Hall 7A

CHILLVENTA

The Future of Refrigeration:
the EPTA vision for an Innovative and Sustainable approach to the industry

Chillventa Specialist Forums 2024
Chillventa Fachforen 2024

CONNECTING EXPERTS.

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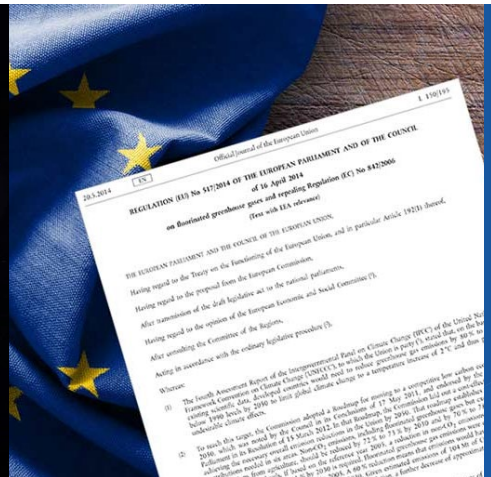
Epta Institutional Affairs Manager

REGULATION (EU) 2024/573



MAIN NOVELTIES IN THE F-GAS REGULATION 2024/573

Reducing the consumption of F-gases:

- Steeper HFC quota phase-down to meet **Kigali Amendment targets**
- New **product bans** for products containing or relying on fluorinated refrigerants

Preventing emissions:

- Extension of **leak checks requirements** to **HFOs** and **mobile equipment**
- Requirement for **leakage detection systems** for equipment using high charge of F-gases with alert systems in case of leaks
- **Recovery obligations** for all F-gases in view of recycling, reclamation or destruction
- **Extended Producer Responsibility:** WEEE fees to include costs for recovery, recycling, reclamation and destruction

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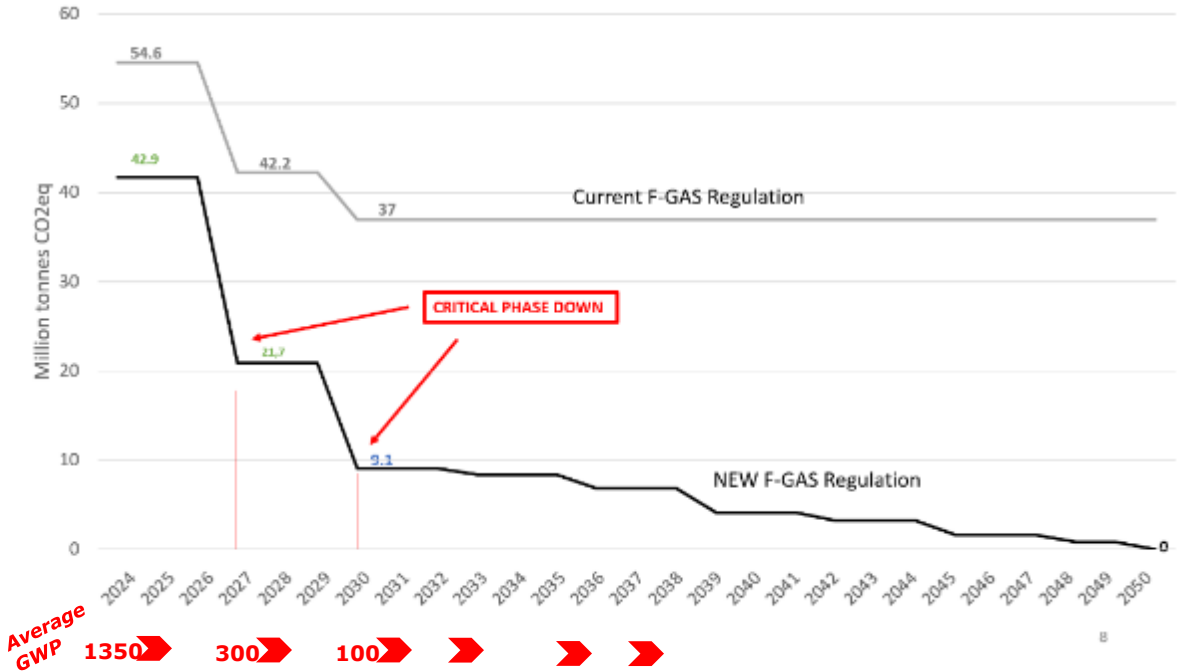
THE PHASE DOWN OF QUOTAS

