

Sicherheit in Technik und Chemie

03.03.2026

DIE ÖKODESIGN-RAHMENVERORDNUNG **PRODUKTEFFIZIENZ NEU GEDACHT**

Dr. Moritz-C. Schlegel

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Von der Vision zur Umsetzung



Von der Vision zur Umsetzung

Vision 2015



"[...] **ecodesign requirements** have mainly targeted energy efficiency **in the future**, issues such as reparability, durability, upgradability, recyclability, or the identification of certain materials or substances will be **systematically examined** [...]"...

Vereinbarung 2019

An infographic titled 'EUROPEAN GREEN DEAL' showing a timeline of various legislative acts. It includes a table with columns for the year, the name of the act, and its status (e.g., 'Adopted', 'In progress'). The acts listed include the European Climate Law, the European Climate Adaptation Strategy, the European Nature Restoration Law, the European Nature Restoration Strategy, the European Nature Restoration Law, the European Nature Restoration Strategy, the European Nature Restoration Law, and the European Nature Restoration Strategy.

Circlaw.nl, 07/2024

Aktionsplan 2020



- EU Strategy for Sustainable Textiles
- Policy framework on bio-based, biodegradable and compostable plastics
- EU action against microplastic pollution
- ...

Initiative 2022



- Regulation on packaging and waste
- Right to repair Directive
- ESPR - Ecodesign for **Sustainable Products** Regulation, WP 2025-2030

"[...] cornerstone of the Commission's approach to more environmentally **sustainable and circular products** [...]"

ESPR, Article 5

- durability, reliability, reusability, upgradeability, maintainability, refurbishability, SoC, energy use, energy efficiency, recycled content, remanufacturability, recyclability, recovery

→ *Erweitertes Verständnis von Produkteffizienz eingeführt!*

→ *Sehr weiter Geltungsbereich inkl. intermediäre Produkte!*



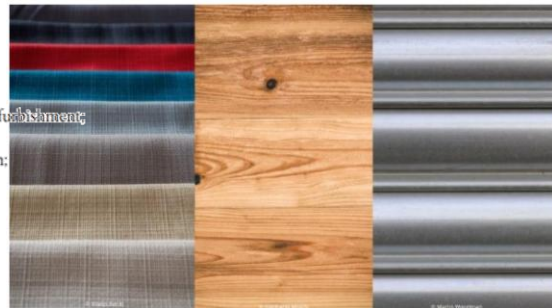
Article 5

Ecodesign requirements

1. In order to address environmental impacts and based on the product parameters referred to in Annex I, the ecodesign requirements in the delegated acts adopted pursuant to Article 4 shall be such as to improve the following product aspects ('product aspects') where those product aspects are relevant to the product group concerned:

- (a) durability;
- (b) reliability;
- (c) reusability;
- (d) upgradeability;
- (e) repairability;
- (f) the possibility of maintenance and refurbishment;
- (g) the presence of substances of concern;
- (h) energy use and energy efficiency;
- (i) water use and water efficiency;
- (j) resource use and resource efficiency;
- (k) recycled content;
- (l) the possibility of remanufacturing;
- (m) recyclability;
- (n) the possibility of the recovery of materials;

Ecodesign for Sustainable Products and Energy Labelling Working Plan 2025-2030.



https://green-forum.ec.europa.eu/news/2025-2030-working-plan-2025-07-11_en

ESPR, Article 5

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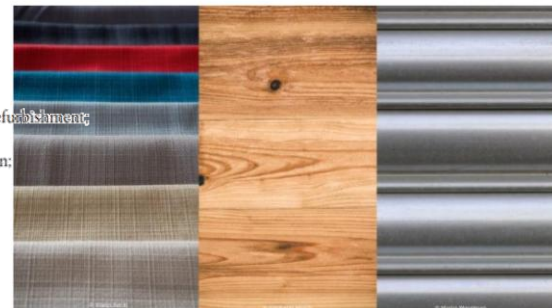
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Ecodesign for Sustainable Products and Energy Labelling Working Plan 2025-2030.



