

**Requirements Management**

**BSc. (Hons) in Computing (Information Systems)**

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# Section A: Introduction

## 1.1 Company overview

Green Groceries (GG.) in the UK provides locally sourced grocery products. It has built its name mainly through collaborating with local farmers and e-conscious suppliers. The company would like to extend their reach in providing people with grocery products. This is why the company has decided to move forward with the development of an e-commerce website. The company houses multiple departments which include financial, operations, accountancy, logistics and marketing. These departments are headed by different personnel who are willing to assist as much as they can in the development of the website. These entities will be referred to as stakeholders from here on out.

Over the past five years, Green Groceries has not been using an e-commerce website to reach customers. This is most likely because of the lack of an in-house software development team. This is why GG Is outsourcing the development process to System Concepts (SC). SC is a well-known Agile software development consultancy. GG has entrusted SC in the development, testing and implementation of the proposed system.

System Concepts has been a reputable software development consultancy for many years. It specializes in delivering high quality, customizable software for various business scenarios. The selling point to SC is that they are focused on agility, innovation and collaboration. It has an outstanding team comprised of various highly qualified personnel. The team at SC is also very flexible because they can work on-site or off-site. Maximizing progress in the time given, as well as delivering products on time is the goal of the company.

The new website is supposed to address some shortcomings that were there because of the manual system. In addition to that, the system will also be a way of making the business run more efficiently. For example, currently, changing the customer’s account details could not be done by the customer. Presumably the customer would have to request that their details be changed. This process has made the information possessed by Green Groceries to not be up to date and therefore, inaccurate. The new website, however, will allow the customer to review and if need be, change their information.

## The Agile Framework

The Agile Framework exists as a response to the old way of software development which was document heavy and non-iterative. This new way of software development emphasizes on requirements volatility rather than detailed requirements which are defined once and cannot be changed (Zelkowitz, 2004). It highlights the importance of iteration and most importantly the need for self-managing specialized teams which work together to achieve the product. In the development of an e-commerce website for GG, the agile framework would be advantageous and appropriate.

1. Incrementation: This is done by harnessing the use of prototypes in early development and continually delivering on software incrementally. This bodes well for the company’s desire to launch a website in 3 months and continually improve it.
2. Requirements volatility: this means the framework works well with loosely defined requirements. Allowing the developmental process further to define them in detail (Zelkowitz, 2004). For GG, the requirements may be subject to change since it is a website, and new technologies and trends are introduced weekly. Because of this, it is important for GG to have the flexibility Agile methods can afford.
3. Collaboration: Agile methods emphasize on collaboration and teamwork. Unlike other frameworks, it facilitates the collaboration of the development team and other stakeholders. GG has a roster of its personnel that is interested in the success of the project as well as an outsourced team which will be implementing the system. The framework allows for these collaborations using facilitated workshops (Hendry, 2021).
4. Risk Management: using Agile methods would allow for risk mitigation more than most approaches. By allowing for iterations of objectives, this promotes flexibility to change and revision. GG would benefit from this because of compliance with the Data protection Act as the managing director forementioned.

While these reasons make a good case for why the Agile framework would be the appropriate choice, it is important to clarify that there are some drawbacks that need to be taken into consideration at the same time. In other words, these are the drawbacks of teamwork and iterative processes (Raith, Richter and Lindermeier, 2017).

1. Client-Developer Disagreements: Agile methods thrive on collaboration, but collaboration can be a tool against progress as much as it is a catalyst for it. Disagreements may arise between the two sets of stakeholders: GG personnel and SC development team. Peter, one of the SC personnel, has been known to occasionally engage in disagreements with clients.
2. Time commitment: Agile methods require time and participation (University of Minnesota, 2023). This will require the collaboration of the GG stakeholders and the SC stakeholders at the same time. This might be an issue for personnel who are busy with company related work that takes up most of their time.

# 2.0 Section B: High-Level Requirements and Moscow Prioritization

High level requirements are specified and attainable goals and objectives that define the broad features, conditions and requirements that must be included in the project (Abad et al., 2017). The high-level requirements give the developers and project manager a clear understanding of what is necessary within the system, and what can be ignored or postponed. The important requirements are the high-level requirements must be agreed upon by the main stakeholders during the analysis phase of the project (Gülke et al., 2012). Currently, the stakeholders have produced a list of bassline requirements. Some of these requirements are not appropriate and do not qualify as high level requirements.

## B.1 Review of Baseline Requirements

Not all the baseline requirements are supposed to be included in the list of high-level requirements. It is however it is important to understand that a requirement might not be high level and instead might fall into low level requirements. Low level requirements describe how the system will function in a more granular and technical (Pointers, 2022). Just to be clear, low-level requirements are also very important. The next part of this paper will assess the inappropriate requirements from the baseline requirements.

### B1.1 Inappropriate Requirements.

Inappropriate requirements are requirements that do not fit the scope of the system/project. These can be requirements can be ambiguous, inappropriate or unmeasurable.

