

**UNIVERSITY OF GREENWICH**  
COMP1787 – Requirements Management

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| Student submission date | 04/16/2024 |

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# **Introduction**

Green Groceries is a medium-sized company that specializes in providing organic and locally sourced grocery products. Over the past five years, Green Groceries has built a solid reputation through collaborations with local farmers and eco-conscious suppliers. Their commitment to sustainability and accessibility has been at the forefront of their operations, catering to customers who prioritize healthy, environmentally friendly food options.

The primary goal of Green Groceries is to expand its market reach and make sustainable products more accessible to a wider audience. With this in mind, the company aims to launch an online platform within the next three months. This platform will not only showcase their range of organic products but also provide a seamless shopping experience for customers who prefer to purchase groceries online. By leveraging technology, Green Groceries seeks to enhance customer convenience while maintaining its commitment to sustainability and eco-conscious practices.

## The aim of this project

Green Groceries aims to develop an online platform to expand their reach and make green products more accessible. This will allow individuals to buy from anywhere, providing an increased variety of organic goods and a more convenient shopping experience. The platform supports their commitment to sustainability by decreasing paper and supporting environmentally friendly practices, all while driving corporate success through greater sales.

Generally, the aim of the project is to leverage technology, as well as Scrum and Agile concepts to create a robust online platform that not only meets the needs of customers but also aligns with Green Groceries' values of sustainability and accessibility.

## The Development the online platform

* **Outsourcing**

Green Groceries has chosen to outsource the development of its web platform to System Concepts, an experienced Agile software development agency. System Concepts is going to develop the web platform following Green Groceries' requirements and specifications.

* **Methodologies and Framework**

The development of the online platform will be guided by Agile approach, specifically SCRUM mothodologies and Agile Atern framework. Agile methodologies emphasize iterative and incremental development, allowing for flexibility and responsiveness to changing requirements throughout the development process.

* **Development team**

System Concepts' development team for the Green Groceries project involves of qualified experts with experience in web development and Agile approaches. The development team's members according to the case study will be shown below.

Millie - A skilled programmer with expertise in web development and effective communication skills.

Peter - An excellent web developer known for expertise but occasionally engages in disagreements with clients.

Anita - Possesses strong web development skills and is also involved in volunteer work for the homeless.

Cheryl - Experienced as a Team Leader in Agile development projects, well-versed in web development.

Pat - Available part-time throughout the project, with a good understanding of web development and testing.

## Stakeholders in the DSDM Atern framework

Business Sponsor and Business Visionary - CEO and Founder of Green Groceries company.

Technical Coordinator and Project Manager- Operations Manager with a background in Agile software development from a previous role.

Business Analyst - Marketing Manager who is certified as a Workshop Facilitator and Agile Project Manager in Green Groceries company.

Business Ambassador (User Representatives) - The Operations and Marketing Managers represent for the requirements and interests of both internal (e.g., staff employees) and external (e.g., customers) stakeholders. They are essential in making sure that the online platform satisfies user needs and is consistent with Green Grocery's principles and commercial goals.

Solution Development Team - Include members namely Millie, Peter, Anita, Cheryl, Pat

End-Users - Green Groceries' customers

## Discuss about Agile (framework)

In order to better understand Agile concepts, I will describe them in the parts below, as well as show the framework and methodology that will be used to create this project.

Agile is a software development approach focusing on flexibility and collaboration. It separates projects into parts and works closely with customers to ensure the final output fulfills their requirements. Agile promotes people and interaction over strict plans, and it prioritizes producing functioning software early and frequently (Greenwich, 2024).

* **The methodology is used to develop the the Green Groceries Online Platform**

Agile methodologies such as Scrum are applied for this project. In order to better understand, I will introduce them in the parts below.

Scrum, a popular Agile method with short development cycles (sprints) and designated team roles is the chosen approach for Green Groceries and System Concepts' online platform development.

The Scrum methodology is perfectly suited for developing the Green Groceries online platform due to its emphasis on iterative development, adaptability, and continuous improvement. Scrum's focus on transparency and defined roles fosters collaboration and ensures the project stays on track while delivering features early and often. Time-boxed sprints provide a predictable rhythm for development, and regular retrospectives allow the team to learn and improve throughout the project lifecycle. In conclusion, Scrum offers an organized Agile methodology to provide an effective platform that is in line with Green Groceries' evolving needs.

