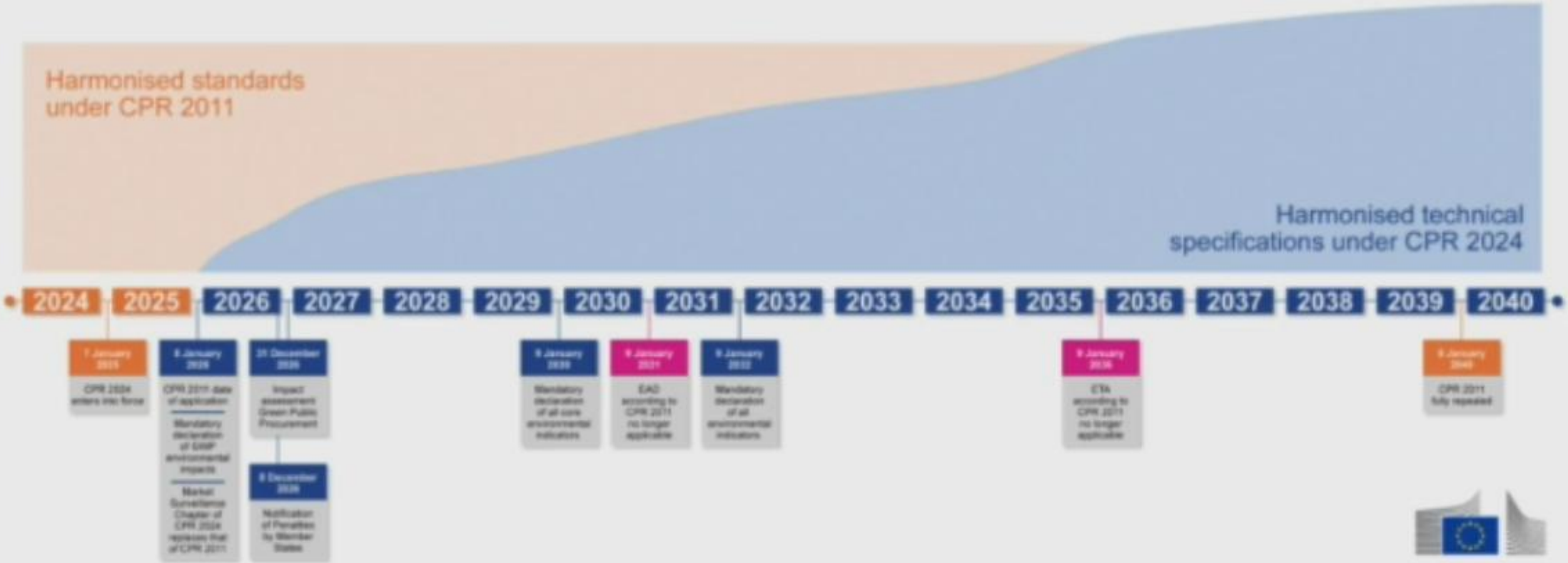
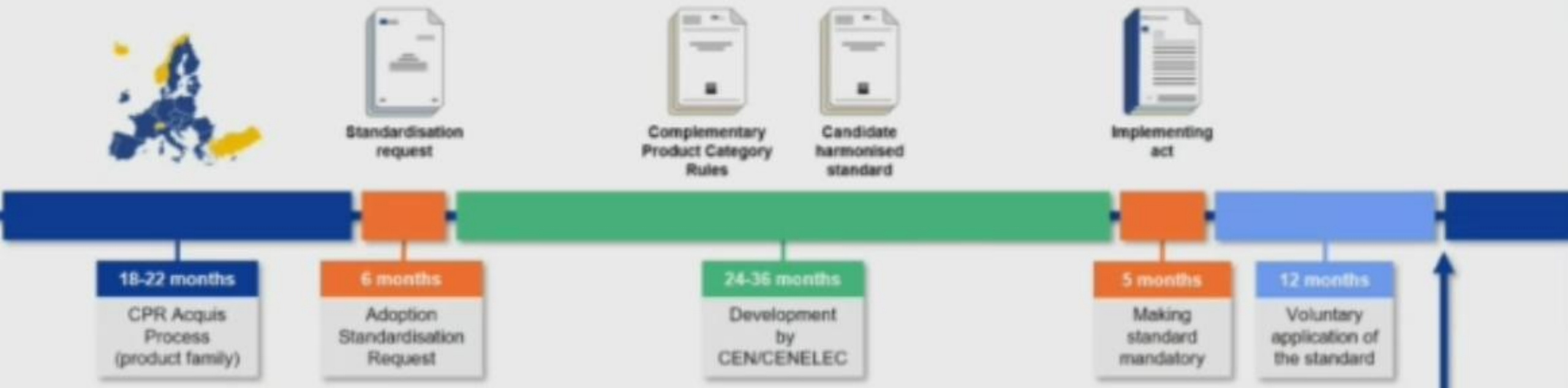
When will environmental obligations start to apply?

