

PROJECT PLAN

Clean Chickens and Co. LLC

Goat Observation and Assessment Technology (G.O.A.T)

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Project Manager: Jack Follett

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Document Change Control

This section provides control for the development and distribution of revisions to the Project Charter up to the point of approval. The Project Charter does not change throughout the project life cycle, but rather is developed at the beginning of the project (immediately following project initiation approval, and in the earliest stages of project planning). The Project Charter provides an ongoing reference for all project stakeholders. The table below includes the revision number (defined within your Documentation Plan Outline), the date of update/issue, the author responsible for the changes, and a brief description of the context and/or scope of the changes in that revision.

Revision Number	Date of Issue	Author(s)	Brief Description of Change
1	9/20/24	Jack Follett Jesus Chavez Albert Kileo	Initial creation

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1. Project Overview

This section of the IM/IT Project Management Plan provides an overview of the purpose, scope and objectives of the project for which the Plan has been written, the project assumptions and constraints, a list of project deliverables, a summary of the project schedule and budget, and the plan for evolving the IM/IT Project Management Plan.

1.1 Purpose, Scope, and Objectives – Jesus (project summary)

- Define the purpose and scope of the project.
- The purpose of the project is to create a database that will keep track of goat meat for the purpose of sales and descriptions.
- Describe any considerations of scope or objectives to be excluded from the project or the deliverables.
- Project exclusions will be any extra goat details after it has been butchered.
- Ensure that the statement of scope is consistent with similar statements in the business case, the project charter and any other relevant systemlevel or businesslevel documents.
- Identify and describe the business or system needs to be satisfied by the project.
- Business needs are a small goat business required an automating database system that will keep track of goats and goat meat for the purposes of sales and other parameters.
- Provide a concise summary of:
 - the project objectives,
 - the deliverables required to satisfy the project objectives, and
 - the methods by which satisfaction of the objectives will be determined.
- Describe the relationship of this project to other projects.
- The relationship of this project can be that this projects goat database in the future could be expanded to other animal and animal meats as well.
- If appropriate, describe how this project will be integrated with other projects or ongoing work processes.
- Provide a reference to the official statement of project requirements (e.g.: in the business case or the project charter).

1.2 Assumptions, Constraints and Risks - Jesus

- Describe the assumptions on which the project is based.
- Describe the imposed constraints and risks on the project such as:

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- schedule,
- budget,
- resources,
- quality,
- software to be reused,
- existing software to be incorporated,
- technology to be used, and
- external interfaces.

1.3 Problem

- Clean Chickens and Co. LLC processes and slaughters a verity of meat and wants to start the processing of goat meat. This process involves grading the animal, assigning it a price, and linking that information to a breeder. An automated system already exists for other types of animals, such as Cow, Chicken, and Pig. However, an automated system does not exist for Goats yet. This project aims to create an automated system that can grade goats from image recognition and store it in a database.

1.4 Project Deliverables & Charter

- Project deliverable: A piece of software that will run on a windows computer and communicate with 4 cameras and take pictures of goats that are to be slaughtered. The program will take these 4 pictures and use image recognition to assign a grade to them based on different features of the goat. This program will also assign a “living price” to the Goat. This is then stored in a database that connects the details of the goat to the original breeder and stored for documentation.
- Delivery media: A software download delivered via the internet.
- delivery dates: This software is to be in full operation by April 2024.

1.5 Schedule and Budget Summary

- Budget: A budget has not been discussed, but it is assumed the relative low cost of this project can be covered by both the University of North Texas, and Clean Chicken and Co. LLC, and at most will be around \$2,000
- Schedule, Sprints will be performed every 2 weeks:
- Project Plan – 9/20/24
- SRS: system requirements – 9/30/24
- Preliminary Design Specification Plan – 10/4/24

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- Status Report 1 and Sprint 1: 10/7/24
- Status Report 2 and Sprint 2: 10/23/24
- Preliminary Design Specification – 10/31/24
- Status Report and Sprint 3 – 11/4/24
- Sprint 4 – 11/18/24
- Presentation – 11/20/24
- Sprint 5 – 12/2/24
- Sprint 6 - 12/13/24
- Sprint 7 – 1/13/25
- Sprint 8 – 1/27/25
- Sprint 9 – 2/10/25
- Sprint 10 – 2/24/25
- Sprint 11 – 3/10/25
- FINAL SPRINT – 3/24/25
- Project Delivery – 4/1/25

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2. Managerial Process Plans

This section of the IM/IT Project Management Plan specifies the project management processes for the project. This section defines the plans for project start-up, risk management, project work, project tracking and project close-out.

