Trends in radio equipment directives in the European Union

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- Policy officer within the European Commission (Directorate-General for Internal Market)
- Main duties:
  - Development of the electronic ecosystem in the EU
  - Radio Equipment Directive
  - Competitiveness
  - International affairs

Content

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2. The common charger
3. The latest standardisation developments under the Radio Equipment Directive
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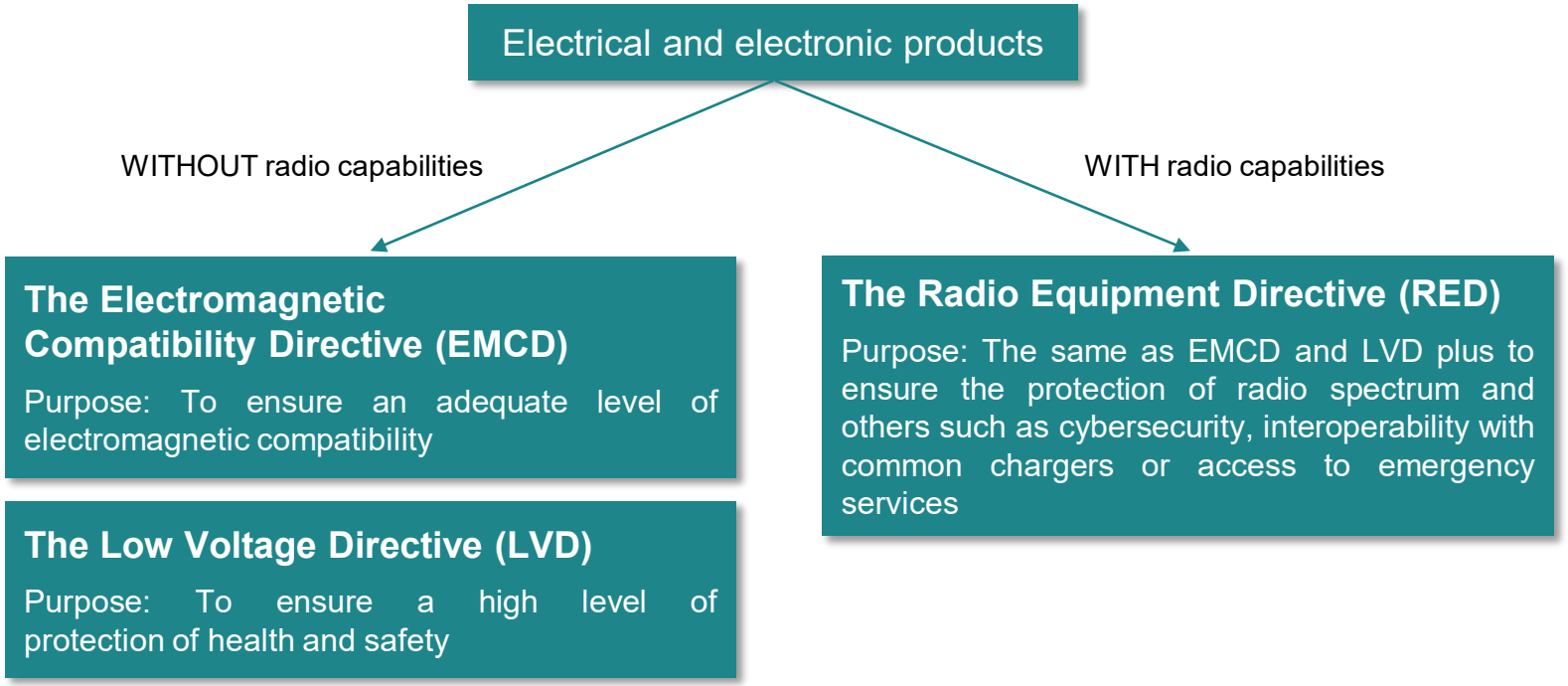
5. A regulatory approach to the refurbishment market of radio devices