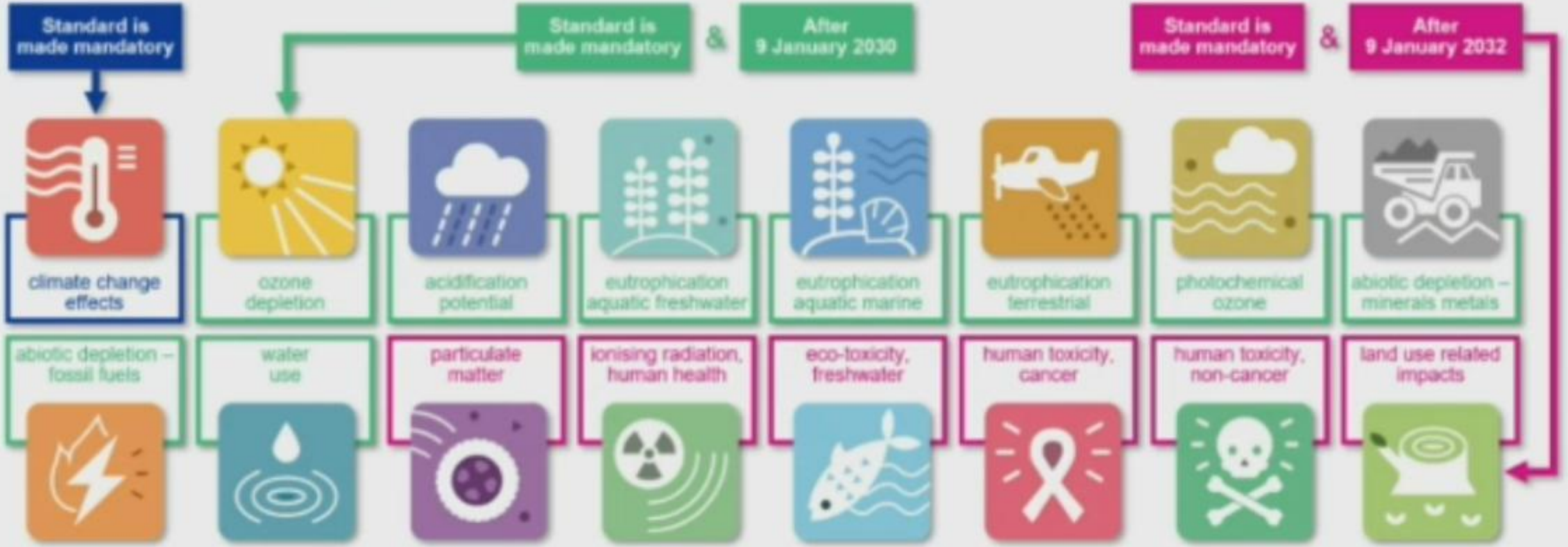


Progressive revision of standards



Obligations under CPR-2024 apply from this date including declaration of environmental performance

Mandatory declaration



Article 15(3) and Annex II

Other environmental indicators

The other indicators included in EN 15804+A2 but not included in Annex II to CPR are also essential characteristics in each product standard and European Assessment Document EAD

