Public consultation on potential measures for regulating the environmental impact of mobile phones and tablets

Fields marked with * are mandatory.

Introduction

In 2020, the EU adopted a new circular economy action plan to support the European Green Deal. The initiatives set out in the action plan cover a product's entire life cycle and aim to ensure that the resources used are kept in the EU economy for as long as possible. They include new rules on designing mobile phones and tablets to be resource efficient (circular).
The relevant legislation will build on two EU laws on:
- ecodesign, promoting the durability, reparability and recyclability of products
- energy labelling, promoting energy efficiency in products.

The widespread and increasing use of mobile phones (particularly smartphones) and tablets is giving rise to a number of new challenges, for example:
-increased functionality of these devices over time has resulted in a greater demand for power, storage capacity and materials to manufacture them. Although they are used in very small quantities, some of these materials raise global concerns because of their social, economic and geopolitical impacts (e.g. critical raw materials such as tantalum and tungsten).
- at the end of their useful life, smartphones and tablets are typically left 'hibernated', i.e. unused at home. This is a waste of resources, as the devices and their materials could, with the right processes, be reused, recycled and/or recovered.
- smartphones are replaced by users every 2 to 3 years on average, as their lifetime is linked to factors such as:
1. the user wanting a new model/software (not related to the device malfunctioning).
2. the (limited) availability of the most commonly damaged spare parts (the screen, battery and sometimes the back cover).
3. the (limited) availability of updated versions of the operating system, firmware or software.
4. cost and ease of repair.
5. reduced battery endurance over time. A battery that remains charged for longer means better energy performance and efficiency, thanks to less frequent charging and longer overall battery life (total number of charging cycles).

The two new Commission initiatives[1] aim to make mobile phones and tablets more energy efficient and to improve their material efficiency (i.e. make them less prone to damage and premature obsolescence). This will make these devices less harmful to the environment, while ensuring they can still circulate freely in the single market.

The identified areas for potential regulation[2] notably relate to:
- resistance when accidentally dropped
- protection from water and dust
- battery accessibility and longevity
- availability of software/firmware/operating system updates
- product durability
- ability of the product to be disassembled
- availability of priority spare parts
- data deletion and transfer functionalities
- appropriate information for users, repairers and recyclers.

[1] See https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12797-Environmental-impact-of-mobile-phones-and-tablets-Ecodesign and https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12798-Environmental-impact-of-mobile-phones-and-tablets-Energy-Labelling
[2] https://www.ecosmartphones.info/

About this open public consultation

This open public consultation aims to offer smartphone and tablet users and stakeholders involved in all areas of the value chain (original equipment manufacturers, component suppliers, users, repairers, recyclers, etc.) the opportunity to express their views on how to best address the policy challenges outlined above and to provide relevant information.

Your feedback, together with evidence from different sources including desk-research and other consultations, will contribute to the analysis on the best possible policy response.

The questionnaire first gathers information about you, the respondent. It is then divided into two sections: one on smartphones and one on tablets, as these two product categories are expected to be responsible for the highest share of environmental impacts when compared to similar categories such as feature phones or cordless phones. You may wish to reply to one or both of these sections. Each section should take around 15-20 minutes. You can also attach position papers/documents to support your views.
You can fill in the questionnaire either:
- as a final user (i.e. with questions based on your experience as user, such as For how long did you use your last smartphone?), or
- with a perspective on the whole market (i.e. with questions based on your understanding of the market, such as How long do you estimate the average operational life of a smartphone produced in the last 2 years to be?).

If you have any questions about this consultation, please email them to GROW-ECODESIGN@ec.europa.eu indicating 'open public consultation – mobile phones & tablets' in the subject line.

Thank you for your interest and cooperation.