The EU legal framework on the electrical and electronic sectors

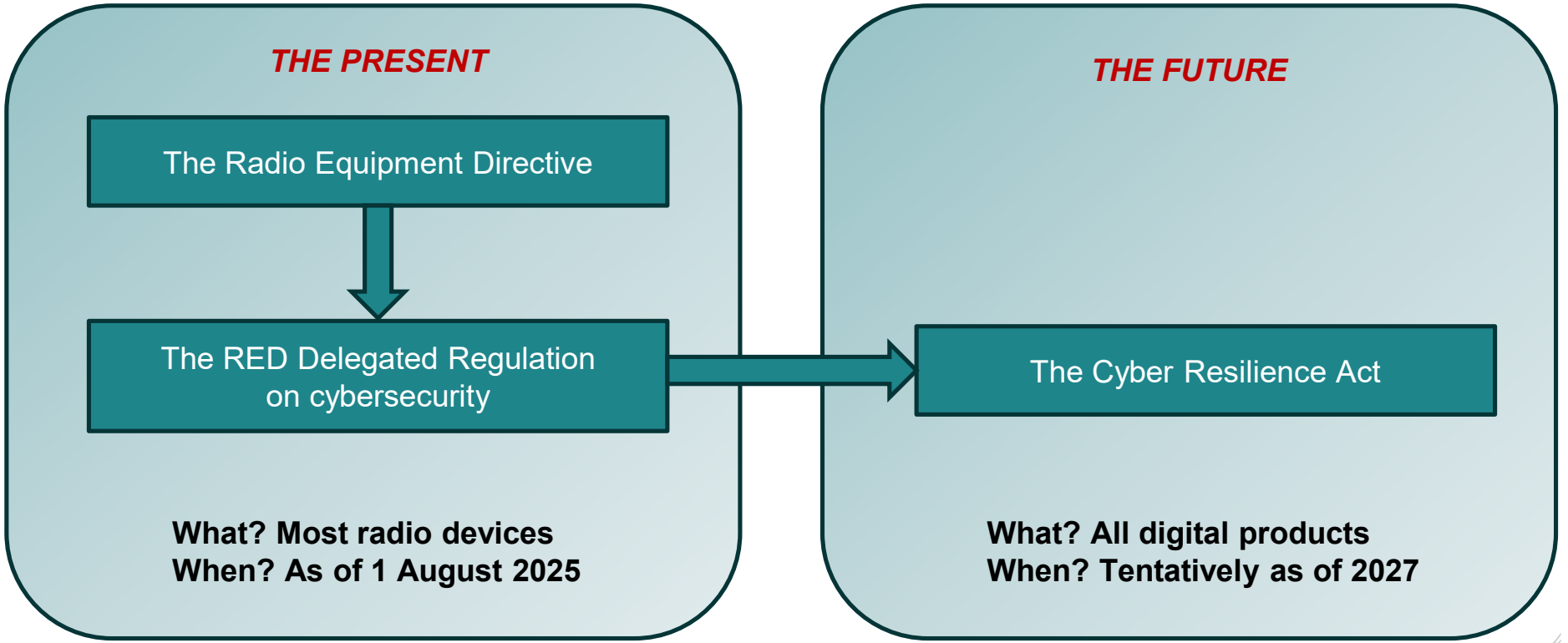
The placing on the European Union of electrical and electronic products

- Legislation lays down essential requirements.
- Harmonised standards establish technical requirements and they are voluntary, objective and verifiable.



The products cybersecurity legal framework in the EU

The products cybersecurity legal framework in the EU



The RED Delegated Regulation on cybersecurity (I)

Objective: To increase the cybersecurity of the majority of categories of radio equipment

- Network protection and appropriate use of network resources.
- Protection of users' privacy.
- Protection from monetary fraud.

Scope:

- Internet-connected radio equipment.
- Childcare equipment.
- Toys.
- Wearable devices.

(*) Some exclusions.

European Commission

The RED Delegated Regulation on cybersecurity (II)

The RED Delegated Regulation on cybersecurity has been amended

- The date of applicability has been delayed by one year (updated date: 1 August 2025).
- Requested by CEN-CENELEC on the grounds of the complexity of cybersecurity.
- The application of Article 3(3)(e) of the RED has been clarified:
  - Applicable if the device is capable of processing personal data OR traffic data OR location data.
- Commission Delegated Regulation (EU) 2023/2444 published in the OJEU on 27 October 2023.

Updated timing

	OLD SCENARIO	NEW SCENARIO
Date of delivery of standards by CEN-CENELEC to the Commission	30 September 2023	30 June 2024 (9 extra months)
Period given to the manufacturers to adapt their products using harmonised standards	From 1 October 2023 to 31 July 2024	From 1 July 2024 to 31 July 2025 (3 extra months)
Time given to the manufacturers to adapt their products using harmonised standards	10 months	13 months (3 extra months)
Date of application of the RED DA	1 August 2024	1 August 2025 (9 + 3 = 12 extra months)
Transition period	30 months	30 + 12 = 42 months

The RED Delegated Regulation on cybersecurity (III)

Harmonised standards

- Drafting by CEN/CENELEC is progressing. Currently, at enquiry stage.
- Strong cooperation between the Commission and CEN/CLC in order to clarify certain legal aspects of the mandate.
- Main elements:
  - List of technical requirements.
  - Application of each technical requirement by establishing a mitigation measure.
  - Assessment of the mitigation measure.
- Legal principles: Objectivity and verifiability.
- Notified body required in the absence of harmonised standards.

Three standards

- Common security requirements for internet-connected radio equipment.
- Common security requirements for equipment processing personal data.
- Common security requirements for internet-connected radio equipment processing virtual money or monetary value.