* **The DSDM atern framework is applied for the development of the Green Groceries online platform**

DSDM (Dynamic Systems Development Method) Atern is an Agile framework primarily used for software development projects. It emphasizes iterative and incremental development, collaboration, and delivering business value early. DSDM Atern provides a structured approach to project management, incorporating principles such as MoSCoW prioritization (Must have, Should have, Could have, Won't have), timeboxing, and frequent delivery .

* **The Advantages when the DSDM atern framework is applied:**

Agile allows for flexibility in responding to changing requirements and priorities, which is essential in dynamic business environments like Green Groceries.

For example, While developing Green Groceries' online platform, customers requested a new feature: the ability to leave delivery instructions-customers might request to leave the package at a specific location if they're not home, provide gate codes for access to gated communities, or ask for specific delivery times.The Agile team quickly adjusted their plans and added this feature to the project. By staying flexible and responsive to customer needs, they successfully integrated the new option into the platform. This approach highlights how Agile methodology allows teams to adapt to changes and improve products based on feedback.

DSDM Atern supports iterative and incremental development, allowing for frequent delivery of working software and rapid feedback.

For example, in developing Green Groceries' online platform using DSDM Atern, the team breaks down the project into smaller, manageable parts called iterations. They focus on developing and delivering one iteration at a time, starting with essential features like user registration and product browsing. After each iteration, the team collects feedback from stakeholders and users, allowing them to make improvements and adjustments for the next iteration. This iterative approach ensures that the project progresses steadily, with frequent releases of working software and continuous feedback, ultimately leading to the successful completion of the online platform.

DSDM atern framework focuses on delivering value to customers by involving them throughout the development process, ensuring that the final product meets their needs and expectations.

For instance, the development team constantly collects feedback from customers as it develops Green Groceries' web platform using Agile methodologies. They use interviews and usability studies to get feedback on features such as the checkout process and product search functionality. By incorporating customer preferences and addressing their concerns, the team ensures that the final platform aligns with customers' needs and expectations, resulting in a more user-friendly and customer-centric product.

* **The Drawbacks of the DSDM atern framework:**

DSDM Atern relies heavily on active involvement and collaboration from stakeholders, which may be challenging to maintain, especially if stakeholders are not readily available or engaged.

For instance, without input from key stakeholders, the development team may face challenges in prioritizing features or resolving conflicting requirements. Therefore, maintaining active involvement and communication from stakeholders is essential to ensure the project progresses smoothly and meets the desired

When implementing DSDM Atern for the development of Green Groceries' online platform, the team encounters challenges due to the framework's complexity.

For instance, smaller or less experienced teams may struggle to grasp the comprehensive framework and required practices. This complexity can lead to difficulties in understanding roles, managing timeboxes effectively, and coordinating collaboration among team members. To overcome this, the team may need additional training and support to navigate the intricacies of DSDM Atern and ensure successful project delivery.

In conclusion, Green Grocery Online Platform is required to develop rapidly in 3 months so using DSDM and Scrum framework is suitable because it supports iterative and incremental development, fostering continuous feedback and adaptability to changing requirements as I mentioned before .

# **High-level requirements analysis and MoSCoW prioritisation.**

## Define High-level requirements

High-level requirements are broad statements that articulate the overarching objectives and functionalities of a project or system without delving into specific details. Based on Appendix A (Table 1: Base lined list of requirements for the Web site), all requirements are listed below (Greenwich, 2024).

| **ID** | **High-Level Requirements** |
| --- | --- |
| RQ1 | Allow the order-handling clerks to process telephone purchases via the website, replacing the paper-based system. |
| RQ2 | Maintain at least 20 office plants as part of the company's commitment to a green and healthy workspace. |
| RQ3 | Allow customers to easily update their account details to ensure accurate and up-to-date information is recorded. |
| RQ4 | Facilitate the organization of a virtual celebration on the website for the CEO's birthday to reflect the company's fun and friendly culture. |
| RQ5 | Ensure that the website complies with Data Protection Act requirements to avoid potential fines and safeguard user data security. |
| RQ6 | Allow the customers with the ability to register an account on the website |
| RQ7 | Allow customers a choice of delivery slots to accommodate their scheduling needs effectively. |
| RQ8 | Allow customers to easily modify their shopping cart contents to accommodate changes in purchasing decisions. |
| RQ9 | Implement pet-friendly policies to foster a positive and inclusive work environment. |
| RQ10 | Design the system to handle a 30% increase in traffic during peak periods without performance degradation. |
| RQ11 | Allow customers to input separate delivery and invoice addresses to facilitate delivery to alternate locations. |
| RQ12 | Allow customers the option to choose whether they receive marketing information to prevent excessive junk mail. |
| RQ13 | Encrypt all user data, including personal information and payment details, to ensure the highest level of security. |
| RQ14 | Maintain consistent branding elements and design across the website to reinforce the company's brand identity. |
| RQ15 | Encourage participation of the development team in quarterly team-building events to foster collaboration and a positive work environment. |
| RQ16 | Develop an offers or discount page on the website to inform customers of available promotions, as requested by the Marketing Director. |
| RQ17 | Ensure the website adheres to legislation regarding VAT to avoid potential fines, as specified by the Chief Accountant |
| RQ18 | Accept all forms of payment on the website to capture a larger market share, as desired by the Operations Director. |