Declaration is voluntary unless national requirements apply to them

Prioritisation of product families

Fire

Dangerous substances

Environmental sustainability

Horizontal subgroups

Standardisation request adopted

CPR Acquis ongoing work

CPR Acquis not started yet

1 Priority

1 Precast normal/lightweight/ autoclaved aerated concrete products

20 Structural metallic products and ancillaries

16 Reinforcing and prestressing steel for concrete - Posttensioning kits

2 Doors, windows, shutters, gates and related building hardware

15 Cement, building limes and other hydraulic binders

4 Thermal insulation products - Composite insulating kits/systems

30 Flat glass, profiled glass and glass block products

13 Structural timber products/elements and ancillaries 1

14 Wood based panels and elements 1

26 Products related to concrete, mortar and grout 2

17 Masonry and related products - Masonry units, mortars, and ancillaries 3

24 Aggregates 4

9 Curtain walling/cladding/structural sealant glazing 5

10 Fixed fire fighting equipment 6

23 Road construction products 7

19 Floorings 8

34 Building kits, units, and prefabricated elements 9

36 Attached ladders 9

21 Internal & external wall and ceiling finishes, internal partition kits 10

7 Gypsum products 11

5 Structural bearings - Pads for structural joints 12

27 Space heating appliances 13

22 Roof coverings, roof lights, roof windows, and ancillary products 14

12 Circulation fixtures and equipment 15

18 Wastewater engineering products 16

25 Construction adhesives 17

32 Sealants for joints 17

35 Fire stopping, sealing and protective products, retardant products 18

33 Fixings 19

3 Membranes, including liquid applied and kits 20

8 Geotextiles, geomembranes, and related products 21

11 Sanitary appliances 22

28 Pipes-tanks and ancillaries not in contact with water for human consumption 23

29 Construction products in contact with water for human consumption 24

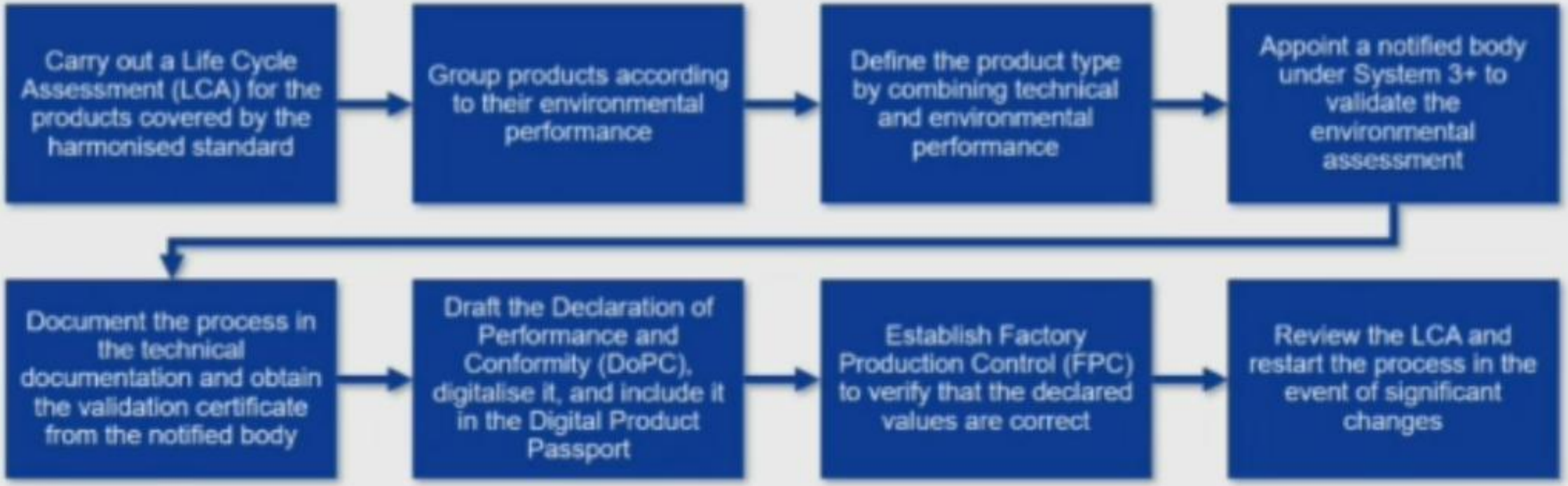
31 Power, control and communication cables 25

Decorative paints and wallpapers 26

6 Chimneys, flues and specific products 27

Annex VII

What do manufacturers need to do to comply with environmental obligations?



Carry out a Life Cycle Assessment (LCA) for the products covered by the harmonised standard

Group products according to their environmental performance

Define the product type by combining technical and environmental performance

Appoint a notified body under System 3+ to validate the environmental assessment

EN 15804+A2 | Complementary Product Category Rues | Product standard | Legal acts related to the product

CPR compliant data from suppliers

Manufacturer specific data

EU CPR background datasets

Other background datasets/EPD

Other generic data

1. Obtain environmental data from the most reliable source available
2. Perform a life cycle assessment of the products
3. Assess the most relevant materials and processes using the c-PCR as reference

Carry out a Life Cycle Assessment (LCA) for the products covered by the harmonised standard → **Group products according to their environmental performance** → Define the product type by combining technical and environmental performance → Appoint a notified body under System 3+ to validate the environmental assessment

Life cycle assessment

The reference for the assessment is one year to avoid seasonal differences and variations due to starting and stopping processes

Weighted average to be used when addressing variations of suppliers and processes

For new products, a conservative estimation should be applied and corrected afterwards if needed

Carry out a Life Cycle Assessment (LCA) for the products covered by the harmonised standard → Group products according to their environmental performance → **Define the product type by combining technical and environmental performance** → Appoint a notified body under System 3+ to validate the environmental assessment

Using the information obtained, the manufacturer decides the granularity of the declaration defining the **product type** considering that:

Technical performance

- Manufacturer is liable of the declaration
- Environmental performance is addressed separately but linked to technical performance
- Conservative values are allowed to reduce the granularity of the declaration

Carry out a Life Cycle Assessment (LCA) for the products covered by the harmonised standard

Group products according to their environmental performance

Define the product type by combining technical and environmental performance

Appoint a notified body under System 3+ to validate the environmental assessment

Life cycle assessment

Notified Body

validation of the assessment

input values

assumptions

compliance with applicable rules

process applied

correct usage of software

initial inspection of the manufacturing plant to validate any company-specific data

Document the process in the technical documentation and obtain the validation certificate from the notified body

Draft the Declaration of Performance and Conformity (DoPC), digitalise it, and include it in the Digital Product Passport

Establish Factory Production Control (FPC) to verify that the declared values are correct

