**Analysis document**

The Greenhouse project

**Problem:**

1. Business analysis

* Read and study the background material in the following section concerning Everlast Agro B.V., a horticultural company managing greenhouse cultivation. Additionally, review the interviews with several stakeholders here.
* Create an analysis document that identifies the problems faced by the company and outlines your proposals for solutions. Include this document in your PEP and discuss it with your teachers.

Examine the current production and management situation, identify problems, and propose IT solutions to improve efficiency. You are also expected to implement these proposals.

**Action:**

* It is important to have an efficient production method to keep crop costs low while maintaining high yields and quality. Large greenhouses are used to continuously produce crops in an artificial environment.

Current production and management situation

1. Everlast Agro B.V

* specializes in greenhouse cultivation (vegetables and crops for the European market)

Focus: mass production of tomatoes, carrots and cucumbers

* currently operates 10 greenhouses across the Westland region, adding a new greenhouse every year
* **Problems**

1. Profit fluctuation
2. !yields for each crop depend on the season
3. !each greenhouse grows a single crop
4. !countries like Italy and Spain have better natural climates for growing crops, so Everlast Agro spends more on technology to stay competitive

the company’s profits fluctuate monthly, with some months even resulting in losses

1. Labor management inefficiency
2. !each greenhouse is responsible for its own employees, and employees are not shared between greenhouses

During peak periods, the workload can be overwhelming, leading

to longer working hours. Conversely, on days with less work, employees are sent home early.

1. Inaccurate climate control

!all greenhouses are equipped with heating, ventilation, and air distribution systems to control the microclimate

!employees have to manually check greenhouse conditions – wastes time and energy

!outdated monitoring systems

these systems typically monitor and control the environment on a coarse scale, averaging values that do not correspond to every part of the greenhouse – makes it difficult to keep the greenhouse environment at the right levels for the plants.

* **Solutions for:**

1. Profit fluctuation

* grow multiple crops in the same greenhouse
* planned crop yielding – grow crops based on the season they yield more
* use technology/software that monitors soil health, water needs, crop growth to ensure efficient use of resources – reduces costs

1. Labor management inefficiency

* use software that tracks every greenhouse’s workload and sends the number of employees needed to a greenhouse with higher workload from a greenhouse with a lower workload – distributes energy and time

1. Inaccurate climate control

* replace the current monitoring system with a more modern and advanced technology that monitors and controls the microclimate remotely and accurately – saves time and energy which can be used for more complex tasks during peak hours

A pie chart with numbers and a few percentages

Description automatically generated

This survey shows that the majority of the workers at Everlast Agro B.V. are aged 37-45, 46-55, 56++, which accounts for 65%. Only 35% of the workers are young people aged 18-25, 26-35.

Hiring more younger people would be beneficial for the efficiency of crops production and maintenance. Younger individuals often grow up with technology and may be more comfortable and skilled in using new systems, software, and tools, which will make the utilization of these systems faster and more efficient.

A graph with red bars

Description automatically generated

This survey shows that the majority of people are employees while there are little to no managers. This can result in insufficient management, which leads to employees having no direction or guidance for completing tasks and having a sense of priorities and objectives.

A pie chart with numbers and text

Description automatically generated

* IT – 8%

Hiring more people whose field of work is IT can be beneficial to the utilization of new software and technologies.

* Shipping – 7%

A too small shipping team can lead to a high workload and overwhelmed employees. This can lead to an inability to meet demand standards and lower profit. Hiring more people whose field of work is shipping can improve efficiency in processing and delivering orders, leading to higher customer satisfaction and increased profits.

* Production - 36%
* Maintenance – 10%

More production means more maintenance. There should be more people in the maintenance field, so that there is balance between the two processes and quality in the production.

**Reflection:**

I found it hard to analyze this much information, but after actively working on it, I got used to extracting the most important points. Doing this analysis made me feel like I was working on an actual real-life problem, which encouraged me to do it precisely and carefully.

**Decision:**

My goal is to get more familiar with concepts like this one so that I can improve my real-life problem-solving abilities.