

DG CNECT
 Meeting between Commissioner Breton and Apple CEO Tim Cook
 26 September 2023

BRIEFING NOTE

Scene setter and context

For the Platforms (DSA, DMA) there is a separate briefing, CAB BRETON/2267.

ARTIFICIAL INTELLIGENCE

You will be meeting Apple’s CEO Tim Cook. Apple is not necessarily seen as leader in the Artificial Intelligence (AI) field, the same way Google and Facebook are. Apple’s main AI divisions are the Siri team, and the Core ML (machine learning) team.



Semiconductors

In March 2023 Apple announced that it will continue to invest in the Silicon Design Centre expansion in Munich. This will be an opportunity to discuss the latest developments around the EU Chips Act and Apple’s respective positions.



Ecodesign

Discuss, as per Apple’s request, the implications of the Ecodesign regulation on mobile phones and tablets (in particular the trade-off between durability and reparability; repair vs quality and safety concerns for example in battery replacement).

Decision-making process

KEY messages/LTT

ARTIFICIAL INTELLIGENCE

- AI solutions can offer great opportunities for businesses and citizens but can also pose risks.
- As mentioned in President von der Leyen's State of the Union letter of intent, Europe should lead global efforts on artificial intelligence, guiding innovation, setting guardrails and developing global governance.
- Therefore, the AI Act proposal is expected to foster innovation and to provide legal certainty for all providers of AI systems following a proportionate and risk-based approach.
- This approach will give citizens and business confidence in AI, knowing that it is safe and respects fundamental rights and European values.
- The trilogue negotiations have started on 14 June. General Purpose, high-risk use cases and the prohibitions are among the debated topics.
- Europe has pioneered clear rules for AI. This approach will serve as inspiration for global rules and principles for trustworthy AI.



EU Digital Identity Wallet and Digital Euro

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Semiconductors

- Welcome Apple's interest in expanding its European presence.
- The European Chips Act has stimulated the announcements of over EUR 100 billion of public and private investments.
- Europe has set the vision to produce the most sophisticated and energy-efficient semiconductors in Europe, even below 5 or 2 nanometres.
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- The Chips Act pillar 1 provides for, among others, the setting up of pilot lines on advanced semiconductor technologies.
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Decision-making process

Ecodesign

- The Ecodesign & Energy Labelling of mobile phones & tablets are expected to ensure that these devices save more than a third of their primary energy consumption by 2030, as well as reduce the need for primary raw materials.
- (specifically *on the Apple's point*): As an effect of the requirements laid down in the Ecodesign regulation, manufacturers will have to equip their devices **choosing** between batteries that are:
 - removable by any layperson with basic tools ('**reparability path**'), or
 - long-lasting, i.e. not having a deterioration of more than 20% of their capacity after 1000 cycles of charge/discharge ('**durability path**')¹.
 - The formulation of the above requirements on battery leaves room of manoeuvre to the manufacturer, in order to choose the best design strategy to comply with the requirements, and without impinging product safety, allowing at the same time to attain the ambitious environmental objectives laid down for mobile phones and tablets in the Circular Economy Action Plan 2020.

Defensives / Q&A

ARTIFICIAL INTELLIGENCE

The AI Act should not have specific rules for general-purpose AI as this goes against the risk-based approach and will stifle innovation.

- The Commission follows closely the latest developments with general-purpose AI systems that have gained a lot of public attention lately.
- There seems to be a consensus between the EU co-legislators that targeted rules are needed for these powerful large models. Considering that these models are expected to be integrated or used in a very large number of AI based products, it is important that downstream providers can effectively ensure

¹ Batteries shall be in any case removable and refurbishable by experts, at least with the use of commercial tools

compliance of their systems with the AI Act. It is clear that these AI systems are too powerful and important for the future of our economy and society not to be regulated. That's also something increasingly recognised by those developing them who agree with the need for safety and ethical safeguards and regulatory oversight.

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What is the state of play of the EU Chips Act?

The European Chips Act was published in the Official Journal of the European Union on the 18th of September, entering into force three days after publication, on the 21st September. To respond to critical dependencies, the Act will strengthen manufacturing activities in the Union, stimulate its design ecosystem, support scale-up and innovation across the whole value chain, and set up a mechanism for coordination and response to critical shortages. Overall, the Union aims to reach the target of doubling its current global market share to 20% in value in 2030.



Ecodesign & Energy Labelling of mobile phones & Tablets

Decision-making process

Could the new rules imply a potential overproduction resulting in wasted resources, reduced material efficiency and higher costs for the consumer?