Review the LCA and restart the process in the event of significant changes

Life cycle assessment

Notified Body

validation of the assessment

input values

assumptions

compliance with applicable rules

process applied

correct usage of software

initial inspection of the manufacturing plant to validate any company-specific data

Technical documentation

Validation report

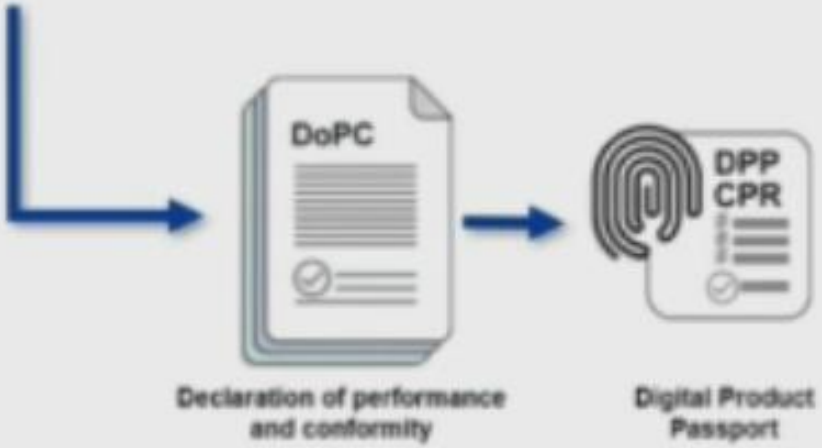
Document the process in the technical documentation and obtain the validation certificate from the notified body

Draft the Declaration of Performance and Conformity (DoPC), digitalise it, and include it in the Digital Product Passport

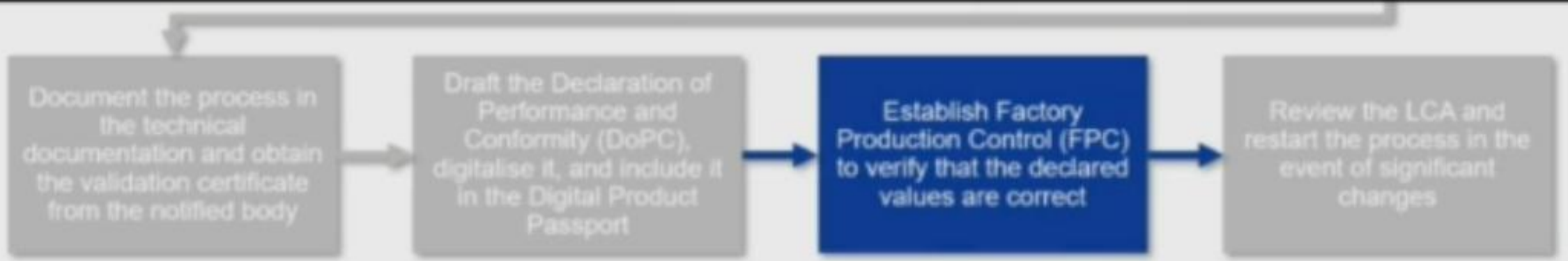
Establish Factory Production Control (FPC) to verify that the declared values are correct

Review the LCA and restart the process in the event of significant changes

Essential characteristic	Clause	Clause method	Symbol	Reference document	Reference document clause	Quantity	Unit	Value kind	Possible values	Boundary values	AVS	Notes
reference service life	4.[x]	5.[x]		EN15804:2012 +A2:2019 +AC:2021		T	years	=			3+	
climate change - total	4.[x]	5.[x]	…	EN15804:2012 +A2:2019 +AC:2021		M	kg CO_2 eq.	≤			3+	
…	…	…	…	…	…	…	…	…	…	…	…	…



Digitalisation instructions provided in the Annex ZA to the product standard / EAD digitalisation annex



Factory production to identify variations in the performance:

- Control of suppliers by connecting data sources
- Control indicators for relevant processes
- Control proxy characteristics which may have an impact on the results
- Check data sources updates regularly

In the event of a performance worse than the declared value, the manufacturer need to take action:

- Revise the manufacturing process to bring the product back to the declared values
- Define a new product type and declared the updated values

Better performances do not require actions by the manufacturer

How harmonisation is ensured?

Complementary Product Category Rues

c-PCR provide additional guidance on modelling such as allocation rules, harmonised scenarios and identification of key processes and supplies

Parameter	Information
Scenario A4.1	Transport by lorry 16-32t, EURO 5
Fuel type and consumption of vehicle or vehicle type used for transport, e.g. long-distance truck, boat etc.	Litre of fuel per km
Capacity utilization (including empty returns)	%
Bulk density of transported products	kg/m^3
Volume capacity utilization factor (factor: = 1 or < 1 or ≥ 1 for compressed or nested packaged products)	

Third party validation

Notified bodies are responsible of validate the environmental assessment performed by the manufacturer

Horizontal notification applies in accordance with EN 15804+A2

Notification in accordance to product standards, EAD or c-PCR **does not apply** for environmental performance

Software tools

Commission "software"	Characterisation factors available in the JRC website https://eplca.jrc.ec.europa.eu/LCDN/EN15804.html	CPR background datasets under development to be published soon Ongoing project and a new tender under development
Lifecycle assessment software may be used by the manufacturer	Under the responsibility of the manufacturer	Subject to Assessment and Verification system 3+

How to prepare for upcoming environmental obligations?

