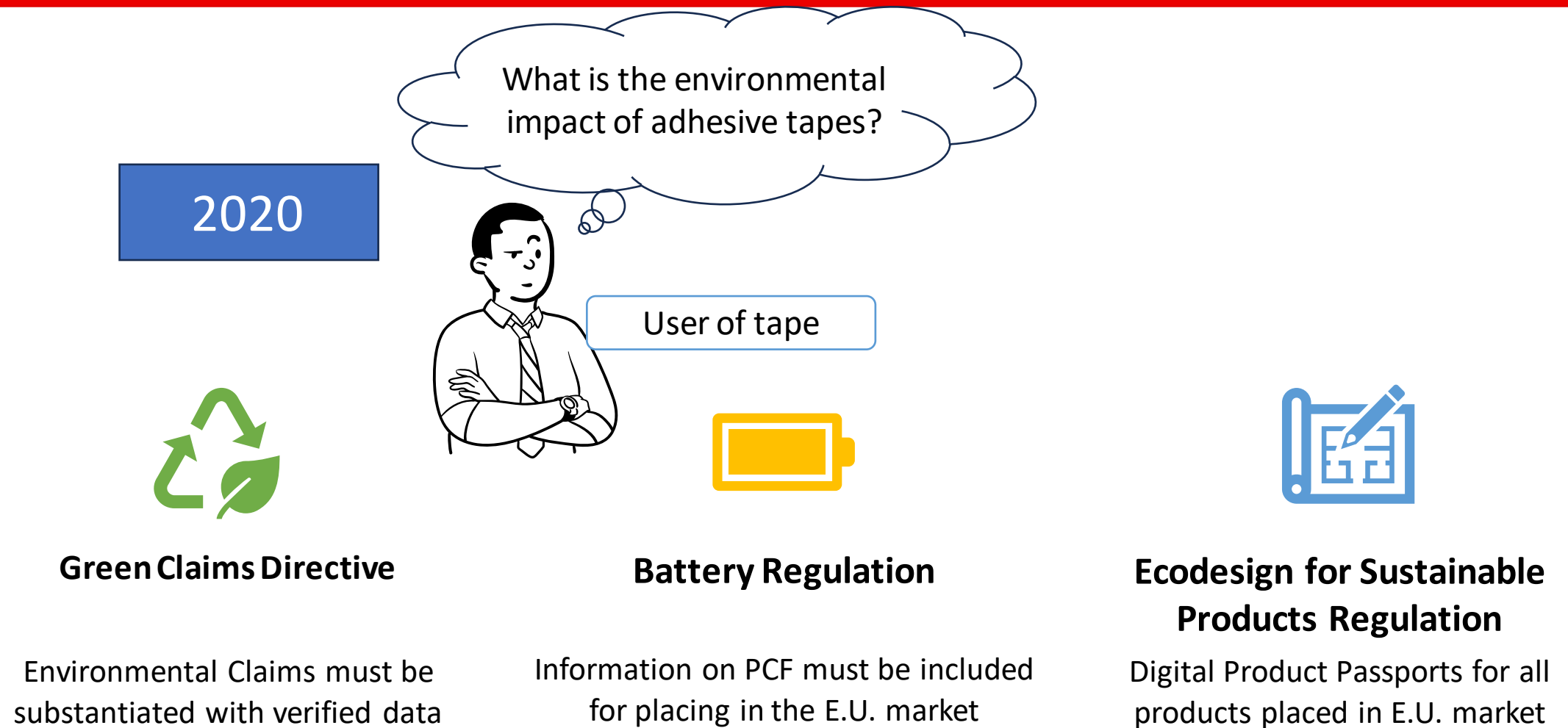
How it is in reality!

Sustainability as driver for innovations

- Innovation waves 18th till 21st century



Background



Regulatory affairs: sustainability

Stepping up relevant direct and indirect influence with regulatory bodies re: initiatives and legislation



Sustainability initiatives

- European Green Deal
- Circular Economy Action Plan
- E.U. Plastics Strategy
- Ecodesign
- Sustainable Products Initiative
- Chemicals Strategy for Sustainability
- REACH Restrictions



Creating awareness and providing guidance on sustainability



- Facilitating the promotion of adhesive tapes as sustainable solutions
- A Technical Committee expert group focussed on sustainability, led by Afera Regulatory Affairs & Sustainability Manager Pablo Englebienne
- Monitoring upcoming legislation after issuing Industry statement on European Green Deal (EGD)
- Collaborating with and learning from other organisations