The new F-Gas introduces for the first time the **complete elimination** of the consumption of hydrofluorocarbons (HFCs) by 2050



Years	Maximum Quantity in tonnes CO_2 equivalent
2025 – 2026	***42 874 410***
2027 – 2029	***21 665 691***
2030 – 2032	9 132 097
2033 – 2035	8 445 713
2036 – 2038	6 782 265
2039 – 2041	6 136 732
2042 – 2044	5 491 199
2045 – 2047	4 845 666
2048 – ***2049***	4 200 133
2050 onwards	***0***

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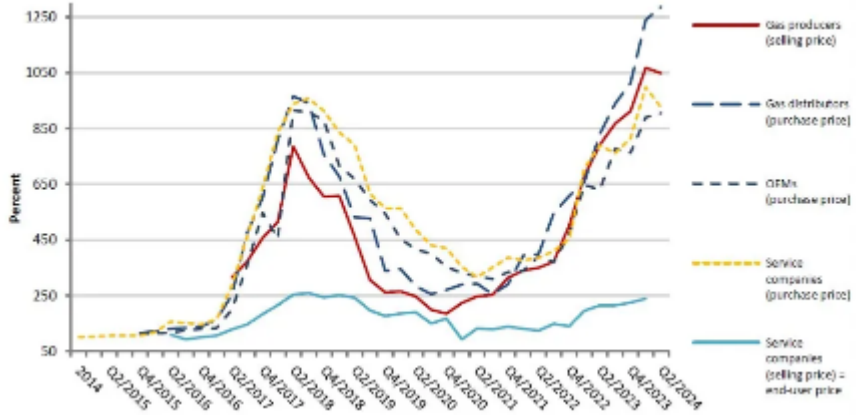
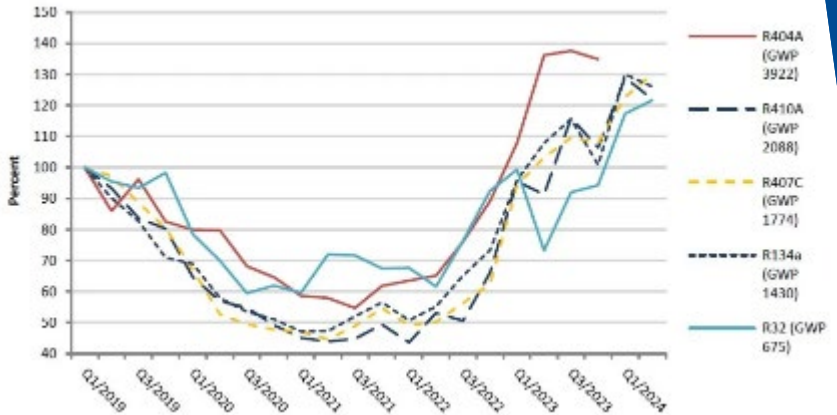
MARKET IMPACTS ON THE F-GASES



Price of R410a along the supply chain



Price of HFSc at OEM level

(Oeko Recherche, 2024)

The current price for all the traditional HFCs is **considerably increasing**, while R744 and R290 remain low and stable

Risk of HFC shortage starting from 2027

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REFRIGERATION PRODUCT PROHIBITIONS

Domestic refrigeration : GWP<150 from 2015; Stop F-gas from 2025

Refrigerators and freezers for commercial use (self-contained) : GWP<150 from 2025

Multipack centralised refrigeration systems for commercial use with a rated capacity of 40 kW or more : GWP<150 from 2022

All stationary refrigeration equipment : GWP<150 from 2030

All the traditional HFCs (R448A, R449A, R134a, etc.) prohibited in 2030

Only NATURAL REFRIGERANTS and A2L (midly flammable) remain

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SERVICING WITH F-GASES

Servicing or maintenance : The use of F-gases with

- GWP≥750 for stationary refrigeration equipment from 1 January 2032
- GWP≥2500 for air-conditioning equipment and heat pumps from 1 January 2026

is prohibited, with an exemption for reclaimed or recycled.

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THE PFAS ISSUE

Per- and polyfluoroalkyl substances (PFAS) are a group of approx. 10.000 man-made chemicals that are used in a variety of industries due to their sealing, temperature and pressure resistance, low friction properties.

"Forever chemicals" are very persistent in the environment and in the human body – meaning they don't break down and they can accumulate over time.