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Produktanforderungen

- Technische Begleitung/Umsetzung
 - [Working Plan 2022-2024: Recycled content, durability, critical raw materials](#)

5.2. *Standardisation work*

Enforcing ecodesign requirements or labelling of products based on their respective characteristics requires clear definitions of how performance is defined and can be tested for any given product. To this end, harmonised technical standards defining suitable test methods can help manufacturers – if they apply the methods therein - enjoy ‘presumption of conformity’ for demonstrating compliance with legal requirements. [Technical standardization work is a vital but often overlooked part of implementation](#), and the recent experience demonstrates the importance of initiating this work as early as possible in parallel with the preparation of the

Schlüsselgremium: JTC10 Material Efficiency Aspects for Ecodesign

- Generischen Normen zu Zirkularitätsaspekten von Produkten → [EN4555x-Reihe](#)
 - EN 45550 Definitions related to materials efficiency
 - –
 - EN 45552 General method for the assessment of the [durability](#)
 - EN 45553 General method for the assessment of the ability to [remanufacture](#)
 - EN 45554 General methods for the assessment of the ability to [repair, reuse](#) and [upgrade](#)
 - EN 45555 General methods for assessing the [recyclability](#) and [recoverability](#)
 - EN 45556 General method for assessing the proportion of [re-used components](#)
 - EN 45557 General method for assessing the proportion of [recycled material content](#)
 - EN 45558 General method to declare the use of [critical raw materials](#)
 - EN 45559 Methods for [providing information](#) relating to material efficiency aspect



Schlüsselgremium JTC10

- EN 45552 **durability**
- EN 45553 **remanufacture**
- EN 45554 **repair, reuse, upgrade**
- EN 45555 **recyclability, recoverability**
- EN 45556 **re-used components**
- EN 45557 **recycled material content**
- EN 45558 **critical raw materials**
- EN 45559 **providing information**

SPI -> ESPR Artikel 5

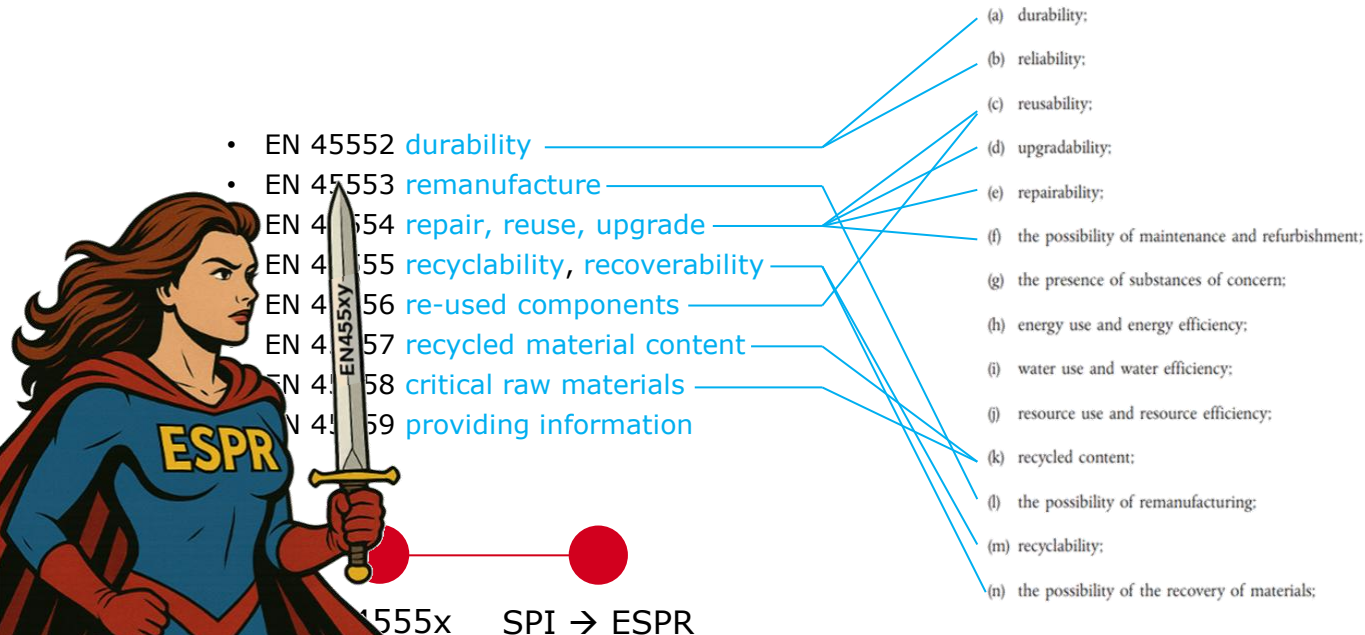
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Von der Vision zur Umsetzung

