

Avoiding Death By Exposure

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There's no such thing as a small bug. Customers, be they people or businesses, do not measure Software bugs in metres, feet or miles or kilograms. They use measures like time wasted, life-lost and money.

Take a [recent bug from Facebook](https://www.theverge.com/2020/5/7/21250689/facebook-sdk-bug-ios-app-crash-apple-spotify-venmo-tiktok-tinder) (<https://www.theverge.com/2020/5/7/21250689/facebook-sdk-bug-ios-app-crash-apple-spotify-venmo-tiktok-tinder>). It affected thousands, maybe millions of customers and the bottom line of companies (seemingly) unconnected with Facebook such as Spotify, Tik-Tok and SoundCloud, and probably countless smaller companies. So why did the journalist seem to think it was small?

Too often we judge the systems we create by how likely they are to fail, given our narrow view of the world. A better measure is our exposure when the systems fail. The exposure for Facebook is a greater motivation for other companies to disentangle themselves from Facebook's SDK, or promote a rival platform.

It doesn't matter if our bug is one tiny assumption or one character out of place, if it stops a million people from using or buying an app then it's a huge bug.



We need a revolution in how we assess software testing costs.

By deciding to not invest in developing robust software and not test for bugs, we are increasing our exposure to harm. By just ticking off scenarios completed, you are not saving money; you are teaching customers and business partners that you are not reliable. That your data model isn't correct or that you're not safe.

The costs you saved yesterday will be a tiny fraction of the money you lose in the longer term, it's just a matter of time. You can not calculate the mean cost of your app's software development, because you don't have all the costs. Your biggest costs will come later when your **SDK fails** (<https://www.theverge.com/2020/5/7/21250689/facebook-sdk-bug-ios-app-crash-apple-spotify-venmo-tiktok-tinder>), your game **wipes people drives** (<https://www.thegamer.com/minecraft-dungeons-hard-drive-wipe-glitch-bug/>) or your **planes crash** (https://www.theregister.co.uk/2019/03/26/737_crash_update/).

Measure your software's quality by the exposure you have to failure, not the cost of man-hours spent developing and testing each feature.