# Apple supplier Corning is working on flexible glass for foldable displays

Corning, the glass manufacturer that currently provides Apple with Gorilla Glass for its iPhones, is working on a bendable version of the glass that could be with us in less than two years. In an interview with *Wired* (via *MacRumors*), Corning general manager John Bayne said that the challenge was creating a glass that's thin enough to bend without sacrificing the resilience needed to protect a display.

In 2017 Apple said it was investing $200 million in the company to "support Corning's R&D, capital equipment needs, and state-of-the-art glass processing." Patents filed by Apple suggest that it's already investigating the area, while a report published last year claimed Apple could release a foldable device as early as 2020.

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Bayne's comments come as two key Android phone manufacturers have announced their first foldable phones, the Samsung Galaxy Fold and the Huawei Mate X. However, both of these devices use plastic screens in order to achieve their form factor. Although the Mate X's screen offered comparable friction and responsiveness to a glass screen, its ability to resist scratches remains untested.

Bayne notes that the company is targeting a "3- to 5-millimeter bend radii" for its 0.1mm thick glass, which could allow a foldable phone to be as thin as 6mm to 10mm with the folding screen wrapped around the outside. For reference, the

iPhone XS is 7.7mm thick.

”In a glass solution, you’re really challenging the laws of physics, in that to get a very tight bend radius you want to go thinner and thinner, but you also have to be able to survive a drop event and resist damage.” said Bayne. “The technical challenge is, can you keep those tight 3- to 5-millimeter bend radii and also increase the damage resistance of the glass. That’s the trajectory we’re on.”

The company already produces the bendable Willow Glass, which can be rolled up like a sheet of paper. Unfortunately, its current manufacturing process makes it impossible for use in phone screens, since it has to be dipped into a salt solution. This would corrode the transistors that would need to be in the glass if it was meant for a display, according to Bayne.

If Corning is able to make its foldable glass a reality, then it could be exactly what Apple needs to achieve the folding phone form-factor without compromising on design or durability.

https://www.theverge.com/2019/3/5/18251328/apple-corning-foldable-display-gorilla-glass-bendable-smartphone