Our analysis shows that the negative environmental impact associated with the manufacturing of spare parts is vastly offset by environmental benefits (in terms of fewer new devices to be manufactured, because the current ones are repairable). In general terms, having less new devices to be placed on the market in substitution of the broken and or older ones will also translate in an economic benefit for users. The Commission estimates a reduced annual consumer expenditure of ~ EUR 20 billion in 2030.

The choice of the list of spare parts to be made available was done taking into account the 'likelihood of failure' of the component, together with the environmental impact associated to the manufacturing of the spare part itself. In particular, mainboards are not included in the list of spare parts, as they are associated with most significant environmental impact.

Background information

ARTIFICIAL INTELLIGENCE

Apple & AI

Apple is the most valuable technology company in the world worth around \$2.82 trillion (June 2023). Apple is making significant efforts to enter the world of AI. However, Apple is not necessarily seen as leader in this field the same way Google and Facebook are.

According to CEO Tim Cook: 'Machine learning (ML) and Artificial Intelligence are important to Apple's future'. Apple claims to use ML to 'enhance [...] experience and [...] privacy'.

Apple uses Artificial Intelligence technologies in numerous domains, for example in its announced "Vision Pro", a \$ 3.500 mixed-reality headset device, which uses an iris-scan for authentication. Other examples of past AI technologies are 'FaceID', which identifies users with a sensor to unlock their phones or fall/crash detection on the iPhone and Apple Watch.

Apple's main AI divisions are the Siri team, and the Core ML team, focusing on natural language processing (NLP) and computer vision.

Apple has not yet publicly announced work on generative AI and might wait observe the market first. However, there are reports (March 2023) about Apple testing new natural language generating features (codenamed "Bobcat") which it might use to improve Siri.

Apple is one of the co-founders of the Partnership on AI, a non-profit organisation that is committed to safety-critical, fair, transparent, and accountable use of AI.

State of play on AI Act

Following the Commission's proposal for the AI Act of April 2021, the Council unanimously adopted a general approach on the AI Act on 6 December 2022 and the European Parliament adopted its mandate on 14 June. With the first trilogue on 14 June the intra-institutional

negotiations of the co-legislators have started.

The next trilogue is planned for 2 and 3 October. The co-legislators have agreed on the need to include all political topics on the agenda (although some only at exploratory level). The trilogue is planned to conclude at the latest on 6 December.

AI Pact

In addition to the AI Act, the AI Pact is planned. Once the AI Act is adopted, there will be a 2 or 3-year transitional period before the regulation becomes applicable to operators. An AI Pact could serve as a commitment by EU and non-EU key AI actors to anticipate the coming into force of certain provisions of the EU AI Act.

It will convene companies active on the EU market and seek early implementation by them of key provisions of the AI Act in Europe, once it has been agreed by co-legislators, to bridge the time until the provisions enter into application and thus become binding. Companies would agree to frontload the implementation of key AI Act provisions on a voluntary basis.

Rules for General Purpose AI (GPAI)/generative AI

Under the Commission proposal GPAI systems are not expressly regulated, but the requirements and obligations related to high-risk AI systems would kick in if they are used in the context of high-risk use cases. In addition, there are transparency requirements for systems intended to interact with humans (e.g. chatbots) and systems that generate certain synthetic content (e.g. audio, video, images).

Decision-making
process

State of the Union on AI

As mentioned in [President von der Leyen's State of the Union letter of intent](#), Europe should lead global efforts on **artificial intelligence**: guiding innovation, setting guardrails and developing global governance.

- **On guiding innovation**: the Commission will launch the **EU AI Start-Up Initiative**, identifying the most promising European start-ups in AI and giving them access to the supercomputing capacity. This goes together with broader efforts to support AI innovation across the value chain – from AI start-ups to all those businesses using AI technologies in their industrial ecosystems. This includes our [Testing and Experimentation Facilities for AI](#) (launched in January 2023), [Digital Innovation Hubs](#), the development of regulatory sandboxes under the AI Act, our support for the [European Partnership on AI, Data and Robotics](#) and the research supported by HorizonEurope.
- **Guardrails for AI**: Europe has pioneered clear rules for AI systems through the [EU AI Act](#), the world's first comprehensive regulatory framework for AI. It serves as an inspiration for **global rules and principles** for trustworthy AI. The **AI Pact** will convene

AI companies, help them prepare for the implementation of the EU AI Act and encourage them to commit voluntarily to applying the principles of the Act before its date of applicability.