The majority of F-gases are or degrade in PFAS as well as their potential breakdown product called TFA (Trifluoracid) - few exceptions (R32, R152a, R23, R1132)

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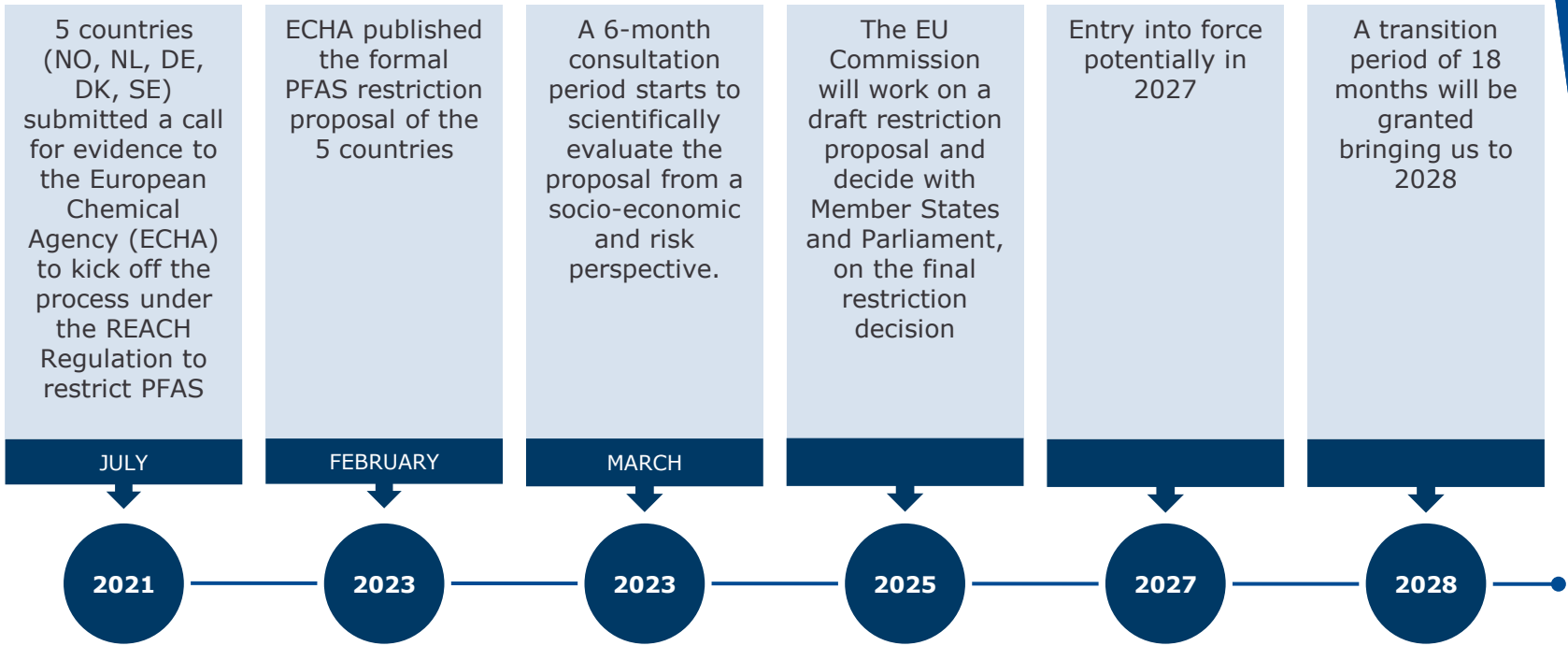
REACH RESTRICTION ON PFAS: PROCESS SCHEDULE



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DRIVERS FOR THE CHOICE OF THE REFRIGERANT OPTIONS

1. Investment cost

Life-cycle cost for the consumer (upfront and running costs)