Schlüsselgremium JTC10

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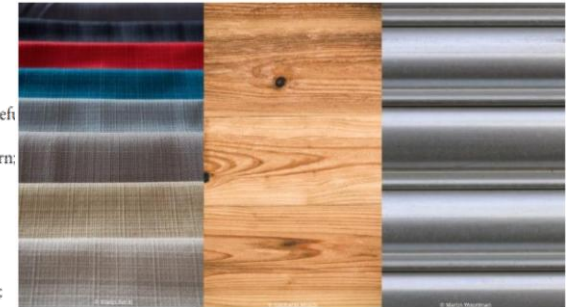
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Ecodesign for Sustainable Products and Energy Labelling Working Plan 2025-2030.

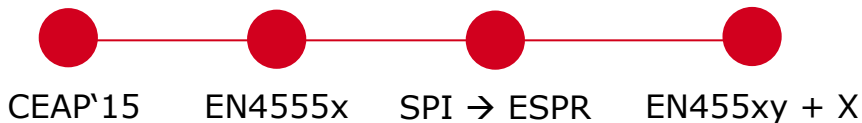


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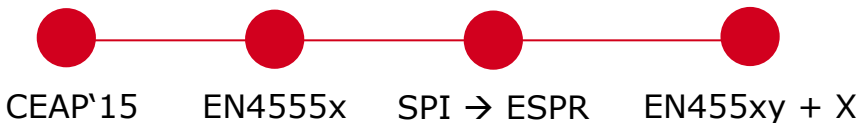
Schlüsselgremium: JTC10 Material Efficiency Aspects for Ecodesign + Eco-CG

- Generischen Normen zu Zirkularitätsaspekten von Produkten → [EN455XY-Reihe geschlossen](#)
 - EN 45550 Definitions related to materials efficiency
 - [Ecodesign Coordination Group – TF6 Guidance to create **product-related material efficiency** standards](#)
 - EN 45552 General method for the assessment of the durability
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 - [EN 45560 Method to achieve **circular designs of products**](#)



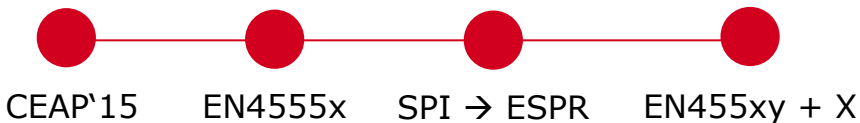
Schlüsselgremium: JTC10 Material Efficiency Aspects for Ecodesign

- Generischen Normen zu Zirkularitätsaspekten von Produkten → [Limitierung auf ErP](#)
- EN 45550 Definitions related to materials efficiency of [ErPs](#)
- Ecodesign Coordination Group – TF6 Guidance to create [product-related material efficiency standards](#)
- EN 45552 General method for the assessment of the durability of [ErPs](#)
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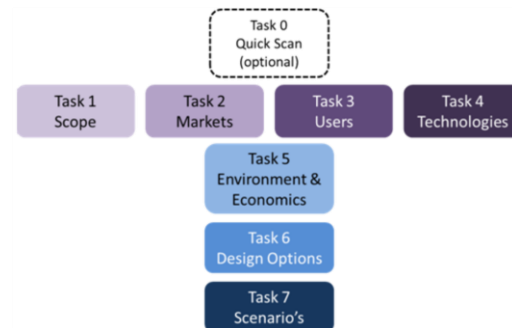
Schlüsselgremium: JTC10 Material Efficiency Aspects for Ecodesign