About you

* Language of my contribution
- ○ Bulgarian
- ○ Croatian
- ○ Czech
- ○ Danish
- ○ Dutch
- ● English
- ○ Estonian
- ○ Finnish
- ○ French
- ○ German
- ○ Greek
- ○ Hungarian
- ○ Irish
- ○ Italian
- ○ Latvian
- ○ Lithuanian
- ○ Maltese
- ○ Polish
- ○ Portuguese
- ○ Romanian
- ○ Slovak
- ○ Slovenian
- ○ Spanish
- ○ Swedish

* I am giving my contribution as
- ○ Academic/research institution
- ● Business association
- ○ Company/business organisation
- ○ Consumer organisation
- ○ EU citizen
- ○ Environmental organisation
- ○ Non-EU citizen

○ Non-governmental organisation (NGO)

○ Public authority

○ Trade union

○ Other

* First name

FEAD

* Surname

Secretariat

* Email (this won't be published)

info@fead.be

* Organisation name

255 character(s) maximum

FEAD

* Organisation size

● Micro (1 to 9 employees)

○ Small (10 to 49 employees)

○ Medium (50 to 249 employees)

○ Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the transparency register. It's a voluntary database for organisations seeking to influence EU decision-making.

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* Country of origin

Please add your country of origin, or that of your organisation.

○ Afghanistan   ○ Djibouti   ○ Libya   ○ Saint Martin

○ Åland Islands   ○ Dominica   ○ Liechtenstein ○ Saint Pierre and Miquelon

◎ Albania	◎ Dominican Republic	◎ Lithuania	◎ Saint Vincent and the Grenadines
◎ Algeria	◎ Ecuador	◎ Luxembourg	◎ Samoa
◎ American Samoa	◎ Egypt	◎ Macau	◎ San Marino
◎ Andorra	◎ El Salvador	◎ Madagascar	◎ São Tomé and Príncipe
◎ Angola	◎ Equatorial Guinea	◎ Malawi	◎ Saudi Arabia
◎ Anguilla	◎ Eritrea	◎ Malaysia	◎ Senegal
◎ Antarctica	◎ Estonia	◎ Maldives	◎ Serbia
◎ Antigua and Barbuda	◎ Eswatini	◎ Mali	◎ Seychelles
◎ Argentina	◎ Ethiopia	◎ Malta	◎ Sierra Leone
◎ Armenia	◎ Falkland Islands	◎ Marshall Islands	◎ Singapore
◎ Aruba	◎ Faroe Islands	◎ Martinique	◎ Sint Maarten
◎ Australia	◎ Fiji	◎ Mauritania	◎ Slovakia
◎ Austria	◎ Finland	◎ Mauritius	◎ Slovenia
◎ Azerbaijan	◎ France	◎ Mayotte	◎ Solomon Islands
◎ Bahamas	◎ French Guiana	◎ Mexico	◎ Somalia
◎ Bahrain	◎ French Polynesia	◎ Micronesia	◎ South Africa
◎ Bangladesh	◎ French Southern and Antarctic Lands	◎ Moldova	◎ South Georgia and the South Sandwich Islands
◎ Barbados	◎ Gabon	◎ Monaco	◎ South Korea
◎ Belarus	◎ Georgia	◎ Mongolia	◎ South Sudan
◉ Belgium	◎ Germany	◎ Montenegro	◎ Spain
◎ Belize	◎ Ghana	◎ Montserrat	◎ Sri Lanka
◎ Benin	◎ Gibraltar	◎ Morocco	◎ Sudan
◎ Bermuda	◎ Greece	◎ Mozambique	◎ Suriname
◎ Bhutan	◎ Greenland	◎ Myanmar/Burma	◎ Svalbard and Jan Mayen
◎ Bolivia	◎ Grenada	◎ Namibia	◎ Sweden

- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton

- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica

- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru

- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Gambia
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States

- Cocos (Keeling) Islands
- Japan
- Philippines
- United States Minor Outlying Islands
- Colombia
- Jersey
- Pitcairn Islands
- Uruguay
- Comoros
- Jordan
- Poland
- US Virgin Islands
- Congo
- Kazakhstan
- Portugal
- Uzbekistan
- Cook Islands
- Kenya
- Puerto Rico
- Vanuatu
- Costa Rica
- Kiribati
- Qatar
- Vatican City
- Côte d'Ivoire
- Kosovo
- Réunion
- Venezuela
- Croatia
- Kuwait
- Romania
- Vietnam
- Cuba
- Kyrgyzstan
- Russia
- Wallis and Futuna
- Curaçao
- Laos
- Rwanda
- Western Sahara
- Cyprus
- Latvia
- Saint Barthélemy
- Yemen
- Czechia
- Lebanon
- Saint Helena Ascension and Tristan da Cunha
- Zambia
- Democratic Republic of the Congo
- Lesotho
- Saint Kitts and Nevis
- Zimbabwe
- Denmark
- Liberia
- Saint Lucia

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **For the purpose of transparency, the type of respondent (for example, 'business association, 'consumer association', 'EU citizen') country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.** Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

*Contribution publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

○ **Anonymous**

Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.

