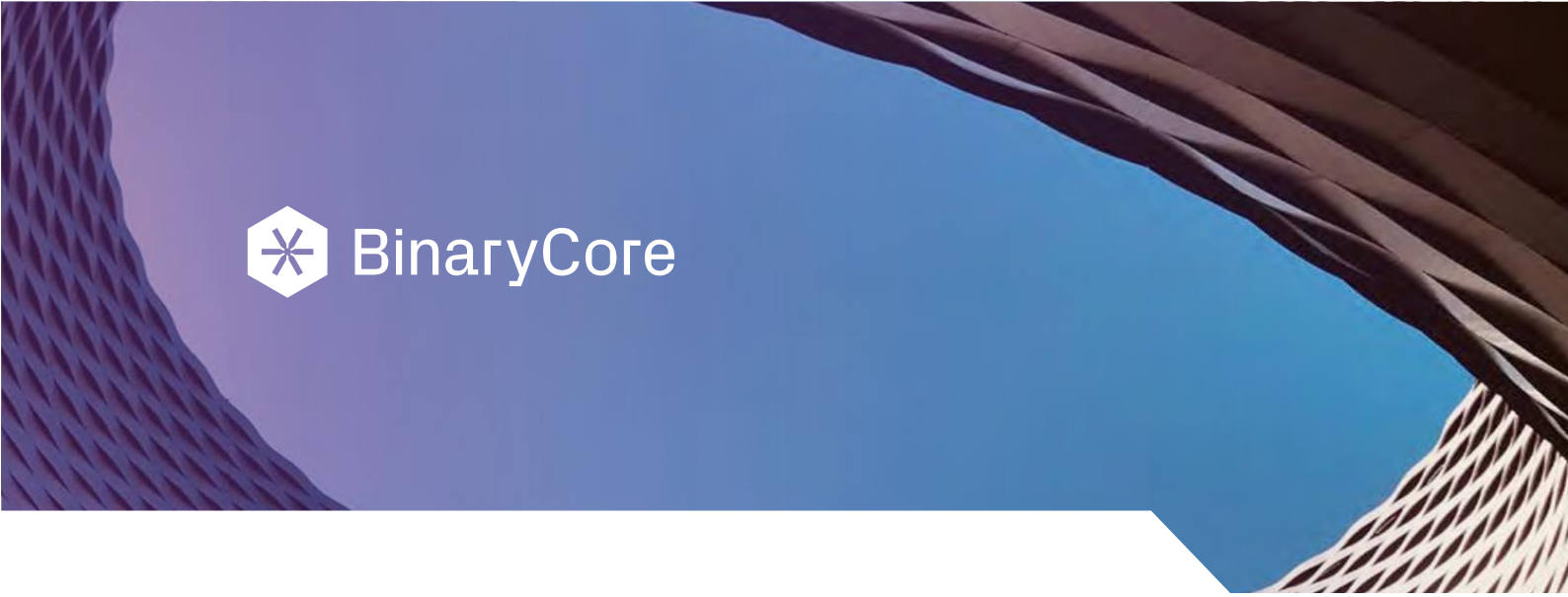

BinaryCore

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The future of product design is in the clouds