- Generischen Normen zu Zirkularitätsaspekten von Produkten → Limitierung auf ErP → [Revision](#)
 - EN 45550 Definitions related to materials efficiency of [products](#)
 - Ecodesign Coordination Group – TF6 Guidance to create [product](#)-related material efficiency standards
 - EN 45552 General method for the assessment of the durability of [products](#)
 - EN 45553 General method for the assessment of the ability to remanufacture of [products](#)
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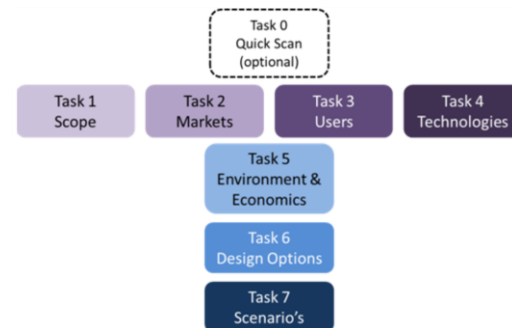
Neue Produktkategorien -> neue Herausforderungen

- Grundprinzipien der Vorbereitung von Rechtssetzungsprozessen müssen aktualisiert werden!
- Methodology of the Efficiency of Energy-related Products (MEErP)
- „[...] *techno-economic-environmental assessment of a specific product group* [...]“
- 7 +1 Abschnitte mit unterschiedlichem Fokus
- Ergebnis: Politikoptionen zur Diskussion



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- 7 +1 Abschnitte mit unterschiedlichem Fokus
- Ergebnis: Politikoptionen zur Diskussion
- seit 2020 in Revision, jedoch ausreichend?



Neue Produktkategorien -> neue Herausforderungen

- Grundprinzipien der Vorbereitung von Rechtssetzungsprozessen müssen aktualisiert werden!
- "[...] Systematic inclusion of design options related to material efficiency aspects (such as a) increased **reparability**, b) increased **durability**, c) increased **recyclability** or d) aimed at promoting the **reuse** of secondary raw materials and/or components) [...]"
- „[...] Systematic inclusion of lifetime in the MEErP modelling of the LLCC. In order to properly analyse and model **circular economy requirements** [...]"
- **Ecodesign Forum Nov'25**, Ergebnis: Zirkularitätsbetrachtungen in vorbereitenden Studien gestärkt → ESPR-Method



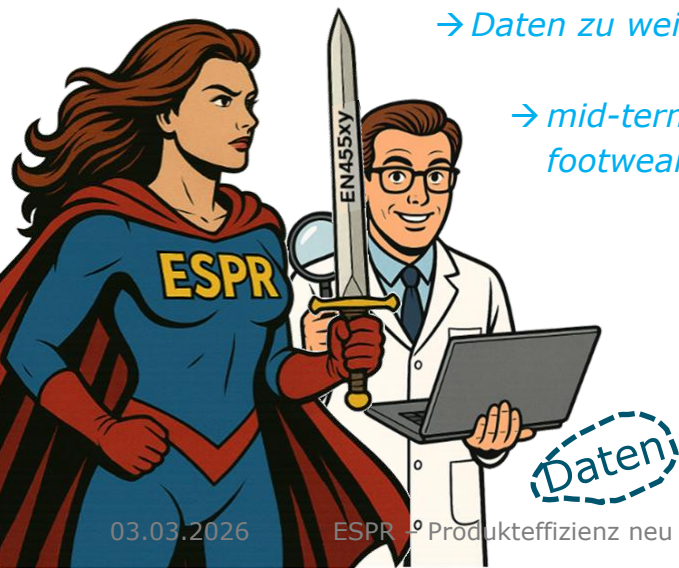
Neue Produktkategorien -> neue Herausforderungen

- Grundprinzipien der Vorbereitung von Rechtssetzungsprozessen müssen aktualisiert werden!

→ *Datenlage ausreichend für Textilien und ggf. Eisen- & Stahlprodukte*

→ *Daten zu weiteren (intermediären) Produktgruppen fehlen!*

→ *mid-term review in 2028: detergents, paints, lubricants, footwear, chemicals*



EU-LIFE Programm am Puls der Zeit:

- HORIZON Cluster 6



EN

Horizon Europe

Work Programme 2025

9. Food, Bioeconomy, Natural Resources, Agriculture and Environment

(European Commission Decision C(2025) 2779 of 14 May 2025)

"[...] Each applicant should choose at least one of the following product groups: *detergents, paints, chemicals, non-ferrous metals, home/interior textiles, footwear or toys* [...]"

"[...] focus on [...] product **aspects contributing to circularity**, i.e., durability, reliability, reusability, upgradability, reparability, possibility of maintenance and refurbishment, [...] recycled content, possibility of remanufacturing and recycling, [...] recovery [...]"



