Why System Design ?

Large companies have large user bases. These users are spread across the world, and expect their web requests to be loaded quickly and reliably.

Keeping users happy is directly proportional to company revenue. Hence, it makes sense for a company to build its computer systems so they may continue to function despite problems:

1. Disasters (Tsunami, Fire, etc.)
2. Power outages (Legal issues, bill payments, etc.)
3. Hardware failures (Computer crashes, clock skew, etc.)
4. Software Failures (Incompatible upgrades, OS fault, etc.)

As an engineer, it's our job to expect and mitigate these problems. Instead of fixing issues reactively, system design solves these problems proactively.

Even before a single line of code is written, the engineers discuss how to meet requirements, the possible problems that can occur, and how to tackle them.

In short, billions of dollars are on the line, because trusted websites get happy customers!