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Why "Simpler Technology" Is Becoming More Valuable Than Complex Systems

We built a most powerful technology in human history but turns out we couldn't fix it, use it or trust it.

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Introduction

For decades, the technology industry revolved around one assumption: More features, more value.

Bloatware, complicated platforms and redundant architecture were seen as a sign of development. More features were considered sophisticated.

That assumption is slowly but surely eroding. Software bloated with capabilities or hardware engineered with redundant systems is not a sign of progress anymore. Across industries counting from enterprise software to consumer's electronics to infrastructure, a shift walks in the way. It's not a rejection of innovation. It is maturation. As stated by Kelly Johnson

> ***"Keep it simple, stupid — the best design is the simplest one that works."***
>
> ***Kelly Johnson, Lockheed Engineer & originator of the KISS Principle***

Technology Overview

The Hidden Cost of Complexity

In 2017, a study published in the Journal of Systems found that software complexity is one of the leading cause of project failure, with overly complex systems contributing to cost overruns of up to 200% in large scale IT projects. More moving parts mean more points of failure and more difficulty in tracing problems.

Clayton Christensen's theory of disruptive innovation, detailed in The Innovator's Dilemma (1997) predicted exactly this. The incumbent exceeds the customer requirements whereas simpler, cheaper more focused alternatives enter the market and wins.

Proven Examples of Simplicity Winning

Linux philosophy "Do one thing and do it well" has produced one of the durable and wildly used platform. Linux powers 90% of the world's server because doing one thing well architecture makes it

stable and maintainable for decades. SQLite, a database engine occupying a single file and operating without any servers, operates on an estimate trillion devices.

Despite Slack's sophisticated threading and real time features, email a 50 year old technology which has remained the world's dominant business communication tool. Slack's communication fatigue because of its complexity was always dominated by the email's asynchronous simplicity.

Why? Asynchronous simplicity. Slack's very richness introduced communication fatigue. Email's constraints became its strengths.

The Pakistani Context

In Pakistan simple technology is especially important. This is because many people in Pakistan do not have access to the internet or new technology. With these limitations Pakistani companies like Jazz Cash and Easy paisa have been very successful. They have been successful because they offer services that work well.

For example, they allow people to send money using their phones. This service is simple and easy to use for people who're not tech-savvy. The people who start companies in Pakistan are learning that simple technology is the best.

Key Findings & Impact

Redefining What Simplicity Means

Simplicity does not mean taking away functionality nor does it mean taking out necessary parts from a system.

In The Design of Everyday Things (1988), Donald Norman stated the rule clearly: good design makes proper functioning intuitive and unambiguous enough that it doesn't need any explanation at all. The object itself makes it obvious how it should be used. This is as true for enterprise software architecture in the year 2023 as it was for the doorknob in 1988.

Measurable Business Outcomes

Simple technology can save companies a lot of money. For example, Stripes API is very simple and easy to use. This means that developers can start using it without needing a lot of training. This saves companies money and time.

Apples decision of getting rid of the headphone jack was first controversial at. It made the iPhone simpler and easier to use. It led to the creation of Air Pods which're very popular.

Notion is another example of a company that simplified its technology and became very successful. It got rid of all the features. Focused on making its technology easy to use.

The Complexity Tax

Complex technology can cost companies a lot of money. Because they some features that aren't necessary required by the company, recent study shows that a lot of companies pay for complex system that never prove beneficial.

What's Next?

The future of technology is about simplicity. Companies that can make technology will be the ones that succeed. There are developments that will shape the future of technology. For example, AI will help companies simplify their technology. There will be design principles that focus on making technology calm and easy to use. *The most sophisticated thing you can build, it turns out, is something that doesn't need to be explained.* **That is the new standard of excellence in technology.**

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