EU-LIFE Programm am Puls der Zeit:

- HORIZON Cluster 6



EN

Horizon Europe

Work Programme 2025

*"[...] The ESPR provisions aim at improving the overall sustainability of the product(s) in question, and by improving the product aspects set out in that regulation (see [Art. 5](#); Annex I). In addition, the revised version of the **MEErP** methodology by JRC [...] The series of standards on material efficiency for energy-related products **EN455XX** must be considered as well [...]"*



Vom Energieeffizienzindex (EEI) zum Materialeffizienzindex (MEI)?

- Kombination von Ansätzen in der normungsvorbereitenden Forschung
 - EN 45550 Definitions related to materials efficiency of products
 - Ecodesign Coordination Group – TF6 Guidance to create product-related material efficiency standards
 - EN 45552 General method for the assessment of the durability + **EN/TR/TS durability scoring**
 - EN 45553 General method for the assessment of the ability to remanufacture of products
 - EN 45554 General methods for the assessment of the ability to repair of products → **EU-COM reparability scoring**
 - EN 45555 General methods for assessing the recyclability and recoverability of products → **recyclability scoring**
 - EN 45556 General method for assessing the proportion of re-used components of products
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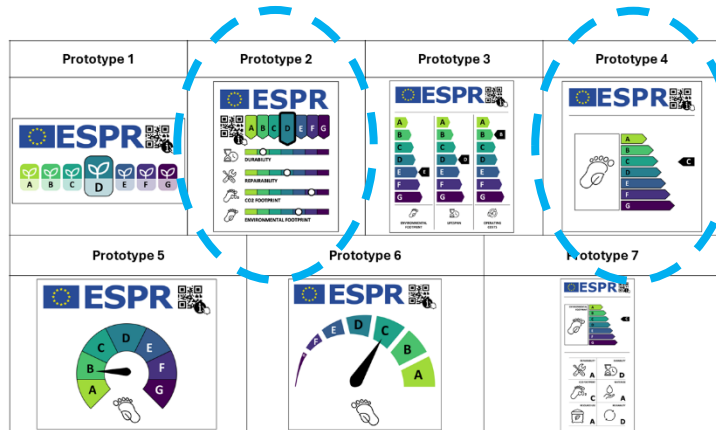
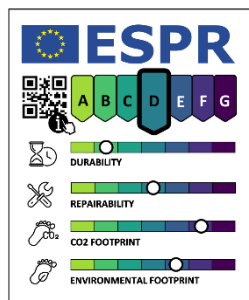
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 - EN 45557 General method for assessing the proportion of recycled material content of products

<i>Efficient use of materials</i>	+	<i>Efficient state of materials</i>	+	<i>Considering repair by</i>
<i>mass-based recycled content</i>		<i>products durability and ability to be recycled</i>		<i>applying approach on component level</i>
<i>→ following principles of EN45555&EN45557</i>		<i>→ following principles of EN45552</i>		<i>→ following principles of EN45554</i>
<i>→ data from product requirements</i>		<i>→ data from product requirements</i>		<i>→ data from product requirements</i>

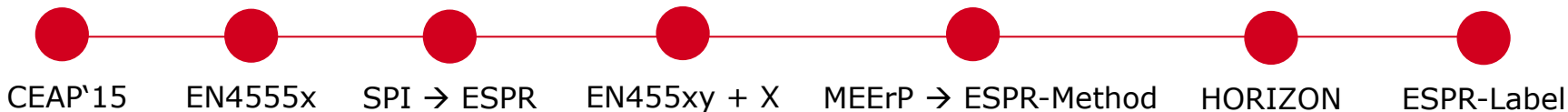
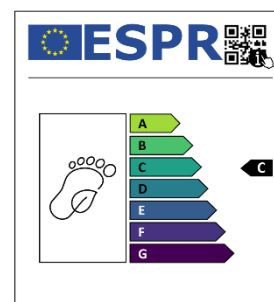
Vom Energieeffizienzindex (EEI) zum Materialeffizienzindex (MEI)?