◉ **Public**

Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

☑ I agree with the [personal data protection provisions](#)

How do you want to fill in the questionnaire?

○ as a **final user** (i.e. with questions based on your experience as user, such as *For how long did you use your last smartphone/tablet?*). For the following questions, please focus – unless explicitly stated - on the latest smartphone /tablet in your possession. If you currently own more than one, please focus on one of them only. If you do not have a smartphone/tablet, please fill in the questionnaire based on your understanding of the product.

◉ with a perspective on the **whole market** (i.e. questions relate to your understanding of the market, such as *How long do you estimate the average operational life of a smartphone produced in the last 2 years to be?*).

Do you want to fill in the section on smartphones?

◉ Yes

○ No

Do you want to fill in the section on tablets?

◉ Yes

○ No

Part 1 - smartphones

1. Which of the following characteristics do users consider important when choosing a new smartphone?

	not important	somewhat important	important	don't know
Price	○	●	○	○
Ecodesign, e.g. durable, upgradeable, reparable designs or designs requiring fewer materials	○	●	○	○
Battery endurance (meaning the amount of time your smartphone can operate, starting with an initially fully charged battery until the device shuts off automatically due to a drained battery)	○	○	●	○
Long-lasting battery (meaning a battery with a durability comparable to the smartphone lifetime)	○	○	●	○
Performance (speed, functionalities such as quality of pictures)	○	○	●	○
Brand and design	○	○	●	○
Guarantee	○	●	○	○
Availability of local repair centres	○	○	●	○
Availability of spare parts	○	○	●	○
Availability of software/firmware updates for a certain period of time	○	●	○	○
Accompanying information on how to repair the product	○	○	●	○

A take-back scheme offered by the manufacturer or seller (i.e. you can take an obsolete device back to the manufacturer/seller at no cost or receive a discount when purchasing another device)	○	○	◉	○
Accompanying information about the environmental impact of the manufacturing phase of the product itself	○	○	◉	○

2. How long do you estimate the average operational life of smartphones produced in the last 2 years to be? (NB1: 'hibernated' smartphones left unused e.g. in a drawer, are not considered in use; NB2: the estimate should consider the operational life of a second hand product if relevant, i.e. total number of years in use)

- ○ Less than 1 year
- ○ 1 to less than 2 years
- ◉ 2 to less than 3 years
- ○ 3 to less than 5 years
- ○ 5 years or more
- ○ Don't know

3. Do you consider that the average operational life of a smartphone corresponds to its price?

- ○ In general terms, the higher the price, the higher the quality and, therefore, the longer the durability.
- ○ All smartphones have the same average durability.
- ◉ There is no link between price and durability
- ○ Don't know

4. When smartphones are no longer being used where do they usually end up?

- ◉ Users tend to still keep them in their household or store them (in the case of business users)

○ The devices are sold or given away

○ The devices are disposed of in electronic waste collection/recycling (incl. leaving it to the retailer to dispose of)

○ The devices are disposed of but not in electronic waste collection/recycling

○ Don't know

5. For which activities/functions, and for how long each day, are smartphones used on average?

	less than 30 minutes	30 minutes- less than 1 hour	1 hour - less than 2 hours	2 hours - less than 4 hours	4 hours or more	Don't know
Overall use	○	○	○	○	●	○
Phone calls	○	●	○	○	○	○
Using applications for chat	○	○	●	○	○	○
Streaming media, i.e. video or music content	○	●	○	○	○	○
Taking pictures	○	●	○	○	○	○
Playing offline games	●	○	○	○	○	○
Playing online games	●	○	○	○	○	○
Browsing the web	○	○	●	○	○	○
Other	○	○	○	○	○	○

6. How long is the average battery endurance of a smartphone produced in the last 2 years (i.e. how long can it operate starting with an initially fully charged battery until the device shuts off automatically due to a drained battery)?