Table 1 High-Level Requirements

After evaluating all of the requirements previously provided, I suppose that some of them are inappropriate, as demonstrated below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirements ID:** | **Requirement Description** | **Stakeholder** | **FR/NFR** | **Reason** |
| RQ-2 | Maintain at least 20 office plants as part of the company's commitment to a green and healthy workspace. | Business  Ambassador | NFR | It falls under nonfunctional requirements, is unrelated to the business goal, and pertains to office management and organizational culture rather than the online platform's aim. |
| RQ-4 | Facilitate the organization of a virtual celebration on the website for the CEO's birthday to reflect the company's fun and friendly culture. | Business  Ambassador | FR | It does not align with the online platform's aim and business goals. Additionally, focusing on organizational culture sharing is more suitable for future development phases, considering the project's short timeline and priority on core objectives. |
| RQ-5 | Ensure that the website complies with Data Protection Act requirements to avoid potential fines and safeguard user data security. | Project Manager | NFR | It falls under nonfunctional requirements and pertains to technical aspects that are already supported by modern protocols like HTTPS and encryption methods like bcrypt. |
| RQ-7 | Allow customers a choice of delivery slots to accommodate their scheduling needs effectively. | End-User | FR | It involves third-party logistics and is not aligned with the project's primary aim. Additionally, accommodating global markets and accessibility would pose challenges in scheduling delivery slots effectively. |
| RQ-9 | Implement pet-friendly policies to foster a positive and inclusive work environment. | Business  Ambassador | NFR | It is related to organizational policies and the work environment, rather than directly supporting the business goal and aim of the project |
| RQ-10 | Design the system to handle a 30% increase in traffic during peak periods without performance degradation. | Business  Ambassador | NFR | It falls under nonfunctional requirements related to performance design |
| RQ-13 | Encrypt all user data, including personal information and payment details, to ensure the highest level of security. | Business  Ambassador | NFR | It falls under nonfunctional requirements related to technical aspects, which are already supported by modern development frameworks. |
| RQ-14 | Maintain consistent branding elements and design across the website to reinforce the company's brand identity. | Business  Ambassador | NFR | It falls under nonfunctional requirements related to UI/UX design, and there are no clear requirements or standards for brand identity. Additionally, brand identity will be refined over time. |
| RQ-15 | Encourage participation of the development team in quarterly team-building events to foster collaboration and a positive work environment. | Technical Coordinator  and Project Manager | NFR | It falls under nonfunctional requirements related to project management and does not directly align with the project's business goals |