EGD: Regulatory impact on tapes industry

- **What is the biggest roadblock?**

- ❖ Insufficient co-operation along the value chain of the Industry > resistance to the required changes and necessity of forming alliances



AFSP goal and organisation



Translate the Green Deal to Afera members



AFSP

Our Workstreams include delegates from Afera Member Companies:

- 3M
- A&G Ambalaj
- ATP
- Avery Dennison
- BASF
- CCM
- Certoplast
- Dow Europe GmbH
- DRT
- Eurotape
- FABO
- H.B. Fuller U.K.
- Henkel
- ICAP-SIRA
- IVK/FEICA
- Lohmann
- Loparex
- Mondi Inncoat
- Nitto
- Novacel
- PPI
- Scapa
- Sekisui Alveo
- Supertape
- tesa
- UBIS
- UPM



Afera/IVK PCF tool



Harmonize PCF calculation across the industry

Enable Scope 3 reporting along supply chain

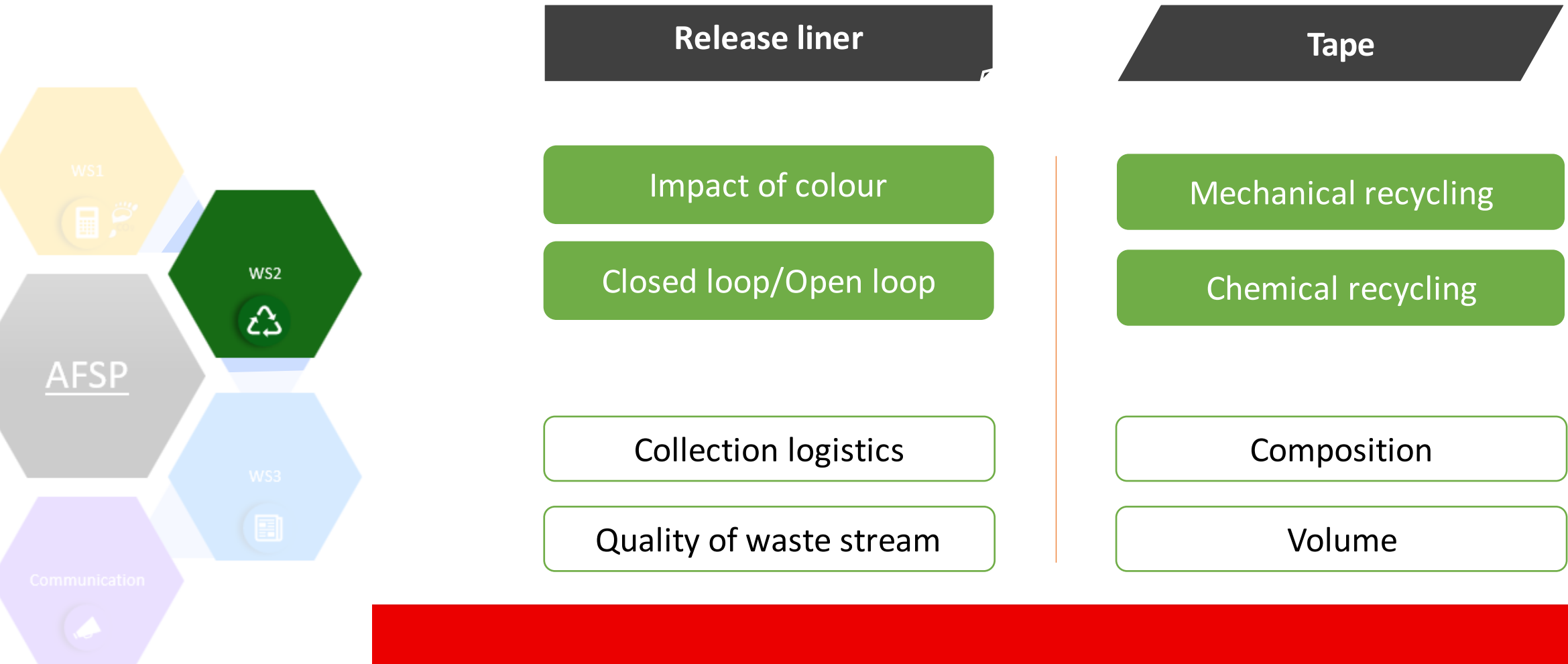
Clear, cost-effective, validated process