○ Less than 6 hours

● 6 hours - less than 12 hours

○ 12 hours - less than 24 hours

○ 24 hours - less than 48 hours

○ 48 hours or more

○ Don't know

7. How do users typically charge their device?

● Full charging

○ Partial charging (i.e. not full charge)

○ Fast charging, if the manufacturer provides a fast charger

○ Don't know

8. Which of the following elements would, in your view, make it easier to repair smartphones compared with the current situation? (You can choose more than one option.)

☑ The compulsory availability of critical spare parts for a minimum amount of time (e.g. 6 years)

☑ A maximum cap on the price of spare parts

☐ Access to repair and maintenance information, such as disassembly maps of the device

☑ 'Do it yourself' repair/refurbishment operations for some components (e.g. the battery) that do not require technical knowledge, with commonly available tools provided

☐ Real time information on ageing of the device/components during the use phase, such as the number of charge/discharge cycles of the battery

☐ Don't know

☐ I think it is already easy to repair smartphones now

☐ Other solutions

9. If there was an EU ecodesign regulation on smartphones, addressing material efficiency aspects in particular (such as those mentioned in the previous questions), how do you think it would affect innovation in the sector?

○ I would not expect it to have any impact on the innovation capability of this sector

○ The ecodesign requirements could promote innovation in this sector (please specify how/what).

◉ Ecodesign requirements for smartphones could indirectly cause barriers to innovation (please specify which)

○ Other (please specify)

○ Don't know

(Please specify)

While designing mobile phones and tablets, their end of life should be kept in mind: they must be durable, reparable, dismantlable and recyclable.

The average lifespan of a smartphone is two-three years and the reasons for the early replacement of the device we live with all day, are different: fashion, the rapid evolution of technology (everything gets old in a short time) and industrial logic.

Nowadays repairing smartphones and tablets in case of breakdown is almost impossible because companies design them inaccessible. They are not designed to be repairable, with unobtainable spare parts and without manuals that favor any intervention.

Regarding recyclability of mobile phones and tablets, in order to improve it, the following general rules should be kept in mind:

- phase out substances of very high concern;
- try to substitute as much as possible critical raw materials;
- make parts easy dismantlable trying to use less glue as possible and more joints;

Incorrect disposal and untargeted collection of batteries and accumulators pose a high risk to people and the environment through fire incidents in waste sorting systems. Mobile phones and tablets using batteries or accumulators must be designed in such a way that batteries' waste derived from them can be removed easily by any end consumer, discharged without prior pack-disassembly and ensure easy access to a hole for the fire-hose as fires are the main problems of mobile batteries' waste.

Part 2 - tablets

1. Which of the following characteristics do users consider important when choosing a new tablet?

	not important	somewhat important	important	don't know
Price	○	◉	○	○
Ecodesign, e.g. durable, upgradeable, reparable designs or designs requiring fewer materials	○	◉	○	○
Battery endurance (meaning the amount of time your tablet can operate, starting with an initially fully charged battery until the device shuts off automatically due to a drained battery)	○	○	◉	○

Long-lasting battery (meaning a battery with a durability comparable to the tablet lifetime)	○	○	◉	○
Performance (speed, functionalities such as quality of pictures)	○	○	◉	○
Brand and design	○	○	◉	○
Guarantee	○	◉	○	○
Availability of local repair centres	○	○	◉	○
Availability of spare parts	○	○	◉	○
Availability of software/firmware updates for a certain period of time	○	◉	○	○
Accompanying information on how to repair the product	○	○	◉	○
A take-back scheme offered by the manufacturer or seller (i.e. you can take an obsolete device back to the manufacturer/seller at no cost or receive a discount when purchasing another device)	○	○	◉	○
Accompanying information about the environmental impact of the manufacturing phase of the product itself	○	○	◉	○

2. How long do you estimate the average operational life of tablets produced in the last 2 years to be? (NB1: 'hibernated' tablets left unused e.g. in a drawer, are not considered in use; NB2: the estimate should consider the operational life of a second hand product if relevant, i.e. total number of years in use)

- Less than 1 year
- 1 to less than 2 years
- ⦿ 2 to less than 3 years
- 3 to less than 5 years
- 5 years or more
- Don't know