- Umgang mit Kennzeichnung offen, Stakeholder-Diskussion von KOM initiiert

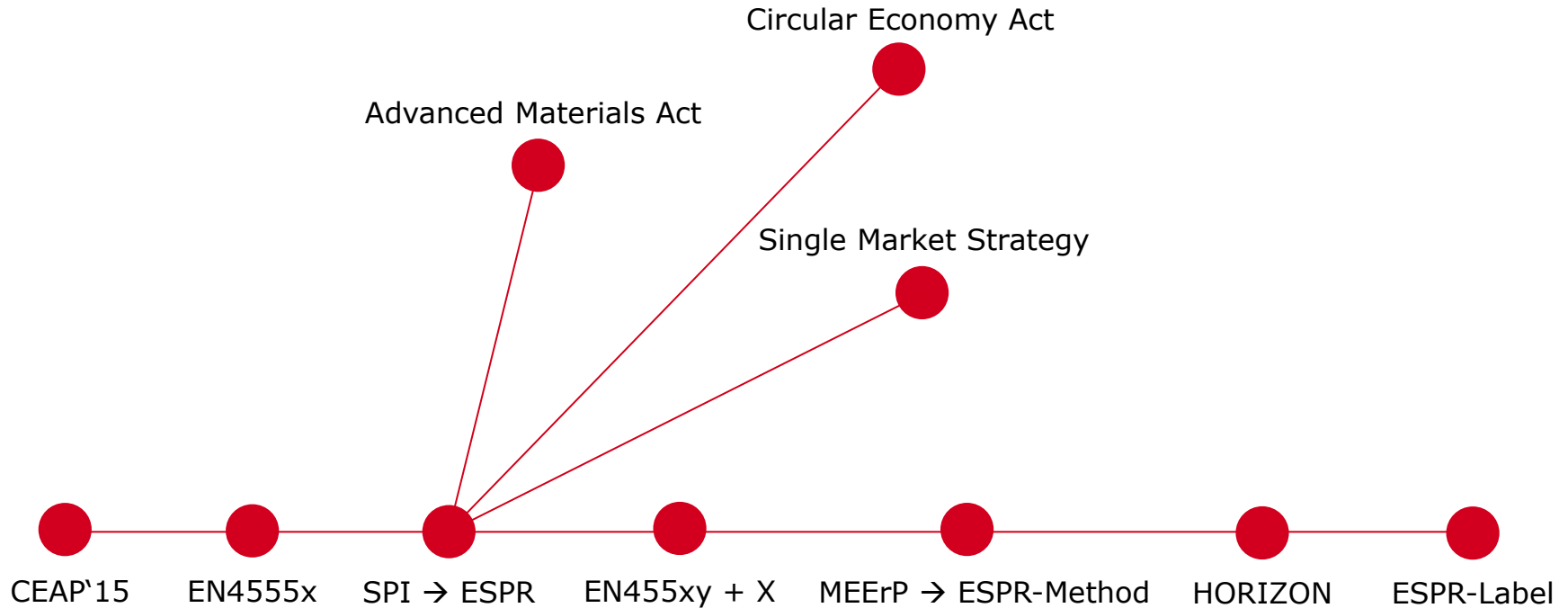
Einzelausweisung?