Follow global standards ISO, TfS

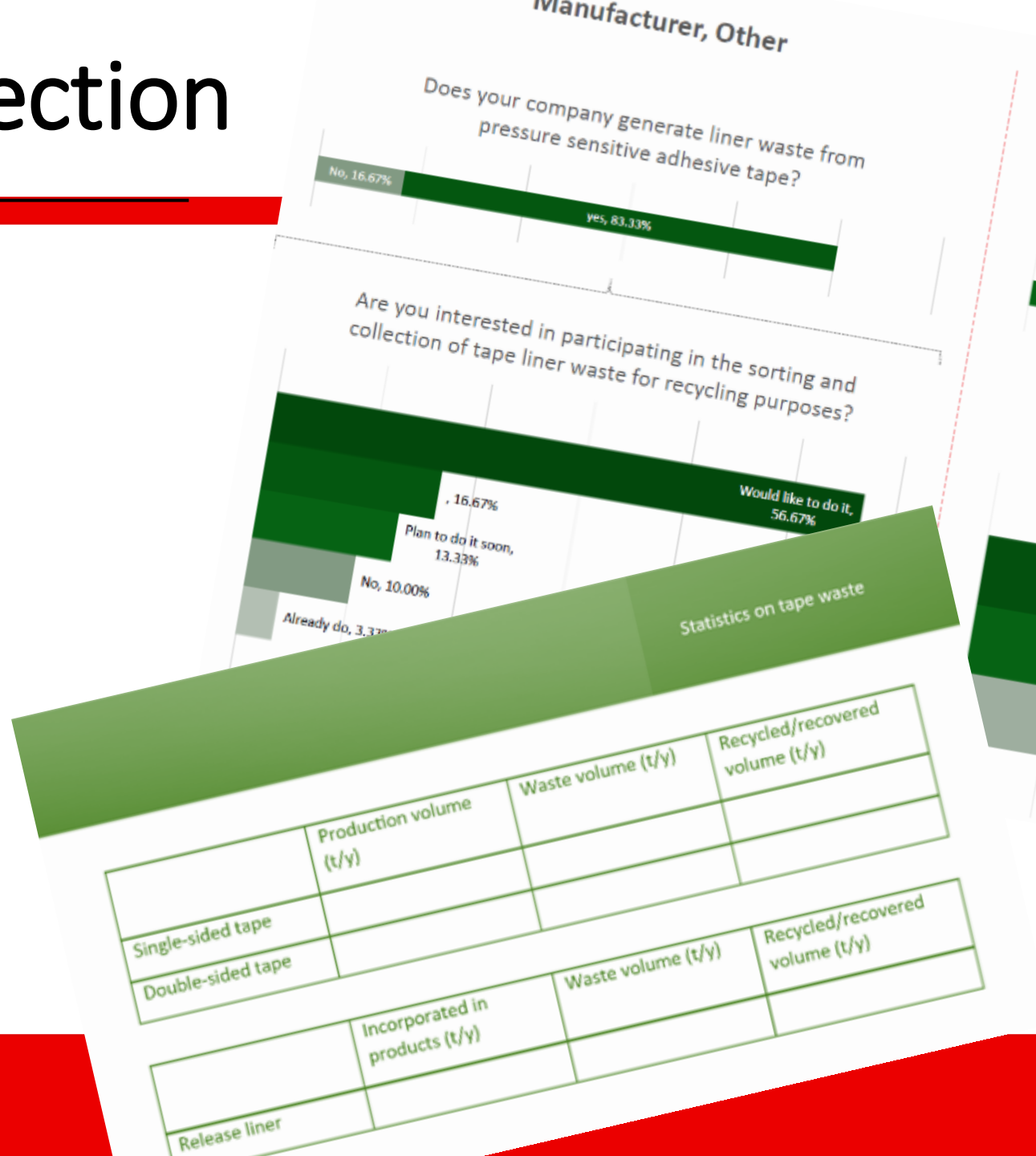
Use primary or high-quality secondary data

<https://afera.com/adhesive-tapes-sustainability/afera-pcf-calculation-tool/>

Recycling of tape waste



Data collection



Recycling/recovery of tape waste beyond RL

Workshop December 2023

Expectations

The ability to work with Afera Members on new workstreams, e.g. creating a tape recycling stream