Get access to a life cycle assessment of the product

- EPD of the product
- Sectoral EPD
- Similar EPD or LCA

Assess the LCA and define a strategy to be ready including:

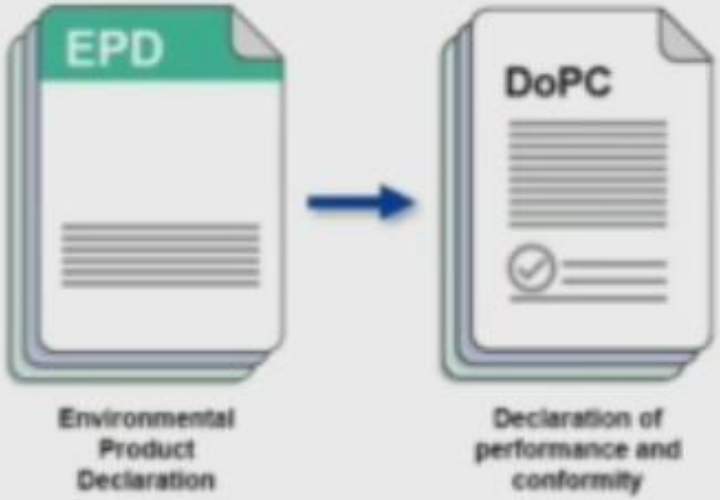
Direct or indirect environmental data	**Processes, suppliers and controls**	**Stock Keeping Unit (SKU)**
Make sure it is digital and can be updated	Identify the need to adapt your systems	Ensure granularity fits with your market

DoPC and EPD

EPDs can be maintained only if they contain the same information available in the DoPC

CPR establishes specific conditions required for DoPC which are not applicable to EPD

EPD will be relevant during the transition and outside the harmonised zone



Additional calculation rules

Ongoing discussion about the development of an act dealing with energy accounting and the use of weighted average:

Article 30

Implementing acts regarding the obligations and rights of economic operators

Where it is necessary, to ensure the harmonised application of this Regulation, and only to the extent necessary to prevent diverging practices fragmenting the internal market for economic operators, the Commission may adopt implementing acts providing details on how economic operators are to fulfil the obligations and exercise the rights set out in this Chapter.

This act is not required to implement environmental obligations, it is a supporting tool to facilitate their fulfilment in a harmonised way

Recognition of ETS data

Ongoing discussion about the recognition of ETS assessments under CPR, also possible for ESPR:

Article 12

Relationship with other Union law

1. To avoid double assessment of the same aspects of health and safety of persons or protection of the environment in respect of products, the Commission is empowered to adopt delegated acts in accordance with Article 89 to supplement this Regulation by laying down the conditions under which obligations relating to the assessment of a product's performance or the fulfilment of certain product requirements, including the equivalence of assessment and verification systems required under this Regulation and obligations as regards general product information, instructions for use and safety information requirements, can be satisfied by the fulfilment of obligations provided for under other Union law.

Declaration without testing

A delegated act for declaration of environmental performance without testing is possible

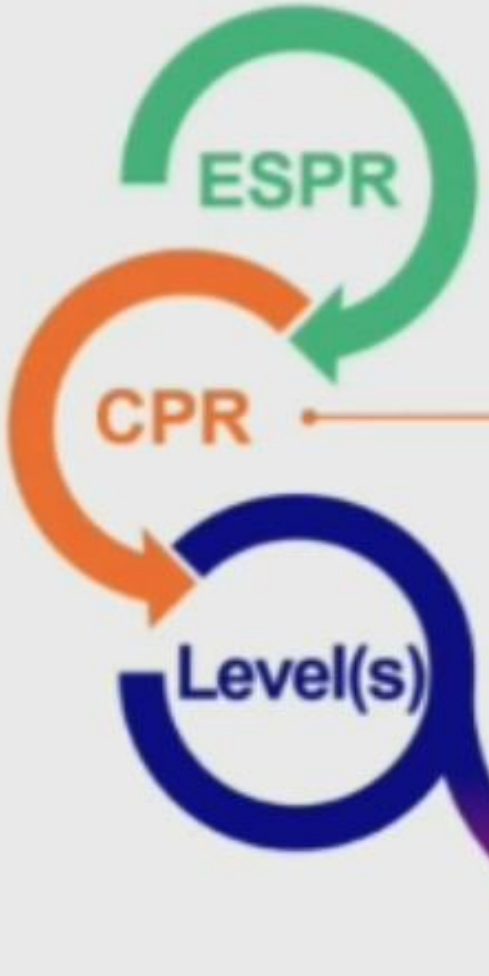
Manufacturers may declare these performances without testing and without the involvement of a notified body

