

# Technical Debt

Technical debt is the extra effort that will later arise when code that is expedited in the short term is used instead of applying a solution optimized for clarity, evolvability and maintenance.



The build-up of technical debt is a major cause for projects to miss deadlines as focus shifts from development of features to fighting debt.

## Causes of technical debt

- Business pressure to release early
- Lack of alignment to standards
- Lack of automated testing
- Not refactoring code as it is implemented
- Poor knowledge of how to craft high quality elegant code.
- Poor or low technical leadership
- Band-aid approaches

## How to take action

- ✓ Dev teams should take responsibility for code quality
- ✓ Include time in estimates to create high quality product
- ✓ Ensure the definition of done and other standards are implemented
- ✓ Use tools to measure technical debt
- ✓ Make existing debt transparent by adding items to the product backlog

## Useful metrics



**SQALE rating** - Software Quality Assessment based on Lifecycle Expectations.

**Cost of delay** - A way of demonstrating and understanding the impact of time and value when not completing something.

**Test coverage** - How much of the system is covered by automated tests.

**Defect density** - The number of defects found in the system.

**Cyclomatic complexity** - Indicates the complexity of the code.