The Industry's point of view on the future of our waste and the common approaches we can adopt

Exchange of ideas, experiences, working practices and possible solutions

Understand what other potential solutions may exist for recycling or reprocessing adhesive tapes

Highlights

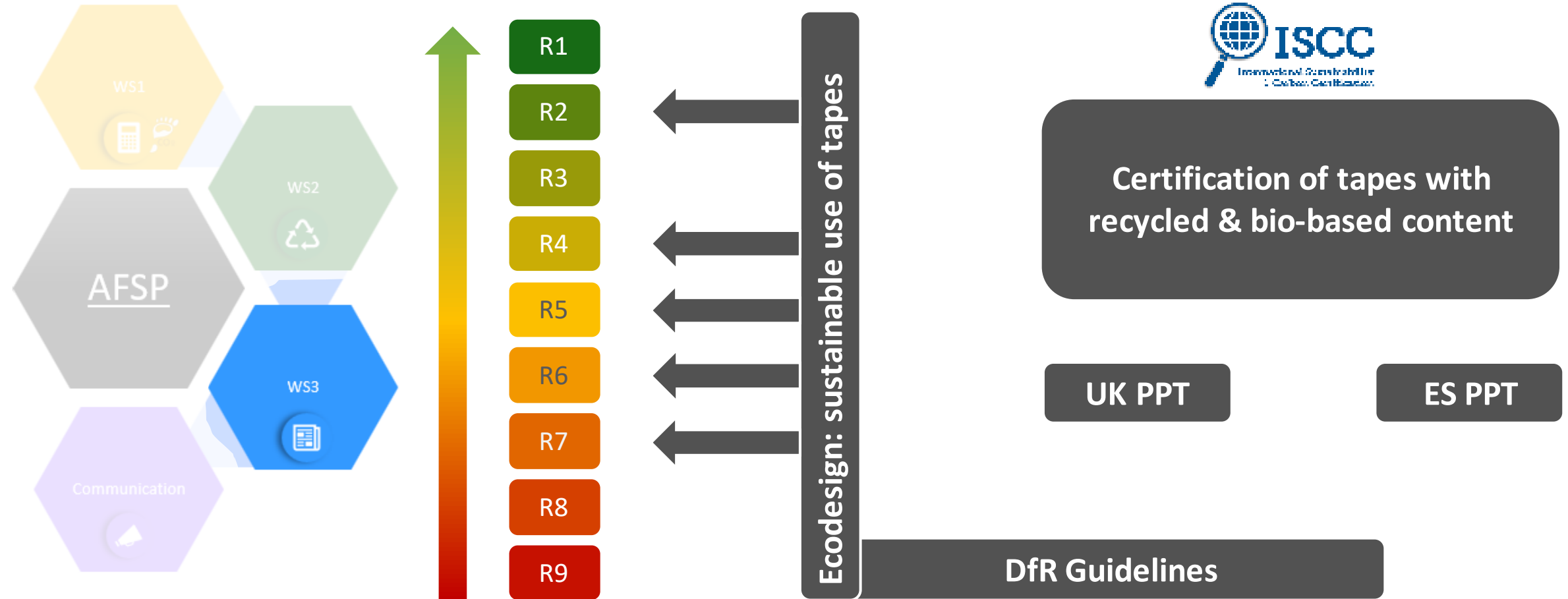
7 presenters shared their practices and challenges. Participants were tape manufacturers and converters.

A connection for future collaboration between converters and suppliers came out of this workshop

