**Executive Report**

**Automation of Chicken Feeders**

**Introduction**

This project focuses on developing an automated chicken feeding system using sensors and a mobile application, which will allow us to monitor feed levels and track the number of chickens. Our aim is to enhance and optimize the company's poultry production.

**Justification**

Our project addresses a key need in the poultry industry, where automation can make a substantial impact. It will reduce manual labor and ensure precise feeding with minimal waste, resulting in higher productivity. The project aligns with the field of computer engineering, as it involves software development, database management, and hardware integration.

**Objectives**

**General Objective:** The main objective of this project is to automate a chicken feeding system through a mobile app that can control and monitor the feed.

**Specific Objectives:** The specific objectives include developing a system to count chickens, designing and building a mobile app that monitors feed levels, and sends notifications. This will be achieved using weight sensors and a motor to automate the feeding process.

**Methodology**

We chose to use the agile Scrum methodology for this project. We'll start by creating the product backlog, which outlines the features requested by the client, such as automation, chicken counting, and sensor integration. Sprint planning will then guide the tasks for each phase of the project.

**Feasibility**

The project is feasible as we have access to the necessary resources and the required skills. The estimated timeline for completion is 5 months, with 10 hours of work per week.

**Work Plan**

The work plan consists of the following tasks:

Phase 1

* Sprint Planning
* Kick-off Meeting
* Gathering Requirements with the Client
* Product Backlog
* Mockups
* User Stories
* Roadmap
* Stakeholder Registration
* Flowcharts
* 4+1 Views
* Project Definition
* Mind Map
* Actor Map
* Project Vision
* Roles and Responsibilities
* Sprint Backlog

Phase 2

* Design
* mockup design
* Main interface creation
* Creation of food interface
* Chicken interface creation.
* General analysis interface
* Integration tests
* Structure creation
* Arduino board programming
* Final adjustments

**Expected Results**

We expect the automated system to increase the efficiency of feed management while reducing the time spent on manual tasks. The mobile app will enable users to remotely monitor the system, providing real-time notifications of any feed shortages.

**Conclusion**

This project not only addresses a practical challenge within the poultry industry, but it also fosters the development of critical software engineering skills, including sensor integration, mobile app development, and project management using Scrum. Once completed, the system will benefit both poultry producers and system developers.