Smart meters and 5G network equipment

- Specific requirement: The cybersecurity established at national level will not be undermined.

Smartphones

- Specific requirement: Compatibility with the European electronic identification system laid down in the eIDAS Regulation.

The RED Delegated Regulation on cybersecurity (IV)

The Cyber Resilience Act (CRA)

- The CRA will constitute the evolution of the Delegated Regulation on cybersecurity.
- The CRA goes beyond the RED:
  - It will address all digital products, including hardware and software and not only radio devices.
  - It will address the whole lifecycle of the product and not only the placing on the market.
- The manufacturers will adapt their products to the RED Delegated Regulation as a first stage and then to the CRA.
- The harmonised standards in support of the RED Delegated Regulation will be reused and complemented by the CRA.
- There will be a progressive improvement of the cybersecurity level of products in the EU.

The common charger

Common charger (I)

The RED has been amended to introduce the common charging solution

- USB Type-C® (EN IEC 62680-1-3:2022). Technical specifications of the harmonised charging receptacle and charging communication protocol for radio equipment capable of being recharged by means of wired charging.
- The increasing the power limit has been updated in 2023 from 100W to 240W.

Dates of applicability

- 28 December 2024 for all categories of radio equipment,
- except laptops which benefit from a longer transition period until 28 April 2026.

Categories of radio equipment covered

- Handheld mobile phones
- Tablets
- Digital cameras
- Handheld videogame consoles
- Headphones
- Headsets
- Portable speakers
- e-readers
- Keyboards
- Mice
- Portable navigation systems
- Earbuds
- Laptops

- The list may be extended.

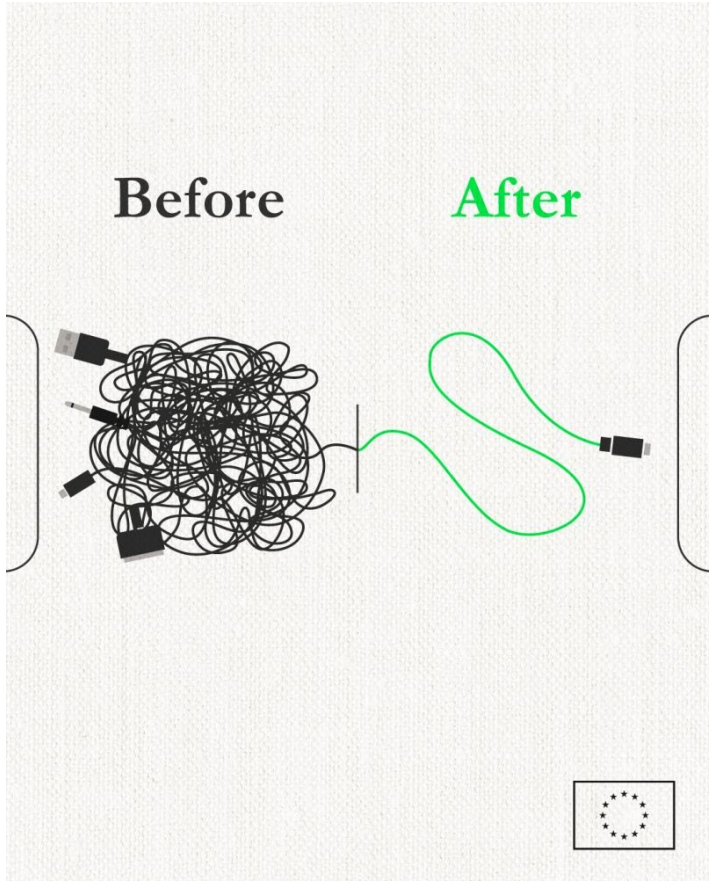
Common charger (II)

Guide on the application of the Common Charger Directive

- The Commission is finalising a guidance for the interpretation of the Common Charger Directive, with the objective of improving the understanding of the Directive and of making its application uniform.
- Planned to be published in the first half of 2024.

Ongoing studies

- The extension of the list of devices covered by the Common Charger Directive.
- The wireless charging technologies.



The latest standardisation developments under the Radio Equipment Directive

RED standardisation

The Commission has adopted two Decisions on RED harmonised standards

- Commission Implementing Decision (EU) 2023/2392.
  - 6 updates of ETSI standards in support of Articles 3(2) (protection of radio spectrum) and 3(3)(g) (access to emergency services).
- Commission Implementing Decision (EU) 2023/2669.
  - 2 updates of CENELEC standards in support of Article 3(1)(a) (safety).

