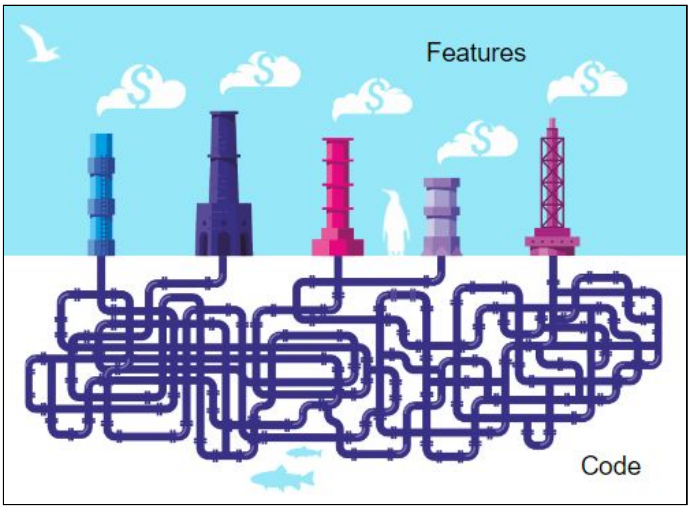
DETANGLE
THE TRUTH HAS ALREADY BEEN CODED _

Features versus quality - achieving the optimal balance

DETANGLE's objective is aligning business goals with quality goals in an optimal way such that heated subjective discussions turn into data-driven, fact-based business decisions.

In today's world a major point of conflict is that stakeholders have to choose between adding more features potentially hurting the sustainability of the software system too much; or protecting the software system with potentially adding too few features to sustain the business.

Obviously, this situation might quickly turn into a heated discussion because finding the right balance is hard. On the other hand, only favoring one over the other may lead to long-term harm either way, either by introducing "technical debt", suffocating development speed over time and leading to budget overruns; or by slowing down business development by an overly elaborated architectural "cathedral". DETANGLE addresses both situations and helps finding the right balance again and again over time by introducing a fact-based Code Quality Management.



DETANGLE counts technical debt based on the modularity of features rather than just modularity of code. It analyzes code changes continuously over the repository and combines it with data from Feature and Bug-Trackers, thus gaining NEW quality insights based on changes due to features and bugs.

DETANGLE keeps quality high and its budget limited by enabling managers and engineers to focus on the technical debt of relevant features only, i.e. the features needed for any ongoing work such as further extensions, new features or service level agreements. The core enabling KPI for architectural quality control is "Feature Coupling". It is a feature-modularity metric which resolves the extent of changes on the common set of code modules due to different features. The higher the overlap of features, the less comprehensible the affected code modules are, thus increasing the time engineers need to read, understand and consider unintended side effects of changes.

DETANGLE offers precise decision support on quality improvements for engineers. The prioritization of improvements of relevant features is based on selecting specific code modules exceeding a combination of feature modularity thresholds. These thresholds signal decreasing efficiency in reading and writing code or an increasing error-proneness. Thus, DETANGLE enables both stakeholders, managers and engineers, to find an optimal balance between features and quality.

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