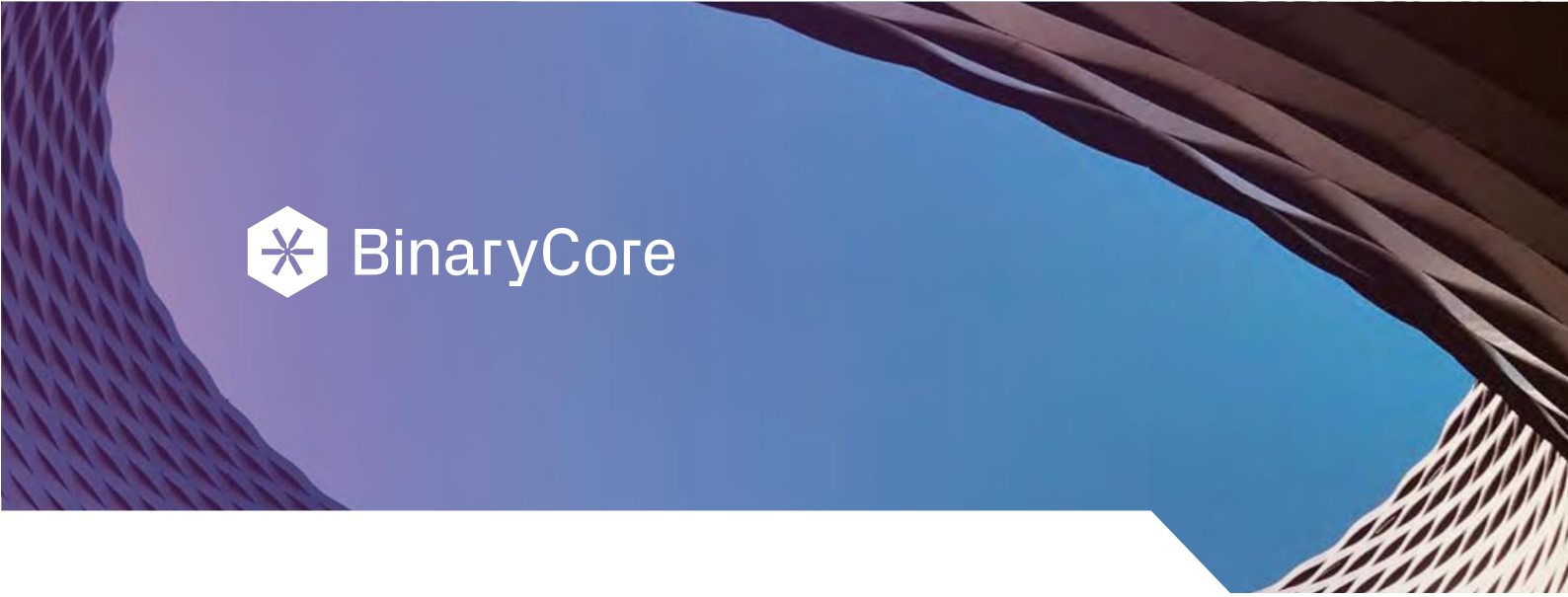
The current state and nature of today's digital economy emphasises continuous improvement of productivity and innovation. Cloud computing, for example, has seen a switch from the exploration of theoretical possibilities to the consolidation of practical application.

In the world we live in today, IT needs to be instantaneous. To bring efficiencies to high-end computing, cloud is now being used to facilitate the production of a range of products such as chips, medical devices, toys, and even vehicles.

In designing these products, the introduction of cloud has enabled many processes to be streamlined, giving designers the opportunity to explore new and different ideas – and therefore, encouraging innovation – which is what design is all about!

Why cloud?

There are several key drivers we can point to when examining the reasons why many of those in product design are looking towards cloud strategies.



First and foremost: collaboration. Cloud strategies don't require you to spend time installing and maintaining servers for file storage and backing them up, meaning that you don't have to worry about getting your teams up and running. Instead, they can jump on their computer and join the design process with all the correct tools at their disposal.

