



TECHNICAL DEBT ANALYSIS

Background

Technical debt is a metaphor referring to the eventual consequences of poor system design, software architecture or software development within a code base. Put differently, it is a metaphor for the quality of software. The debt can be thought of as work that still needs to be done before a particular job can be considered complete or proper. If the debt is not repaid, then it will keep on accumulating interest, making it hard to implement changes later on. Just like financial debt, these uncompleted changes incur interest on top of interest, making harder and harder to implement changes to the code base: the effort to fix defects or to add new functionality increases exponentially.

The fact is all companies will accrue technical debt, as it is unavoidable on any development project. There is relentless pressure on development teams to deliver new innovation to the market faster than ever before and this tends to lead to a continuing debt accumulation. After releasing the software, there is usually not enough time to 'pay back' the technical debt that the business accrued. There is only time to fix the critical defects (pay back the interest) as there is a new business requirement to be met. If the debt grows large enough, eventually the company will spend more on servicing its debt (maintenance) than it invests in increasing the value of its other assets (new development).

Our offering

We investigate the code base of one or more of your projects, using sophisticated tooling to automate this process where possible. Results of this analysis include:

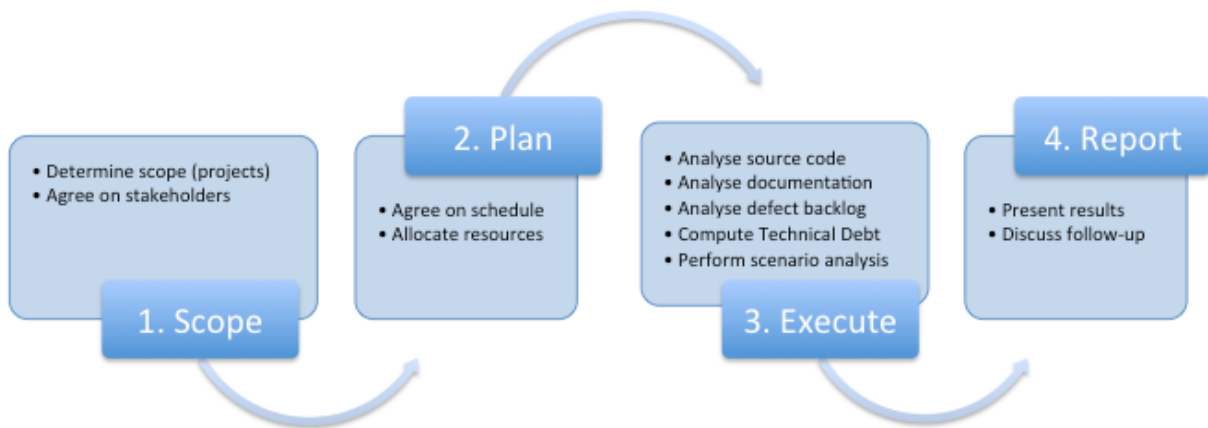
- Identification of the most critical code parts, using metrics like dead code, duplicated code, cyclomatic complexity, resolution effort/time, number of open defects;
- Estimate of the current level of technical debt in monetary units.

Based on the results, different strategies are available, from which we will recommend one:

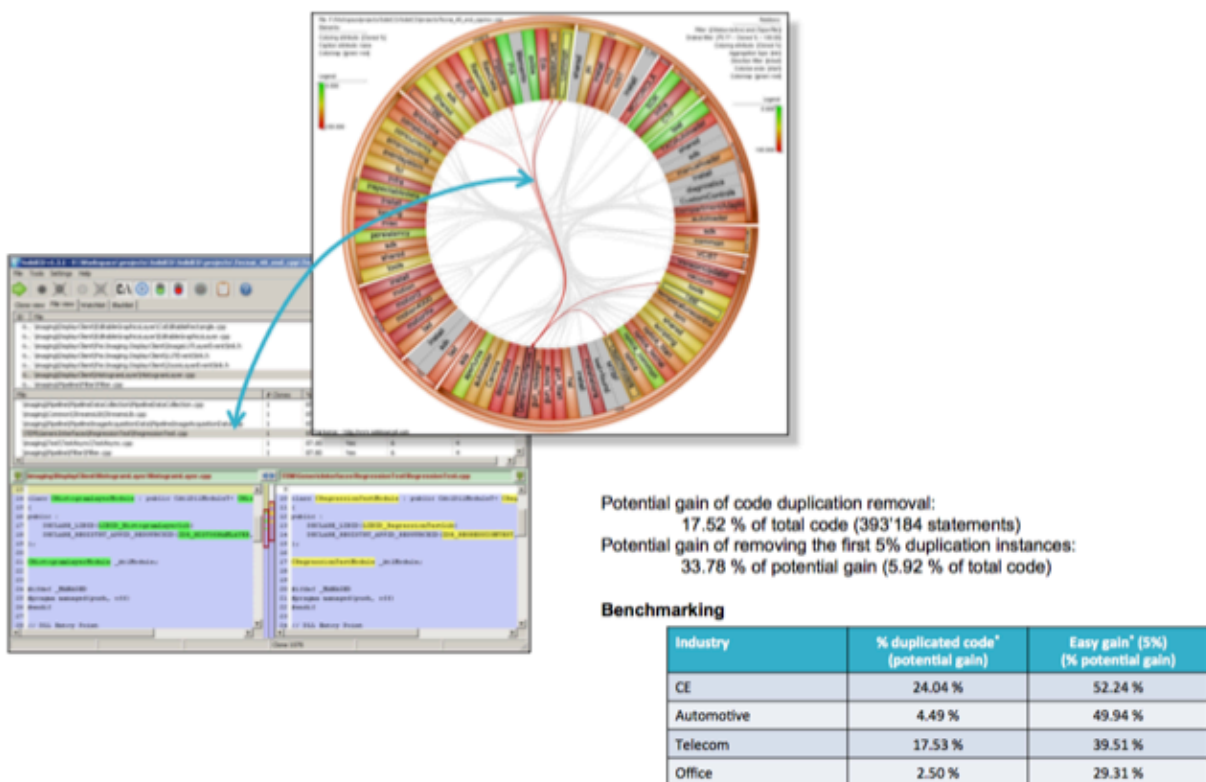
- You can choose to continue to pay the interest (cope with the technical debt, having to deal with the extra effort in future development).
- You can pay down the technical debt in one lump sum by replacing the system. This is normally a risky and expensive choice.
- You can pay down the principal, thereby reducing the technical debt by incremental refactoring and redesign. Although it will cost you to pay down the 'debt' in the first place, there will very likely be an opportunity to generate savings for the company in the mid- and long-run.

For further information

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Typical phases for “Technical Debt Analysis”.



Snapshot showing example of code duplication analysis.