2. Standards & Legislation

S&L includes bans, taxes and voluntary agreements

3. Complexity

Complexity of manufacturing and operating the product

4. Risk Awareness

Perceived and actual risk of using the product

5. Market Readiness

Market competence in safe adoption of the new technologies

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NATURAL REFRIGERANTS

100% of Epta's solutions portfolio with natural refrigeration

Integral solution
with natural refrigerant and best in class energy performance

Plug-in with natural refrigerant specifically designed for F&B segment

Remote CO_2 cabinet
with proprietary full glass door design

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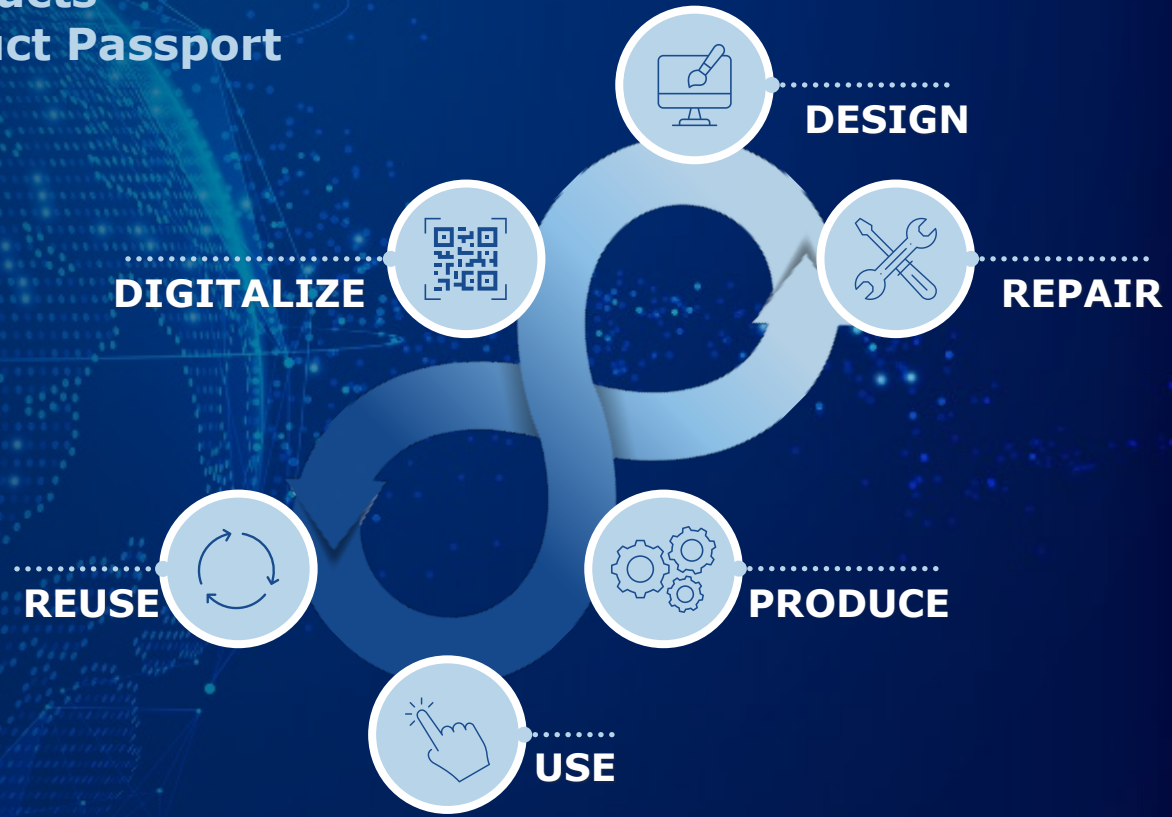
FROM ECODESIGN AND ENERGY LABELLING TO …

Sustainable Products and Digital Product Passport



ECODESIGN FOR SUSTAINABLE PRODUCTS REGULATION

On 30 March 2022 the European Commission presented the proposal for a new regulation on Eco-design of Sustainable Products (ESPR).

TARGETS

Make sustainable products the norm in the EU, boost circular business models and empower consumers for the green transition.

Move to a truly circular economy in the EU: decoupled from energy- and resource dependencies, more resilient to external shocks and respectful of nature and people's health.

ACTIONS

- Improvement of the circularity, energy performance and other environmental sustainability related aspects
- Definition of performance requirements and information obligations for almost all categories of physical goods placed on the EU market
- For product groups that share sufficient common characteristics, possible definition of horizontal rules
- **Increased focus on product information**

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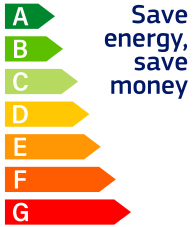
THE GREEN TRANSITION OF PRODUCTS

kWh ↓ = € ↓ + CO_2 ↓

- **ECODESIGN**
  Minimum energy efficiency requirements
- **ENERGY LABELLING**
  Energy efficiency a1nd energy consumption