Values need to be conservative and properly developed

Process can be initiated on request of any interested party

Article 5(6) and 59(1)

EU Regulatory framework: environment



Ecodesign for Sustainable Products Regulation
Setting performance and information requirements for products placed on the Single Market

Construction Products Regulation
Delivery of environmental information from construction products and implementation of requirements

Level(s) methodology
Sustainability assessment of buildings

Taxonomy
Sustainable activities

EPBD
Sustainable buildings

PP
Public procurement of buildings

Conclusions

Implementation of environmental obligations is based on current practices and existing experience

Changes are required to ensure the European harmonisation which could not be reached through EPDs

The goal is providing digital reliable environmental information to be used in the decision making

Be involved in the process as soon as possible to make sure implementation is efficient and reflects your needs

Integrate environmental “thinking” in your processes to facilitate the process

Energy Performance of Buildings Directive (EPBD)

Draft of the delegated act setting out a Union framework for the national calculation of life-cycle global warming potential (GWP)

European Commission – DG ENERGY
Unit B3 - Buildings and Products
Bunthan IEA, Ph.D., Policy Officer

European Commission

EU legislation & EPBD

1970s — Oil crisis

2002 — EPBD 2002-91-EC

Minimum performance requirements (2004)

2009 — RES Directive 2009/28/EC

2010 — EPBD 2010/31/EU – recast

2012 — EE Directive 2012/27/EU

2018 — **EPBD (EU) 2018/844 – amending**

RES Directive – amending + EE Directive – amending

Nearly Zero Energy Buildings (2020)

2021 — EU Green Taxonomy

2023 — RES Directive – amending + EE Directive – recast

2024 — EPBD recast

Zero Emission Buildings (2030) + **life-cycle global warming potential (GWP)**

Whole-life-cycle emissions of buildings

Recitals

(7) Buildings are responsible for **greenhouse gas emissions before, during and after their operational lifetime**. The 2050 vision for a decarbonised building stock goes beyond the current focus on operational greenhouse gas emissions. The **whole-life-cycle emissions of buildings** should therefore progressively be taken into account, starting with new buildings. Buildings are a significant material bank, being repositories for resources over many decades, and the design options and choices of materials largely influence the whole-life-cycle emissions both for new buildings and renovations. The whole-life-cycle performance of buildings should be taken into account not only in new construction, but also in renovations through the inclusion of policies for the reduction of whole-life-cycle greenhouse gas emissions in Member States' national building renovation plans.

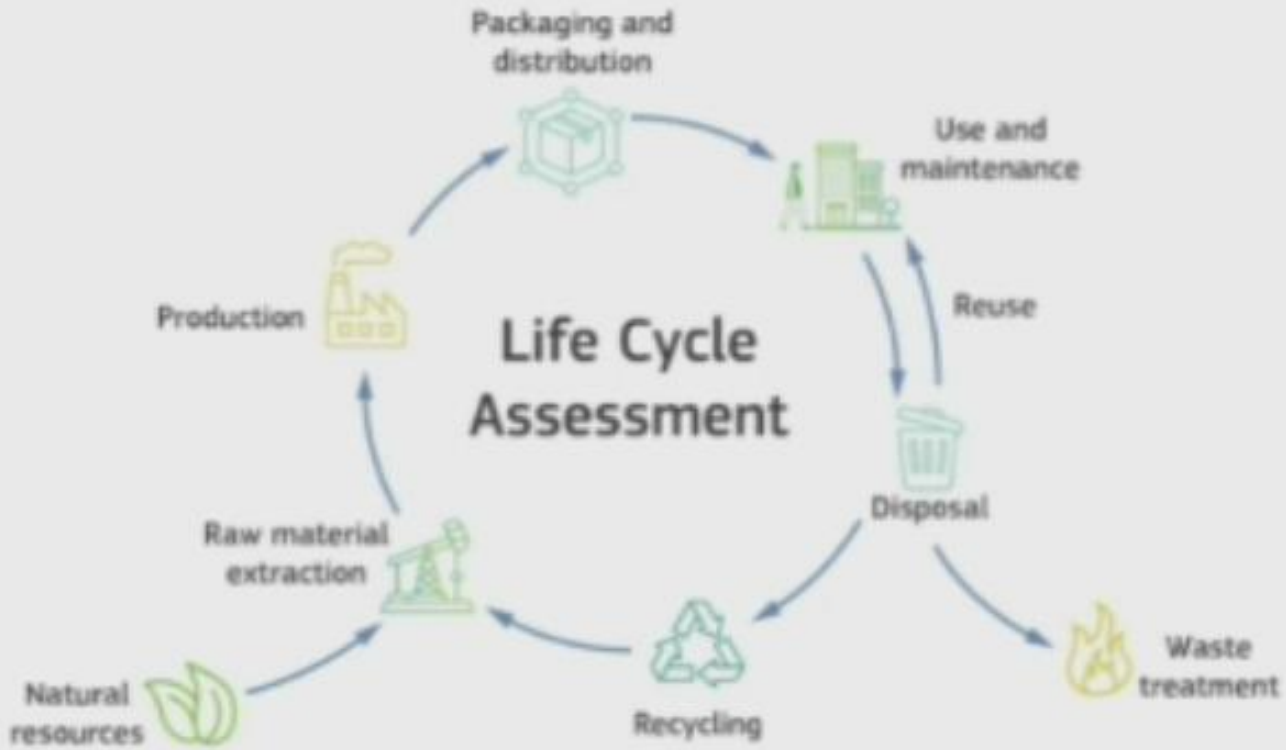
New construction in the EU accounts for 18% of the total whole life-cycle emissions from the building stock, even though it only represents 1% of the total floor area. Construction and demolition waste represents 40% of the waste generated in the EU.