- **Governance:** with the AI Act and the Coordinated Plan on AI, the Commission is working towards a **governance framework** for AI, which can be a centre of expertise, in particular on large foundation models, and promote cooperation, not only between Member States, but also internationally. When developing governance for AI, one must ensure the involvement of all – **not only big tech**, but also start-ups, businesses using AI across industrial ecosystems, consumers, NGOs, academic experts and policy-makers. This is why the Commission (together with the Spanish Presidency) will convene in November the **European AI Alliance Assembly**, bringing together all these stakeholders. To promote this inclusive approach to trustworthy AI on a **global level**. President von der Leyen’s proposal for an intergovernmental panel on AI – similar to the IPCC – is a clear call for action.

International developments in AI principles and regulation

The EU also wishes to promote guardrails at a global level. Bilateral cooperation is ongoing or being developed especially with the US (Trade and Technology Council), Canada, Japan (Digital Partnership), India (Trade and Technology Council), South Korea (Digital Partnership) and Singapore (Digital Partnership). Multilaterally the EU is involved in G7, G20, the OECD and the Global Partnership on AI.


EU Digital Identity Wallet



personal data

Digital Euro





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In March 2023, Apple announced it will invest an additional 1 billion euros in German engineering over the next six years as part of its Silicon Design Centre expansion in central Munich. This is on top of the company's previous 1 billion euro investment commitment from 2021, when Apple established Munich as the headquarters to its new European Silicon Design Centre. Munich is already Apple's largest engineering hub in Europe, and the engineering teams there are integral to the new Apple innovations.

Apple's Munich-based teams have contributed to the breakthrough custom silicon designs used in the latest Apple products, as well as critical cellular and power management innovations.

There are already more than 2,000 engineers in Apple's European Silicon Design Centre in Bavaria working on breakthrough innovations, including custom silicon designs, power management chips, and future wireless technologies.

In May 2023, Apple announced its spend with EU suppliers has increased more than 50% since 2018 (€85 billion in past the five years) and more than €20 billion in 2022 alone.

According to Apple, since opening its first German office in 1981 with 10 employees, Apple has expanded to more than 4,500 team members throughout the country. The company has grown by over 80 percent in Germany over the past five years, and has added more than 1,600 team members in the past three years alone. Apple also continues to expand its work with German suppliers, supporting thousands of jobs through its multibillion-euro annual supply chain spend. Over the past five years, Apple has spent over 18 billion euros with more than 800 German companies, supporting job creation, community development, and workforce opportunities throughout the country.

Its investments in Europe reach more than 4,000 European suppliers and support cutting-edge innovations that can be found in every product Apple makes, from sensors in Apple Watch, to lasers in iPhone, to microcontrollers in Mac. Through these investments and the iOS app economy, Apple now supports more than 2.6 million European jobs.

Apple is one of ST Microelectronics' top customers. ST delivers proximity sensors to Apple and near-infrared cameras based on SOI technology. ST generated 18% of its revenue with Apple.

Apple is among the leading customers for the most advanced nodes manufactured at TSMC.



Ecodesign & Energy Labelling of mobile phones & Tablets

New rules to help consumers make informed and eco-friendly choices when buying mobile phones and tablets have been recently finalised (Ecodesign Regulation (EU) 2023/1670 and energy labelling regulation (EU) 2023/1669). The requirements will enter into application as of 20 June 2025.

Based on the commitments of the Circular Economy Action Plan 2020, the Regulations set compulsory requirements for mobile phones and tablets regarding:

- design for reliability (resistance to accidental drops, scratch resistance, protection from dust and water, battery longevity)
- ability of the product to be disassembled and repaired (such as availability of critical spare parts),
- availability of operating system version upgrades
- data deletion and transfer functionalities
- provision of appropriate information for users, repairers and recyclers
- non-discriminatory access for professional repairers to any software or firmware needed for the replacement.

The Energy Label (for smartphones and slate tablets) foresees the display of information on the energy efficiency of the device together with information on the device reparability score, the battery longevity, the protection to dust and water ingress, and the 'repeated free fall reliability' (i.e. how many falls the device can withstand remaining operational).

Contact:

Artificial Intelligence



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Personal
data

Personal
data

[REDACTED]
On the Cyber Resilience Act (CRA) proposal

[REDACTED]
Ecodesign & Energy Labelling of mobile phones & Tablets

