

Europe Can Lead in AI Wearables

A Pragmatic Path Forward

AI wearables represent the next generation of personal computing with a global market expected to reach \$138.5B by 2029. These technologies – spanning smartwatches, fitness trackers, health monitors, and emerging AI glasses – are meeting people where they are in their daily lives – affordably and on their own terms. The true revolution in AI isn't happening in distant data centers – it's happening on our wrists, in our ears, and right before our eyes – in AI-enabled wearables.

Why Europe can win?

- > **Early leadership in wearables ecosystem:** Europe has built a strong wearables ecosystem including global market leaders like Oura Health (smart rings), Philips (medical-grade algorithms and sensing technology), and EssilorLuxottica, which is the market leader in AI glasses.
- > **Component expertise:** Europe controls critical elements of the global wearables supply chain. STMicroelectronics, Europe's largest semiconductor supplier, produces the motion sensors enabling activity tracking, and Bosch Sensortec's ultra-low-power sensors appear in millions of wearables globally.
- > **World class talent:** Europe boasts a world-class talent base, engineering capacity, and education systems – key ingredients for capitalizing on AI opportunities.

But this future may not happen in Europe.

Overregulation is putting European wearables industry at risk. The current regulatory approach to new technologies risks sidelining European builders and citizens – as exemplified by the **EU Batteries Regulation**.

Europe has a strong legacy and ecosystem foundation to **lead in AI wearables**.

This *could* be the European smartphone moment.

The cost of getting this wrong: consumers, the environment, and competitiveness:

- > **Consumers:** uncertainty and redesign cycles mean the latest products can arrive late to Europe – or not at all – while devices that do arrive risk being bulkier, heavier, less water-resistant, with shorter battery life and reduced functionality. Similar delays have already occurred for AI products in Europe due to regulatory uncertainty. This would cut off European citizens from the latest innovations, pushing them to the sidelines of the global playing field.
- > **Environment:** mandating consumer-removable batteries can lead to weaker, shorter-lived batteries and excess replacement inventory. Stored batteries risk becoming unusable if not maintained. The result can be more e-waste, premature device replacement, and greater raw-material consumption – undermining circularity goals.
- > **Competitiveness:** while European firms re-engineer entire product lines, US and Asian competitors – free from equivalent constraints – can launch 12–24 months faster outside Europe, design with full form-factor freedom, and iterate based on market feedback. In fast-moving consumer tech, being 18–24 months late is often equivalent to never launching.
- > **From February 2027, all portable batteries must be readily removable and replaceable** – well-intentioned for sure, but misaligned with the physical constraints of wearables that must be optimized for everyday usage – small, light, comfortable, and aesthetically refined while delivering sufficient battery life.
- > **For AI wearables, power demands are higher** (machine learning inference, continuous sensing, real-time processing). The battery often occupies 40–60% of internal volume. Adding removable housings and mechanisms consumes scarce space, forcing larger, heavier, less capable devices.
- > **No amount of engineering cleverness circumvents this reality.**

The Environmental Omnibus is the best route to review the Batteries Regulation and enable European leadership in AI wearables.

Call to action



Call for the pragmatic path forward for the Batteries Regulation

Pause enforcement of Article 11 and review the EU Batteries Regulation via the Environmental Omnibus as part of the simplification agenda.