Whole-life-cycle emissions of buildings

Indicator life-cycle global warming potential (GWP)

(Article 2(24) and 2(25))

- Production and transport of construction products
- Construction-site activities
- Use of energy in the building
- Replacement of construction products
- Demolition
- Transport and management of waste materials and their reuse
- Recycling and final disposal



Summarise

- Article 7(2) : Calculation of LC Global Warming Potential (GWP) from 1-01-2028 for large new buildings & from 01-01-2030 for all new buildings

  - Article 7(3) Calculation in accordance with the main principles of Annex III, pending the adoption of a DA to set out a Union framework for the national calculation of GWP by 31 December 2025

- Article 7(5) : By 01-01-2027, publication & notification of national roadmaps detailing introduction of limit values and set targets

Whole-life-cycle emissions of buildings

Article 7(2)

Member States shall ensure that the life-cycle GWP is **calculated in accordance with Annex III** and disclosed in the energy performance certificate of the building [...]

Article 7(3)

The Commission is empowered to adopt **delegated acts** in accordance with Article 32 to **amend Annex III to set out a Union framework for the national calculation of life-cycle GWP** with a view to achieving climate neutrality. The first such delegated act shall be adopted by 31 December 2025.

Timeline of the provisions for Life-cycle GWP

May 2024

Publication of the EPBD in the OJ & entry into force
Directive - EU - 2024/1275 - EN - EUR-Lex (europa.eu)

May 2026

Publication the OJ & entry into force

Delegated act setting out a Union framework for the national calculation of life-cycle GWP
(Article 7(3))

January 2027

Member States shall publish and notify to the Commission a roadmap on the introduction of limit values & targets

Article 7(5)

January 2028

> New buildings over 1000m2 useful floor area

Member States shall ensure that life-cycle GWP is calculated in accordance with Annex III and disclosed in the energy performance certificate.

Article 7(2)

January 2030

> All new buildings

Member States shall ensure that life-cycle GWP is calculated in accordance with Annex III (and DA) and disclosed in the energy performance certificate

+ **limit values** for all new buildings from national roadmaps

Article 7(2) + Article 7(5)

Delegated Act for the Union framework for the calculation

1. General framework
   - *Standard EN 15978*
2. Reference study period
3. Data for calculation
4. Useful floor area
5. Scope of life-cycle stages
   - *aligned with Construction Product Regulation*
6. Allocation of emissions related to a building's energy consumption and on-site generation
7. Scope of building elements and technical equipment
   - ***Build on Levels EU framework, with some adjustments***
   - *Requirement to cover the elements, but flexibility for the "classification"*
8. Results of life-cycle GWP
   - *for reporting in EPC, disaggregated and transparence for each life cycle stages*

→ **Comparability of the results vs flexibility for the implementation**

Life-cycle GWP calculation

Construction Product Regulation (CPR)
Ecodesign and energy labelling legislation

Shall be used when available

Life cycle GWP at product level ✖ **Quantity** = **Life cycle GWP at building level**

	Product stage (A1-A3)	Construction process stage (A4-A5)	Use, maintenance, replacement stage (B1-B4)	Operational energy use stage (B6)	End-of-life stage (C1-C4)	Reuse, recycling, recovery potential (D1)	Potential benefits and loads from exported utilities (for example, electrical energy, thermal energy, potable water) (D2)
GWP total							

In Energy Performance Certificate (EPC) and Building Stock Observatory (BSO)

Data for the calculation

Member States have to ensure that the life-cycle GWP is calcuated by 01.01.2028 for large new buildings (EPBD Article 7(2))

Project-specific	Compatible with EN 15978 and only if they are explicitly permitted by national legislation.
Product-specific	
Average data	

Generic data	To fill data gaps, where none of the above data sources are available, or to simplify the calculation
Default values	- Any a specific scope of a building element or multiple building elements, - Any scope of a life-cycle sub-module or a life-cycle module, or multiple life-cycle sub-modules or multiple life-cycle modules.

Scope of building elements and technical equipment

Annex III

[...] The scope of building elements and technical equipment is as defined in the **Level(s) common EU framework for indicator 1.2**. [...]