*Table 1* below shows a list of inappropriate requirements and their descriptions.

|  |  |  |
| --- | --- | --- |
| **ID** | **Requirement** | **Justification** |
| 1 | Maintain Office Plants | This requirement does not describe anything associated with the goal of the project and is therefore inappropriate. |
| 2 | Virtual Celebration of CEO’s Birthday | This requirement does not fit the core functionality of an e-commerce website and is therefore inappropriate. |
| 3 | Team building events | This requirement does not contribute to the functionality of the system/project and is therefore inappropriate. |
| 4 | Pet friendly Policies | This goal is inappropriate because it is subjective and therefore cannot be measured. |

### B1.1 Updated High List of High-Level Functional Requirements

High level requirements are ‘what’ the system should do, not how (Tasker, 2016). Deciding on high level requirements is to ask oneself whether the requirement is what the system is supposed to do, rather than how it is going to do something. This section highlights the requirements that are crucial to the success of the proposed system.

*Table 2* below shows the updated list of suitable requirements and their descriptions.

|  |  |  |
| --- | --- | --- |
| **ID** | **Requirement** | **Justification** |
| 1 | Order processing | The system should be able to allow the customers to place orders that will be processed by the GG staff. |
| 2 | Account Management | Allowing the customer to change their account details to update with the most current information. |
| 3 | Catalogue | The System should have a product catalogue for customers to search, view and choose from. |
| 4 | Shopping cart and Checkout | Customers should be able to choose items and store them in the shopping cart before proceeding to checkout. At checkout, they should be able to choose which items to check out and their total should be calculated. |
| 5 | Authentication and security | The system should have a good degree of security since it contains user’s personal data. |
| 6 | Delivery management | The system should offer flexible delivery options. It should allow the customer to select delivery slots and be able to put a different address than the one that is saved with their account |
| 7 | Compliance with legal requirements | The system must be compliant with the relevant legal requirements. This includes VAT, consumer protection laws and General Data Protection Regulation (GDPR) and Data Processor DPA |
| 8 | Promoting Offers | The system must include a discount page. The page will inform customers of discounts and promotions. |

### B2 MOSCOW Prioritization/ Timeboxing

MOSCOW, apart from being the capital of Russia is also how we can prioritize requirements in four steps. MOSCOW stands for Must have, should have, could have and Will not have (Brush, 2023). By assessing each requirement, we can know what the system must absolutely have, and the rest in varying in significance.

Timeboxing is a technique to increase efficiency at work. This is done by setting a specific date when the task must be completed in the time available before the date arrives (Becker, 2022). In the case of GG, it would involve creating a list of high-level requirements, arranging them in accordance with MOSCOW prioritization rules. Then, creating time boxes from now, until the delivery of the final product. Finishing the process by assigning the high-level requirements, refined by MOSCOW, to the timeboxes.

### B2.1 Prioritized High Level Requirements List

*Table 3* below shows the requirements according to their prioritization with the Moscow prioritization rules.

|  |  |  |
| --- | --- | --- |
| **ID** | **Requirement** | **MOSCOW** |
| 1 | Order processing | Must Have |
| 2 | Account Management | Must Have |
| 3 | Authentication and security | Must Have |
| 4 | Shopping cart and Checkout | Should Have |
| 5 | Delivery management | Should Have |
| 6 | Compliance with legal requirements | Should Have |
| 7 | Promoting Offers | Could Have |
| 8 | Catalogue | Could Have |

### B 2.2 Justification

**Must Have:**

**Order Processing:** Processing orders is crucial for GG’s online store because it is the whole point of the website. Facilitating transactions and managing orders is at the core of the business purpose of the website (O’Shea, 2023).

**Account Management:** Allowing customers to create and manage their accounts is very important and arguably, there are no customer interactions with the business without account management. With this feature, the shopping cart, payment mechanism and building a long-term relationship with customers is possible.

**Authentication and Security:** The integrity and data protection of the system is ensured with this feature. The system is bound to contain sensitive information safeguarding sensitive information and complying with data protection acts is necessary.

**Should Have:**

**Shopping Cart and Checkout:** The shopping cart is important, and very useful. That being said, it is more of a secondary priority compared to the must have functionalities. It is however a should have because it facilitates the smooth purchase of the customers.

**Delivery Management:** Clients can’t get their packages without the delivery management. This is why it is a should have. It helps provide the customer with convenience, but it is not as crucial as the other functionalities.

**Compliance with Legal Requirements:** Even though this is not a directly impactful functionality to the system, it needs to be compliant with the legal requirements and regulations. This, as said before, is important to avoid legal turmoil, lawsuits and reputational damage.

**Could Have:**

**Catalogue:** It is important for GG to showcase their products of locally sourced farm products on the website. It is not at the first or second level of priority during the initial launch. It is a feature that will be important after the launch or in future development.

**Promoting Offers:** The separate page that is used to promote offers to enhance the customer’s experience and inform them of their offers. This functionality would have to delay from the initial launch because it requires offers to be available first.

# Legal, Social, Ethical and Professional Issues

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