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Task 1: Abstract	**Supervisors:**
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2023, January, Bozen-Bolzano, Italy	Prof. Daniel Mendez Fernandez

Submitted for Ph.D. Position on Software Architectures and Technical Debt at BTH

Assets in Software Engineering: What are they after all

ABSTRACT

PROBLEM STATEMENT

The development and maintenance of software products or services are still based on many artifacts. However, only a few software artifacts impact a project's feasibility and quality, which can fit to be called assets. In an organization or industry, defining and distinguishing those assets from software artifacts is an ongoing challenge, with no definition, or distinguishing those assets from artifacts. In the early stages of SDLC, overlapping between quality concepts with non-quality ones will have a negative impact between (designers/architecture of the project) and (building/developers of the product). In the early stage of SDLC, defining assets and distinguish them from artifacts will reduce TD and complexity of the project.

RESEARCH OBJECTIVE

The major research questions answered in this study are: [**RQ 1:** What is the definition of an asset in software engineering. **RQ 2:** How are assets managed in software engineering. **RQ 3:** How do assets in software engineering impact the software development process lifecycle]. This study developed a strategy to define assets and distinguish those assets from software artifacts.

APPROACH

This study developed a strategy to distinguish the assets from the software artifacts, we define those assets as artifacts responsible for optimizing the software quality and improve its maintainability during and after the project development. We defined the quality factors for those assets with their characteristics, we show their impact on the quality of the organization. We define the assets' degradation, and we identify the types of degradation that caused the assets' degradation.

RESEARCH FINDING

The study shows that defining assets and distinguish them from artifacts in early stage of SDLC will reduce TD and improve SW quality and quality control. The study shows it is a necessary foundation for controlling assets' quality and by pointing out asset degradation, we can effectively integrate practices for quality control in the early stage of SDLC to reduce TD.

CONTRIBUTION

This study is empirical research, and our contribution is rooted in our long-term academic-industry collaborations and the empirical studies we conducted with our industrial partners in (designing the product architecture) and (building/developing the product).

CONCLUSIONS

We propose the significant quality factors fit the nature of this study to define and distinguish between assets, artifacts, asset degradation, this will help to improve project performance and product quality and a clear definition for the assets and distinguishing them from artifacts will offer a smooth transition from (Stage of designing the product architecture) to (Stage of building/developing the product) in the early stage of the software development life cycle (SDLC).

Keywords: Assets, Asset Management, Software Artefacts, Asset Degradation, Technical Debt