Make a good choice



Sustainable products

...and many others

Ecodesign requirements

Extending product life cycle

Reducing carbon and environmental footprints of products throughout their life cycle

Ensuring products are fit for a climate neutral and circular economy

Preventing waste and boosting material recovery

Minimum uptake of recycled materials

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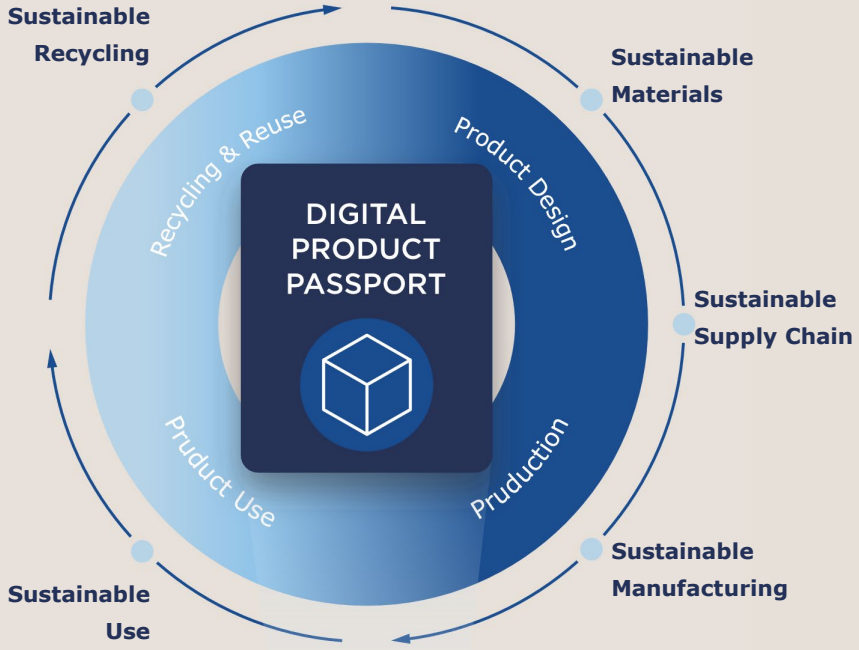
POTENTIAL CONTENTS



Basic product data

Producer

Details of the product
(size, colour,...)

Place of production

Environmental indicators
(e.g. CO2 footprint)

Utilization

Chemicals

Origin of war materials

Circular economy related indicators

Durability, reusability, upgradability, reparability

Disassembly

Recycling, Recycled content

Instructions

Labels

Social indicators/ supply chain compliance

THE DIGITAL PRODUCT PASSPORT

WHAT

A structured collection of product related data with predefined Scope, agreed data ownership and access rights conveyed through a unique Identifier (App)

SCOPE

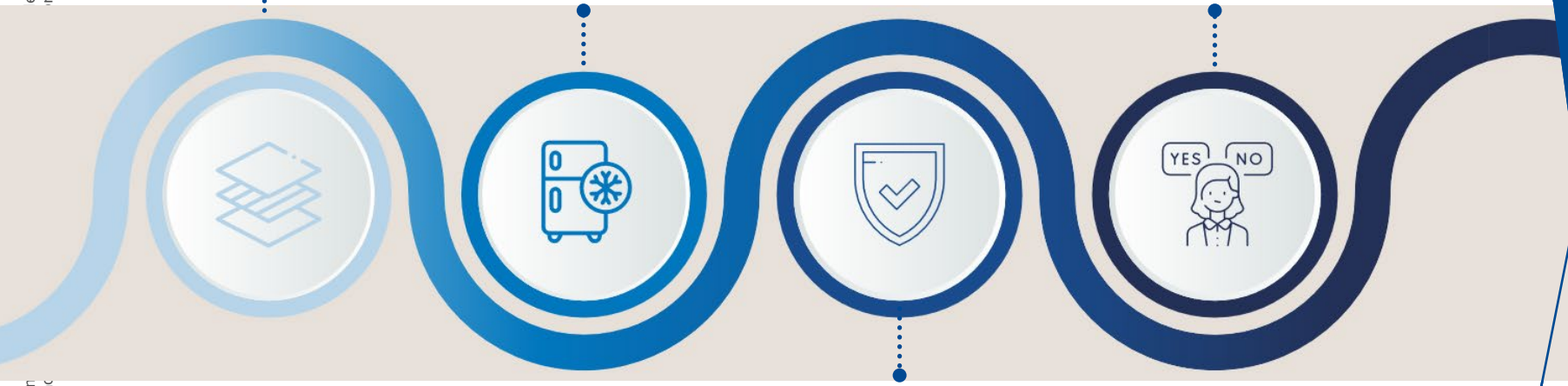
Information related to sustainability, circularity, value retention for reuse/remanufacturing/recycling