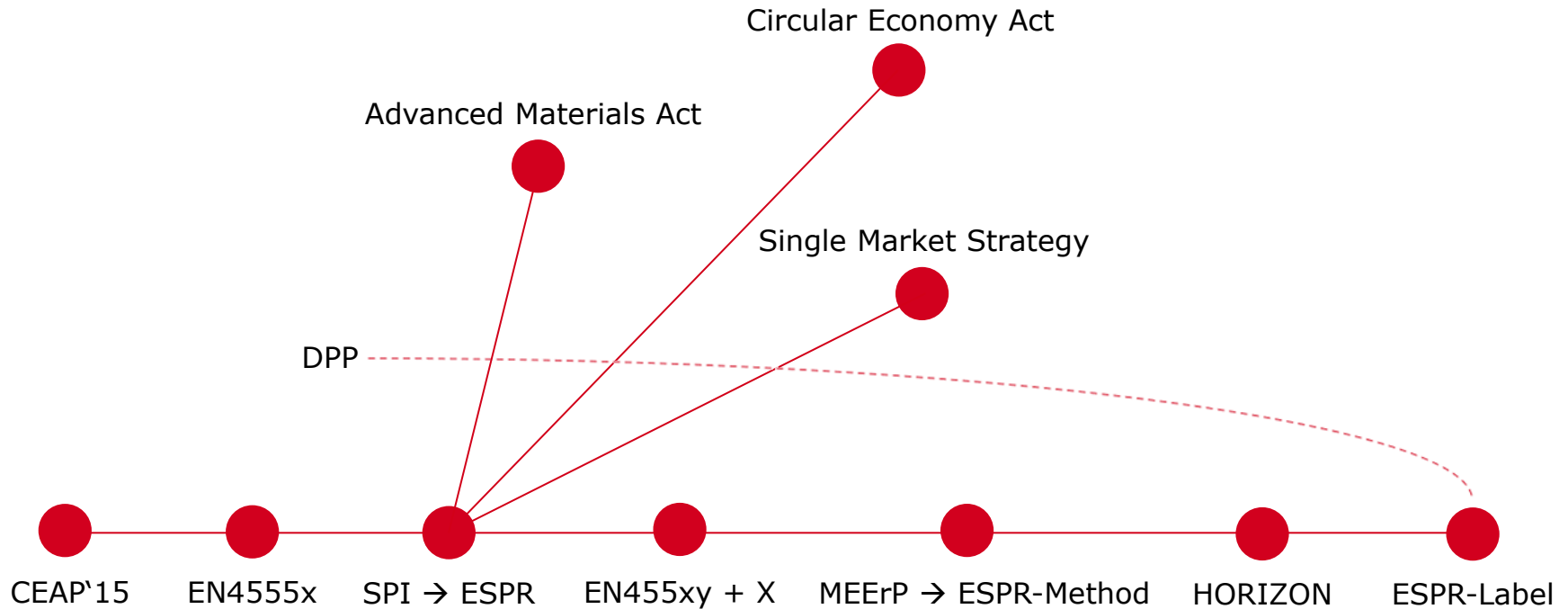
Gesamtausweisung?

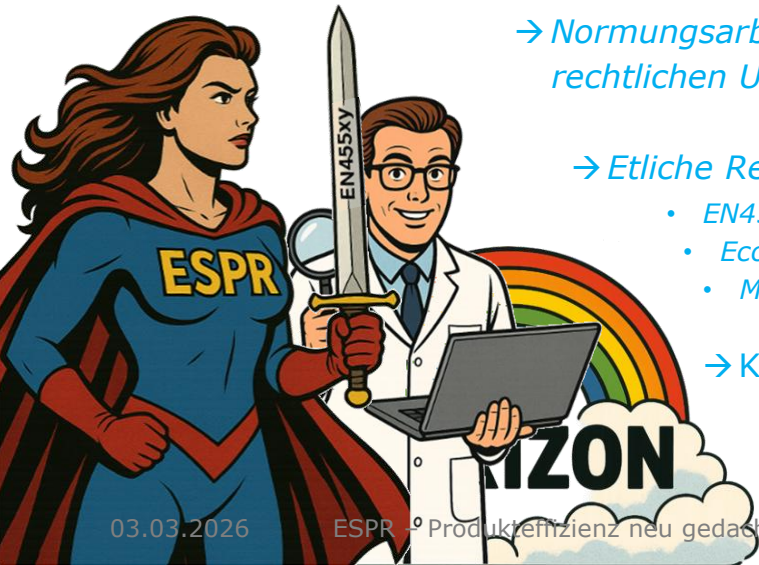


Schnittmengen zu weiteren Rechtsrahme



Schnittmengen zu weiteren Rechtsrahme





→ *Normungsarbeit ist das Bindeglied zwischen der Vision und der rechtlichen Umsetzung von Produkteffizienz*

→ *Etliche Revisionen begleiten die Umsetzung*

- *EN4555x → EN455xx*
- *Ecodesign-Richtlinie → ESPR*
- *MEErP → ESPR-Methode*

→ *Kennzeichnung kann das Neuverständnis im Alltag etablieren*

- *Energy- + ESPR-Label*
- *Digitaler Produktpass*
- *Gestaltung ausstehend*

PASSPORT



Informationsveranstaltung zur ESPR



Online | Kostenfrei | 08. Juni 2026 | 10:00-13:00

***Aktueller Entwicklungsstand und
Auswirkungen: Maßnahmen, DPP,
Normung, Forschung und Beziehung
zu anderen Rechtsbereichen***

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