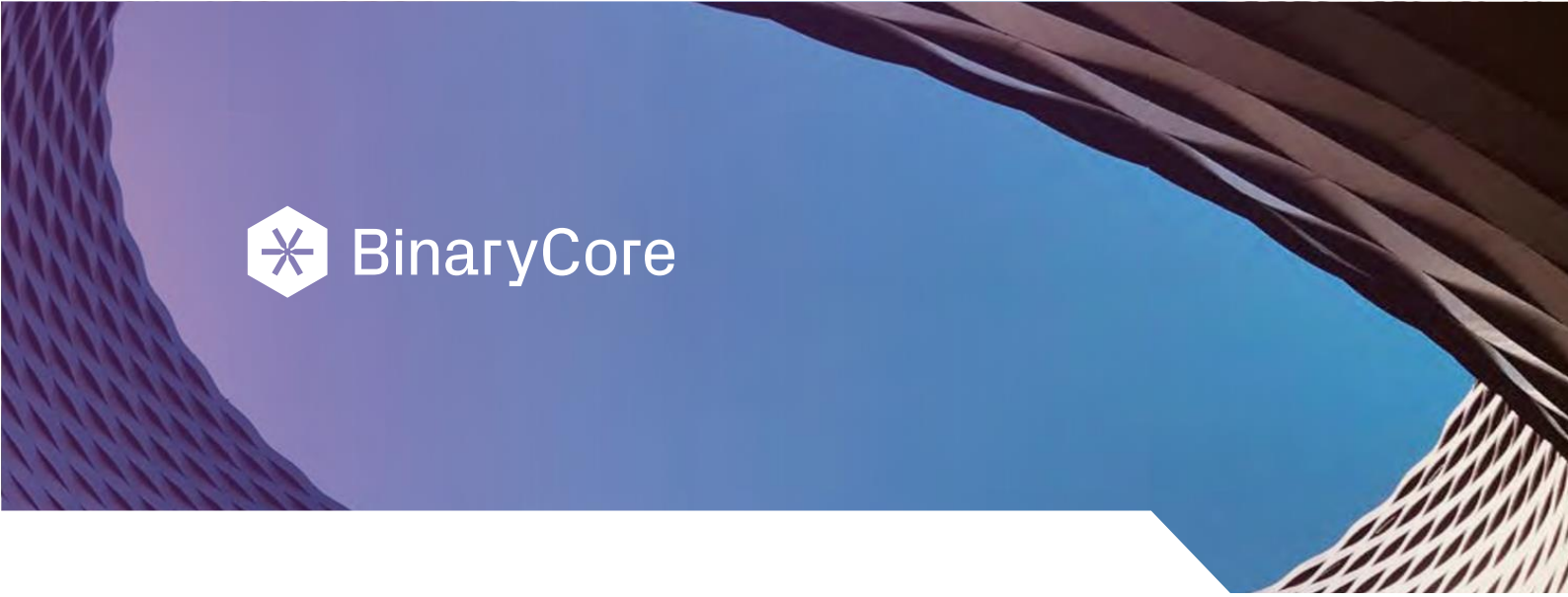
Older systems can easily create bottlenecks in this process, such as waiting for team members to figure out version control, upload and/or copy files across to a shared system or via email. Ultimately, this wastes time that could be spent on far more valuable activities.

Secondly: helping with hybrid. The pandemic has catalysed a shift towards hybrid working, which could be a real challenge for product designers who require specialist hardware or software. With cloud, however, the transition is eased greatly.

But, aside from practical considerations like saving on cost and time, how does cloud help the actual design process?

Cloud dramatically lowers the barriers to testing new design ideas through a combination of various simulation techniques, which helps to spot any flaws or mistakes in the product design. The adoption of techniques such as multi-physics simulation, generative design, and multimodal AI for the design of physical products has been accelerated by cloud, and in turn, helps designers to rectify any problems much earlier in the development cycle.

Again, this is evidence of cloud promoting innovation, as designers and researchers no longer need to spend time on non-essential tasks, meaning they can focus on broader design, scientific, and engineering challenges.



However, it is important not to overlook the ever-present connectivity that cloud provides. Running the product design process through cloud-based control planes extends the possibilities of the design process, and when done correctly with the right technologies companies this process can be managed in half the time it currently takes. Indeed, new technologies like digital twinning have become imperative to software systems that design, monitor, and improve physical product design. Digital twins have a broad appeal and reach across all industries, including manufacturing, e-commerce, architecture, and aerospace, serving as a real-time digital partner of a physical object in the design process.

Clearly, cloud is becoming increasingly important to the product design process. It encourages collaboration, accelerates design partner and automation tool integration to enhance product quality, helps with hybrid working, and streamlines the overall design process. In fact, when all of these elements come together failure rates can be reduced by as much as 30%. As advances in leading-edge products accelerates because of cloud's further integration into the design process a realm of possibilities beckons for leaders to unleash new business capabilities.

If this is a topic you would like to discuss further to understand the future potential for your organisation, please let me know or visit www.binarycore.com

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- Michael Roemer, Founder, Binarycore