- Same scope for all type of buildings → comparability of the result
- Equivalent perimeter to Levels, as set forth by Annex III, while allowing flexibility
  - Default value can be allowed by MS
- MS describe at national level the required building elements and technical equipment :
  - Must cover entries in Tier 2, e.g. substructure, structure, Building's heating systems, etc.
  - Tier 3 and Tier 4 are examples, e.g. basement lateral supports, external windows, heat pumps, etc.

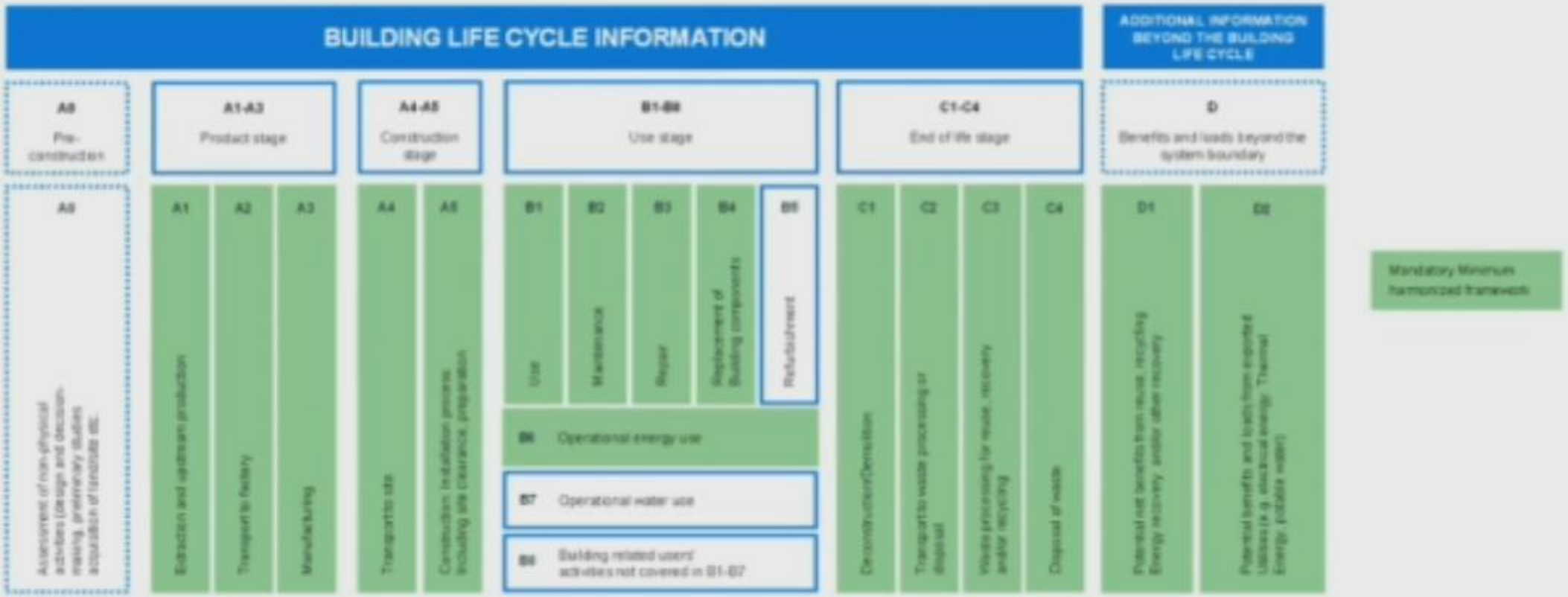
Scope of life-cycle stages

Annex III

For the calculation of the life-cycle GWP of new buildings pursuant to Article 7(2), the total life-cycle GWP is communicated as a numeric indicator for **each** life-cycle stage expressed as kgCO2eq/(m2) [...]

- Scope of life-cycle stages consistent with DoPC under CPR.
- For A4, B1, C, for example, "Member States may choose to limit the calculation to information available at product level"
- Scope of the calculation may or may not be identical to the scope of limit value, but required life-cycle stages must be disclosed anyhow

Scope of life-cycle stages



Guidance for the national roadmap and the limit values

Published on 30 June as part of the EPBD implementation supporting package – link

- MS publish and notify a roadmap detailing the introduction of **limit values**, from 2030.
- A series of limit values from 2030 with **downward trend,** for example, a limit value (or corresponding level of ambition) in 2030 followed by a lower value in 2033, in 2036, etc.
- MS decides on the interval, typically every 3 or 5 years.
- If relevant, MS adapt the limit values for different climatic zones and building typologies.
- **MS considers the readiness of the market** while encouraging the decarbonisation of the construction sector as soon as possible.
- Relevant **stakeholders are to be consulted by MS** when the limit values are established.

Thank you!

#EPBD

LinkedIn EU Energy
YouTube @EUEnergy
https://energy.ec.europa.eu/
DG Energy newsletters