2.1 Work Plan

2.1.1 Work Breakdown Structure

The Work Breakdown Structure (WBS) for the G.O.A.T project breaks down the various work activities into smaller, manageable tasks. This structure helps in identifying potential risks, estimating resource needs, scheduling durations, and organizing the project flow. Each task is defined with clear dependencies and deliverables to ensure smooth project execution.

1. Project Planning

- Necessary Resources: Project manager, planning tools (e.g., Monday.com, Gantt charts)
- Estimated Duration: 2 weeks
- Products/Deliverables: Project plan, initial schedule, risk management plan
- Acceptance Criteria: Project plan approved, schedule and risk management plan developed
- Predecessor: Project initiation
- Successor: System requirements gathering

2. System Requirements

- Necessary Resources: Business analysts, stakeholders, development team
- Estimated Duration: 1 week
- Products/Deliverables: System Requirements Specification (SRS)
- Acceptance Criteria: SRS approved by stakeholders, no missing requirements
- Predecessor: Project planning
- Successor: System design

3. System Design

- Necessary Resources: System architects, development team, hardware specialists
- Estimated Duration: 2 weeks
- Products/Deliverables: System architecture, detailed design document
- Acceptance Criteria: Design meets all system requirements, approved by stakeholders
- Predecessor: System requirements
- Successor: Software development

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4. Software Development

- Necessary Resources: Developers, coding environment, version control system
- Estimated Duration: 4 weeks (split across multiple sprints)
- Products/Deliverables: Image recognition software, hardware integration modules
- Acceptance Criteria: Functional software modules, passing unit tests
- Predecessor: System design
- Successor: System testing

5. Integration & Testing

- Necessary Resources: QA team, testing tools, test environment
- Estimated Duration: 2 weeks
- Products/Deliverables: Tested system, bug reports, and feedback
- Acceptance Criteria: System passes integration tests, all critical bugs fixed
- Predecessor: Software development
- Successor: Deployment

6. Deployment

- Necessary Resources: Deployment team, live environment, user manuals
- Estimated Duration: 1 week
- Products/Deliverables: Fully deployed system, training materials
- Acceptance Criteria: System successfully deployed, approved by client
- Predecessor: Integration & testing
- Successor: Post-deployment support

7. Post-Deployment Support

- Necessary Resources: Support team, documentation
- Estimated Duration: Ongoing after deployment
- Products/Deliverables: System maintenance, issue tracking, updates
- Acceptance Criteria: System performs as expected, issues are resolved
- Predecessor: Deployment
- Successor: N/A (ongoing)

2.1.2 Schedule Allocation

- In this section, we'll outline how the different project tasks are scheduled, how they depend on each other, and how we can work on multiple things at the same time to save time and resources.

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Task Scheduling and Time-Sequencing

- The project is broken down into sprints, where each sprint has specific tasks. Some tasks, like gathering system requirements and designing the architecture, must be done in sequence, while others can be done at the same time, like coding the software and testing it. This helps us keep the project moving efficiently.

Critical path

- The critical path is the set of tasks that must be completed on time to avoid delaying the whole project. In our project, the key tasks on the critical path are:
 - Finalizing system requirements
 - Designing the system
 - Developing and testing the image recognition software
- Deploying the system

These tasks are crucial and any delays in them will affect the entire project.

Constraints

There are some external factors that might affect our schedule, like:

- Hardware delivery delays (getting cameras and sensors)
- Stakeholder availability for testing and reviews
- Budget restrictions, which could delay the purchase of key components

Milestone

To keep track of our progress, we'll use the following milestones:

- **Project Plan Completion:** 9/20/24
- **System Requirements Done:** 9/30/24

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- **Preliminary Design Finished:** 10/4/24
- **Alpha Version of Software:** 12/2/24
- **Final Deployment:** 4/1/25

Resource Allocation

Each task will have its own resources, such as developers, testers, hardware, and software tools. We will monitor the use of these resources to stay within budget and meet the deadlines

2.2 Risk Management Plan (Jesus, Risk)

- Specify the risk management plan for identifying, analyzing, and prioritizing project risk factors. (Mention the politics around slaughter of livestock in America: <https://thesavemovement.org/after-7-years-of-vigils-a-ballot-measure-might-finally-close-denvers-lamb-slaughterhouse/>)
- Specify plans for assessing initial risk factors and for the ongoing identification, assessment, and mitigation of risk factors throughout the life cycle of the project.
- Describe the following:
 - procedures for contingency planning,
 - procedures for tracking the various risk factors,
 - procedures for evaluating changes in the levels of the risk factors and responding to changes in the levels of the risk factors,
 - risk management work activities,

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- procedures and schedules for performing risk management work activities,
 - risk documentation and reporting requirements,
 - Documentation will be shared and updated as much as possible for clarity's sake
 - organizations and personnel responsible for performing specific risk management activities, and
 - procedures for communicating risks and risk status among the various customer, project and subcontractor organizations.
- Identify and describe the applicable impact of any of the following risk factors:
 - risks in the customer project relationship,
 - Limited time to complete 9 months only
 - Program will need to be updated frequently by the client after completion
 - Goats may be difficult to photograph(moving)
 - risks in the development and target environments,
 - risks in personnel acquisition, skill levels and retention
 - risks to schedule and budget, and
 - Client is located in Minnesota, will need to complete work and meetings online
 - Technology limitations, Amish have very little contact with technology.

