**2.1 Project Development Model**

**SPIRAL MODEL:**

For this FWMS project, we are using spiral development methodology. Spiral model is a

software development process that combines both prototyping and design in stages; its

basic concepts are as follows:



Focus is on risk assessment and on minimizing project risk by breaking a project into

smaller segments and providing more ease of change during the development process, as

well as providing the opportunity to evaluate risks and weight consideration of project

continuation throughout the life cycle.

**Each trip around the spiral traverses four basic quadrants:**

1) Determine objectives, alternatives and constraint of the iteration.

2) Evaluate alternatives, Identify and resolve risks.

3) Develop and verify deliverables from the iteration.

4) Plans next iteration.

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Begin each cycle with an identification of stakeholder and their win conditions, and end

each cycle with review and commitment.

**Identification:**

This phase starts with gathering the business requirements in the baseline spiral. In

the subsequent spirals as the product matures, identification of system requirements,

subsystem requirements and unit requirements are all done in this phase.

This also includes understanding the system requirements by continuous

communication between the customer and the system analyst. At the end of the

spiral the online e-waste collection system is deployed in the identified market.

**Design:**

Design phase starts with the conceptual design in the baseline spiral and involves

architectural design, logical design of modules, physical product design and final

design in the subsequent spirals.

**Construct or Build:**

Construct phase refers to production of the actual software product at every spiral. In

the baseline spiral when the product is just thought of and the design is being

developed a POC (Proof of Concept) is developed in this phase to get customer

feedback.

Then in the subsequent spirals with higher clarity on requirements and design details

a working model of the system called build is produced with a version number.

These builds are sent to customer for feedback.

**Evaluation and Risk Analysis:**

Risk Analysis includes identifying, estimating, and monitoring technical feasibility

and management risks, such as schedule slippage and cost over-run. After testing the

build, at the end of first iteration, the customer evaluates the software and provides

feedback.