Executive summary

The state of software in 2025 was both urgent and uneven. Too many organizations have been running on fragile foundations.
Hidden risks in architecture, security, and maintainability are holding back growth–and increasing costs. Using these critical insights on the state of software quality in 2025, CIOs, CTOs, and technology leaders can make informed and strategic decisions for a resilitent start of 2026.

The 6 key factors that shaped software in 2025

1. Security risks remain widespread	60% of systems are classified as having a low degree of security controls–and systems with above-average build quality are twice as likely to have high-security compliance.
2. Poor maintainability is driving up costs	For an average system, poor software quality can result in additional maintenance costs of up to €250,000 per system per year. For 10% of the largest systems, this cost can reach as high as €7 million.
3. Legacy systems are stalling innovation	Systems with outdated architecture are up to 40% slower to change, blocking transformation and agility.
4. Cloud migration is treated as a logistical task	Migrating "as-is" creates legacy in the cloud. Without modernization, organizations miss out on cloud benefits like scalability, performance, and AI integration.
5. AI adoption is booming–but fragile	73% of AI and big data systems score below the benchmark average in maintainability, limiting safe, scalable deployment.
6. Green IT is now a strategic priority	Optimizing code structure and refactoring can reduce energy use by up to 90%. Yet many industries are just beginning the journey.

Software quality is no longer optional. It's a core driver of business resilience, risk reduction, and future readiness.