3. Do you consider that the average operational life of a tablet corresponds to its price?

- In general terms, the higher the price, the higher the quality and, therefore, the longer the durability.
- All tablets have the same average durability.
- ⦿ There is no link between price and durability
- Don't know

4. When tablets are no longer being used where do they usually end up?

- ⦿ Users tend to still keep them in their household or store them (in the case of business users)
- The devices are sold or given away
- The devices are disposed of in electronic waste collection/recycling (incl. leaving it to the retailer to dispose of)
- The devices are disposed of but not in electronic waste collection/recycling
- Don't know

5. For which activities/functions, and for how long each day, are tablets used on average?

	less than 30 minutes	30 minutes- less than 1 hour	1 hour - less than 2 hours	2 hours - less than 4 hours	4 hours or more	Don't know
Overall use	○	○	○	⦿	○	○
Using applications for chat	⦿	○	○	○	○	○
Streaming media, i.e. video or music content	○	○	⦿	○	○	○
Taking pictures	⦿	○	○	○	○	○

Playing offline games	●	○	○	○	○	○
Playing online games	○	○	●	○	○	○
Browsing the web	●	○	○	○	○	○
Other	○	○	●	○	○	○

6. How long is the average battery endurance of a tablet produced in the last 2 years (i.e. how long can it operate starting with an initially fully charged battery until the device shuts off automatically due to a drained battery)?

- ○ Less than 6 hours
- ● 6 hours - less than 12 hours
- ○ 12 hours - less than 24 hours
- ○ 24 hours - less than 2 days
- ○ 2 days - less than 3 days
- ○ 3 days or more
- ○ Don't know

7. How do users typically charge their device?

- ● Full charging
- ○ Partial charging (i.e. not full charge)
- ○ Fast charging, if the manufacturer provides a fast charger
- ○ Don't know

8. Which of the following elements would, in your view, make it easier to repair tablets compared with the current situation? (You can choose more than one option.)

- ☑ The compulsory availability of critical spare parts for a minimum amount of time (e.g. 6 years)
- ☑ A maximum cap on the price of spare parts
- ☐ Access to repair and maintenance information, such as disassembly maps of the device
- ☑ 'Do it yourself' repair/refurbishment operations for some components (e.g. the battery) that do not require technical knowledge, with commonly available tools provided
- ☐ Real time information on ageing of the device/components during the use phase, such as the number of charge/discharge cycles of the battery
- ☐ Don't know

☐ I think it is already easy to repair tablets now

☐ Other solutions

9. If there was an EU ecodesign regulation on tablets, addressing material efficiency aspects in particular (such as those mentioned in the previous questions), how do you think it would affect innovation in the sector?

○ I would not expect it to have any impact on the innovation capability of this sector

○ The ecodesign requirements could promote innovation in this sector (please specify how/what).

◉ Ecodesign requirements for tablets could indirectly cause barriers to innovation (please specify which)

○ Other (please specify)

○ Don't know

(Please specify)

> While designing mobile phones and tablets, their end of life should be kept in mind: they must be durable, reparable, dismantlable and recyclable.
>
> The average lifespan of a smartphone is two-three years and the reasons for the early replacement of the device we live with all day, are different: fashion, the rapid evolution of technology (everything gets old in a short time) and industrial logic.
>
> Nowadays repairing smartphones and tablets in case of breakdown is almost impossible because companies design them inaccessible. They are not designed to be repairable, with unobtainable spare parts and without manuals that favor any intervention.
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> Regarding recyclability of mobile phones and tablets, in order to improve it, the following general rules should be kept in mind:
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> •   try to substitute as much as possible critical raw materials;
> •   make parts easy dismantlable trying to use less glue as possible and more joints;
>
> Incorrect disposal and untargeted collection of batteries and accumulators pose a high risk to people and the environment through fire incidents in waste sorting systems. Mobile phones and tablets using batteries or accumulators must be designed in such a way that batteries' waste derived from them can be removed easily by any end consumer, discharged without prior pack-disassembly and ensure easy access to a hole for the fire-hose as fires are the main problems of mobile batteries' waste.

Conclusion

Would you like to attach a position paper/document to support your views?

○ Yes

○ No

Please upload your file

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