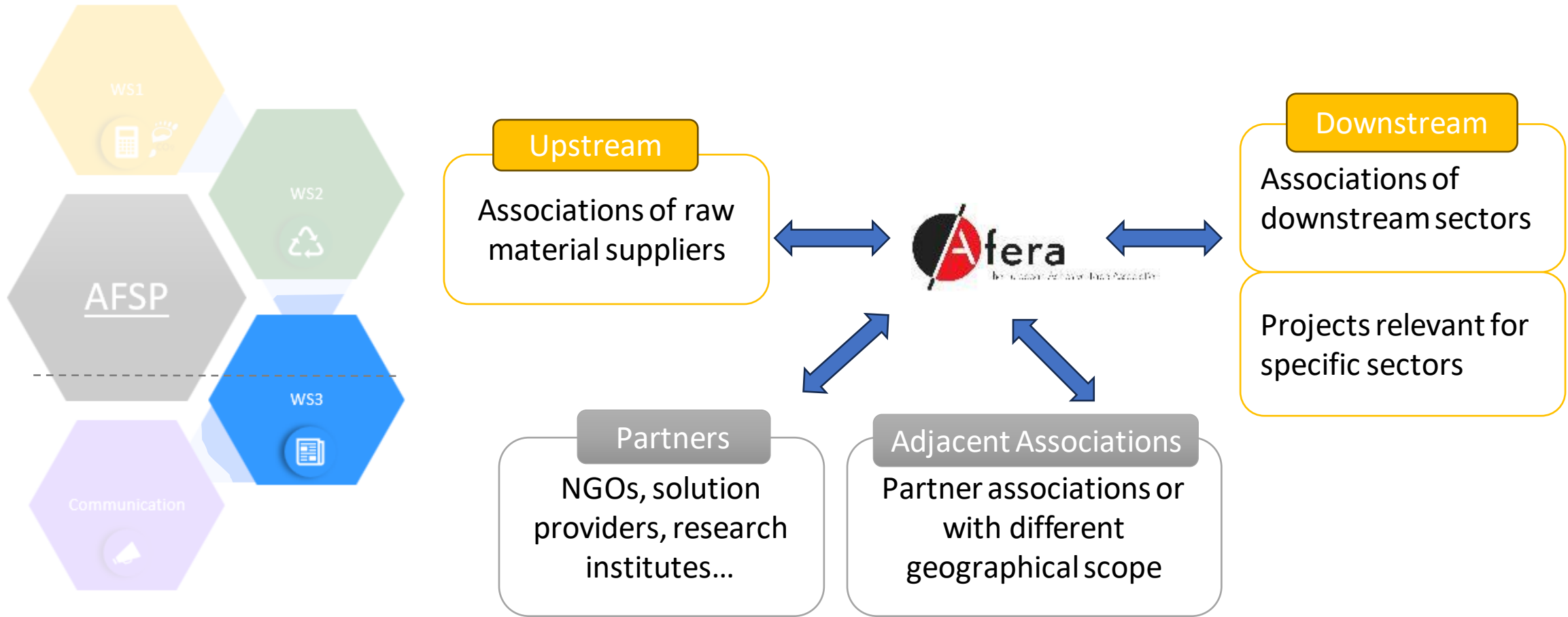
Lack of collaboration is an issue. It is necessary to share and listen to the stories like this workshop

Continue the discussion in the AFSP workstream.

Tape industry advocacy



Stakeholder mapping



Stakeholder mapping

Upstream

Association	Description
IRLA	International Release Liner Association
FEICA	European Adhesive Association
SiEU	Silicones Europe - CEFIC sector group
EPRC	European Paper Recycling Council
CEFIC	European Chemical industry association
CEPI	European Paper Industry
Plastics Europe	European Plastic industry association
EDANA	European Non-wovens association
VinylEU	Vinyl plastics producers

Adjacent Associations

Association	Description
FINAT	European Self-adhesive label association
PSTC	US Tape Association
CATIA	Chinese Tape Association
JATMA	Japan Tape Association
TAAT	Taiwan Tape Association
FEICA	European Adhesive Association
IVK	German Adhesive Association
ASEFCA	Spanish Adhesive Association
Assogomma	Italian Rubber Association
FIPEC	French Adhesives and Paint Association
FESPA	Graphics Events Association

Downstream

Sector

Association	Description
ACEA	Automotive
Batt EU	Battery manufacturers
APPLIA	White good appliances
EUROPEN	Packaging
eIT	Food for packaging
UNESDA	Soft drinks association
	Medical devices
	Pharmaceuticals
CICA	Construction
ASD	Aeronautics
	Marine
	Logistics centre providers
	Retailers and distributors

Project

Association	Description
AEPW	Alliance to end plastic Waste
CELAB	Develop recycling of release liner and matrix waste from self-adhesive labels
4evergreen	Develop recycling of fibre-based packaging
RecyClass	DfR guidelines for plastics
CEN	European Standardization
EPRC	European Paper Recycling Council
Packaging Chain Forum	Packaging group



A few examples

- What is the European tape industry value chain (value circle) doing?
 - ✓ Setting standards
 - ✓ Circularity: plastic waste back into the value circle
 - ✓ Tape waste back to feedstock
 - ✓ Enabling waste sorting with advanced “watermarking”
 - ✓ Promoting liner recycling pathways