EN 301 908 -1 V15.2.1 IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements; Release 15';
EN 302 077 V2.3.1 Transmitting equipment for the Digital Audio Broadcasting (DAB) service; Harmonised Standard for access to radio spectrum';
EN 302 245 V2.2.1 Transmitting equipment for the Digital Radio Mondiale (DRM) service; Harmonised Standard for access to radio spectrum';
EN 303 132 V2.1.1 Maritime VHF survivor locating devices employing Digital Selective Calling (DSC Class M); Harmonised Standard for access to radio spectrum and for features for emergency services';
EN 303 980 V1.3.1 Satellite Earth Stations and Systems (SES); Fixed and in-motion Earth Stations communicating with non-geostationary satellite systems (NEST) in the 11 GHz to 14 GHz frequency bands; Harmonised Standard for access to radio spectrum';
EN 303 981 V1.3.1 Satellite Earth Stations and Systems (SES); Fixed and in-motion Wide Band Earth Stations communicating with non-geostationary satellite systems (WBES) in the 11 GHz to 14 GHz frequency bands; Harmonised Standard for access to radio spectrum'.

EN 50360:2017 Product standard to demonstrate the compliance of wireless communication devices, with the basic restrictions and exposure limit values related to human exposure to electromagnetic fields in the frequency range from 300 MHz to 6 GHz: devices used next to the ear EN 50360:2017/A1:2023';
EN 50566:2017 Product standard to demonstrate the compliance of wireless communication devices with the basic restrictions and exposure limit values related to human exposure to electromagnetic fields in the frequency range from 30 MHz to 6 GHz: hand-held and body mounted devices in close proximity to the human body EN 50566:2017/A1:2023'.

SAR measurement (I)

SAR testing methodologies

- Testing methodologies internationally adopted by IEC:
  - Scanner-based method, IEC 62209-1 and IEC 62209-2. These two standards will be superseded in the future by IEC 62209-1528,
  - Vectorial/array-based method, IEC 62209-3.

- Harmonised standards in the EU on SAR, including measurement:
  - EN 50360, on devices used next to the ear.
  - EN 50566, on hand-held and body mounted devices in close proximity to the human body.
  - Both of them include both testing methodologies.

SAR measurement (II)

Study on SAR testing methodologies

- Due to the importance and sensitivity of this issue, the Commission has performed an independent technical study, conducted by JRC (scientific Commission's body), to compare both testing methods.
- The study demonstrates that both methodologies have advantages and disadvantages. Thus, the Commission has published both of them in the OJEU.

- Key findings:
  - Both methodologies have similar measurement uncertainty (30%).
  - Measurement equipment must be validated to provide reliable measurements.
  - The new array-based methodology IEC 62209-3 is found to be more efficient for the measurement of modern devices using simultaneous telecommunication technologies. Also, the measurement time is lower compared to the old method.
  - The new standard EN IEC 62209-3 is less technology prescriptive and more eco-friendly because there is no need to replace the liquid for different frequencies).

Initiative on inclusive standards

- European harmonised standards are used to design safe products. However, if standards do not consider the diversity of human bodies in terms of size, structure and composition, they may fail to ensure safety, comfort, accessibility, and usability for the whole European population.
- The Commission carried out a study to better understand the extent and implications of standards' non-inclusiveness.
- A methodology to identify, assess and prioritise standards with an anthropometric component has been developed and has been applied to 2,650 European standards supporting the 22 pieces of EU legislation.
- Anthropometric measures are relevant for 36% of these standards. The great majority of them fail to adequately consider all relevant anthropometric dimensions. For 76 standards, the potential impact of non-inclusiveness on human health and safety is assessed as high, thus calling for an urgent revision.

Initiative on Reconfigurable Radio Systems

Initiative on reconfigurable radio systems

Objective

- This initiative (RRS) is about the activation of Articles 3(3)(i) and/or 4 to ensure that the software that is installed in the radio equipment device once is placed on the market does not compromise the compliance with the RED.
- A product that is RED compliant may not be RED compliant any more after a software update that modifies radio parameters.

The way forward

- The Commission will launch an independent study in support of the impact assessment. This study is expected to be carried out in 2024.
- Depending on the results of the study, the Commission will analyse the appropriateness of activating the aforementioned provisions, as of 2025.
- ETSI has a working item on this field.

Refurbished products

Refurbished products

Refurbished products in the radio equipment sector

- Consumer electronic refurbished products are more and more popular.
- Affordable for consumers and positive for circular economy.

The legal challenges

- The modifications of the product during the refurbishment can make it no longer compliant with the RED.
- Imported refurbished products need to be compliant with the rules in force at the time they are placed on the EU market.

The current legal framework

- This issue is not specifically regulated in the RED or in the LVD.
- The Blue Guide establishes that:
  - If the modifications are minor and do not compromise the compliance with the RED, the refurbisher is considered as a mere distributor.
  - If the modifications may compromise the compliance with the RED, the refurbisher is considered as a manufacturer and has to perform a conformity assessment procedure.

The next stages

- This issue will be addressed in the context of the revision of the New Legislative Framework (products regulatory framework).

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