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3. Supporting Process Plans

3.1 Configuration Management

- The methods that will be used to perform the following activities:
 - Baseline identification:
 - The software, that will run on a Windows machine, will take 4 pictures of a live goat. One picture from the front, side, back, and top. From this, the software will give the goat a grade. This grading system will be based on multiple factors and will be graded in section 1-3. Section 1 being the best, and section 3 being the worst. Goats can also be graded in-between two numbers. These sections are “Section 1-2” and “section 2-3.” The goats' weight will also be considered. After the software designates a grade, the goat is also given a price based on “living weight.” This is all documented and put into a database that ties this information to the specific breeder it came from. This system must be able to process at a minimum 100 goats a day and be scaled to more than 26,000 goats in a year. The first year will run at 20% capacity, at around 4000 goats a year.
 - configuration identification:
 - The software will run a windows computer with a strong-enough GPU to handle AI applications.
 - It must be able to process more than 100 goats a day.
 - It will involve the development of a software application for Windows, along with a database to record and relate information together for documentation and archival reasons. The software will most likely be written in C++ and/or Python.
 - 4 cameras will be used to capture 4 different sides of the goat for analysis.
 - A script will need to be made that interfaces with and controls the 4 cameras.
 - A weight will have to be captured and stored in the database.
 - A goat will be graded based off its weight, and physical features that the software grades. It is then assigned a price.
 - The cameras will need to be able to communicate with a computer and be autonomously operated via a script. They also need to be high quality enough that it captures enough detail.
 - This must be completed by April 2025.
 - Sprints will last 2 weeks.
 - Testing will occur near the end of each sprint.
 - Budgeting will be handled by UNT and Clean Chickens and Co. LLC, but should remain at or below \$2000 if possible.

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- configuration control: Change requests are subject to the terms specified later in this document. Additional things to note down is the current status of the change request such as “planning, executing, completed, failed.”
- status accounting: At the end of each sprint, the status of each work product will be accounted for, and plans for when they should be completed, or discussion about parts that didn’t get completed will be discussed.
- release management:
- This software needs to be tested in a live environment before full deployment. The last couple of sprints should be tested in a live environment to ensure that it will be in full operation by April 2025. Each sprint will deliver a new version of the software.
- Each sprint will begin with planning new features, and processing/adding change requests. Tier 1 features are important and must be worked on first. Tier 2 features are less important but can be worked on if tier 1 features are done.
- The software is then worked on for 2 weeks.
- The software is then tested and deployed.
- Issues are collected, and a review is done of the sprint to see what went well, and what needs more attention. The sprint then restarts.
- Change Requests:
 - As the project goes on, there may be changes that must be implemented that were not seen at first. The following must be done for every change request.
 - A change must first be identified and brought up to all group members. This can happen at any point during a sprint.
 - This change request must be documented and added to the “additional plans and change requests” section of this plan, or another document specifically for change requests.
 - Once it is logged, the impact on both technical and time costs must be considered. If the request is out of scope or deemed too costly, the request will be documented and denied, noting a specific reason.
 - All members of the group must agree on the change to be approved. Once all group members agree, the change is approved and documented.
 - The change will be implemented next sprint, unless if there is a need to implement it earlier.

Points of Contact

- UNT:

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- David Keathly, Senior Project Manager, Professor
 - Phone number: 940-565-4801
 - Email: David.Keathly@unt.edu
- Clean Chickens and Co. LLC:
 - Rebecca Wierschke, CEO.
 - Phone number: 218-308-1752
 - Email: rebeccawierschke@gmail.com
 - Greg Wierschke
 - Phone number: 651-500-3780

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4. Additional Plans and Change Requests

- Additional plans:
- Add any changes to the project here:

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5. Project Evolution

5.1 Project support and maintenance

- Specify or reference to the support, maintenance and operational model for the project when the project will be used by the potential customers

5.2 Follow-up projects

- Identify potential follow-up projects which will use this project:
 - Adding support for sheep was mentioned by the client.
- Identify potential follow-up projects which will supersede this project

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Annex A

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Annex B

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