IT DATA FLOW

Communication Supplier-To-Provider across the entire value chain of the product

Tracking the life story of a product
(materials extraction/production and carbon footprint)

Allow citizens to make informed choices



Make available reliable Information
and enable incentives for sustainability performance

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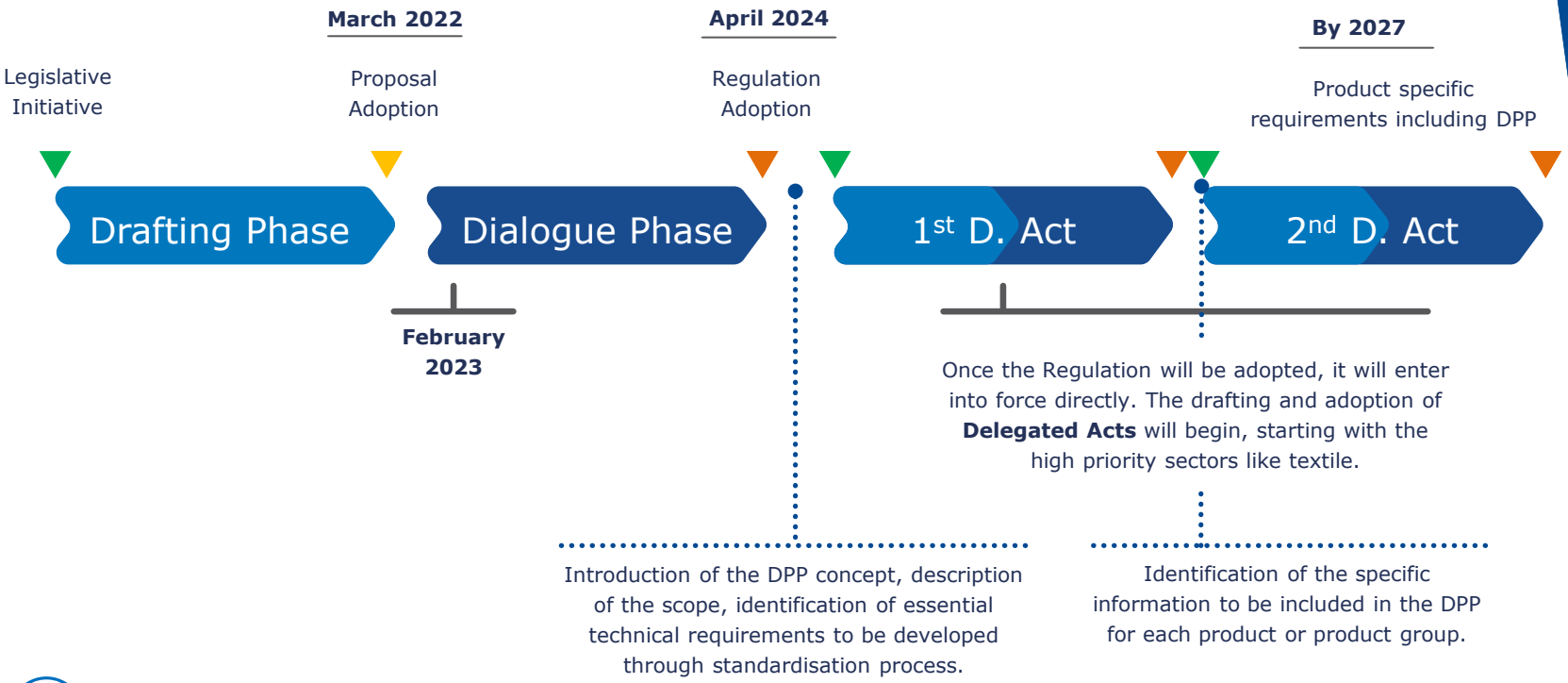
THE PATH OF DIGITAL PRODUCT PASSPORT (DPP)



DPP becomes mandatory when there is a delegated act for that specific product

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Thanks for your attention!

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