Table 2 The requirements are inappropriate

After evaluating all of the requirements previously provided, I suppose that some of them are appropriate, as demonstrated below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirements ID:** | **Requirement Description** | **Stakeholder** | **FR/NFR** | **Reason** |
| RQ-1 | Allow the order-handling clerks to process telephone purchases via the website, replacing the paper-based system. | Business  Ambassador | FR | The feature enabling order-handling clerks to process telephone purchases via the website was developed due to its popularity, utility among users, and alignment with Green Groceries' market expansion goal. |
| RQ-3 | Allow customers to easily update their account details to ensure accurate and up-to-date information is recorded. | End-User | FR | The decision to develop this feature is necessary for customers to update incorrect information to avoid affecting other functions such as purchasing. |
| RQ-6 | Allow the customers with the ability to register an account on the website | End-User | FR | The decision to develop the feature allowing customers to register an account on the website was driven by the need for creating profiles to support various functions such as ordering, payment, and delivery, as well as for enabling personalized marketing and financial management. |
| RQ-8 | Allow customers to easily modify their shopping cart contents to accommodate changes in purchasing decisions. | End-User | FR | The decision to develop the feature allowing customers to easily modify their shopping cart contents was driven by the need to accommodate changes in purchasing decisions, enable users to save products for later purchase, and facilitate the purchase of multiple products at once. |
| RQ-11 | Allow customers to input separate delivery and invoice addresses to facilitate delivery to alternate locations. | End-User | FR | The decision to develop the feature allowing customers to enter separate delivery and invoice addresses was influenced by the users' diverse needs, including the ability to specify multiple addresses for delivery, purchase items for others, and facilitate gift deliveries, aligning with the business goal of accommodating various customer preferences. |
| RQ-12 | Allow customers the option to choose whether they receive marketing information to prevent excessive junk mail. | End-User | FR | The decision to develop the feature allowing customers to choose whether they receive marketing information was driven by legal compliance with spam regulations, enhancing customer satisfaction, and optimizing marketing effectiveness. |
| RQ-16 | Develop an offers or discount page on the website to inform customers of available promotions, as requested by the Marketing Director. | Business Analyst | FR | The decision to develop an offers or discount page was based on the goals to attract more customers, satisfy existing ones, boost sales, enhance competitiveness, and manage inventory effectively. |
| RQ-17 | Ensure the website adheres to legislation regarding VAT to avoid potential fines, as specified by the Chief Accountant | Business  Ambassador | NFR | The decision to ensure compliance with VAT legislation was driven by the need to avoid fines, maintain accurate invoicing, and contribute to government tax requirements. |
| RQ18 | Accept all forms of payment on the website to capture a larger market share, as desired by the Operations Director. | Business Sponsor  and  Business Visionary | FR | The decision to accept all forms of payment was driven by the aim to capture a larger market share, expand accessibility, and build trust in financial transactions, ultimately serving a global customer base. |

Table 3 The requirement are appropriate

## The MoSCoW/Timebox rules

The project duration is 3 months. Because I use Scrum, I will divide the project into 6 sprints and each sprint is 2 weeks. To appropriately assign time to the sprints, I will first determine the overall number of hours of work required to complete the project, which will then be allocated to the sprints.

The group currently consists of five individuals, four of whom work full-time (8 hours per day) and one who works part-time (4 hours per day). In addition, each week the group will work 5 days, so the total number of working days in 3 months will be calculated as follows: 5 days per week \* 4 weeks per month \* 3 months is 60 days.  
As a result, the total hours of labor will be displayed in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Member** | **Working hours per a day** | **Working day (3 months)** | **Hours** |
| 4 full-time | 8 | 60 | 1920 |
| 1 part-time | 3 | 60 | 180 |
|  | | **Total hours** | 2100 |

Table 4 Total labor time for doing this project

To sum up, the total labor time is 2100 hours, therefore each sprint will receive around 350 hours.

Estimation for each requirement (WBS - Work breakdown structure):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Num** | **Requirement ID** | **Requirement** | **Break tasks** | **Estimation (man.hour)** |
| 1 | RQ01 | Allow the order-handling clerks to process telephone purchases via the website, replacing the paper-based system. | 1.1 Design database tables for order management - 60 hours 1.2 Develop user interface for order processing - 50 hours 1.3 Implement backend functionality for order submission - 40 hours 1.4 Integrate payment gateway for online transactions - 40 hours 1.5 Implement order confirmation and tracking system - 45 hours 1.6 Test and debug order processing system - 40 hours 1.7 Train staff on using the new system - 15 hours | 285 |
| 2 | RQ03 | Allow customers to easily update their account details to ensure accurate and up-to-date information is recorded. | 2.1 Design user interface for user account management - 40 hours 2.2 Develop backend functionality for account data storage - 35 hours 2.3 Implement account update functionality - 40 hours 2.4 Ensure data validation and security measures - 40 hours 2.5 Test account update features across different devices - 40 hours 2.6 Provide user documentation for account management - 25 hours | 220 |
| 3 | RQ05 | Allow the customers with the ability to register an account on the website | 3.1 Design database tables for user registration - 50 hours 3.2 Design registration form and user interface - 40 hours 3.3 Develop backend functionality for user registration - 40 hours 3.4 Implement email verification and account activation process - 30 hours 3.5 Ensure data encryption and privacy measures - 25 hours 3.6 Test registration process for usability and security - 40 hours 3.7 Provide user guidance for account registration - 25 hours | 250 |
| 4 | RQ08 | Allow customers to easily modify their shopping cart contents to accommodate changes in purchasing decisions. | 4.1 Design database tables for shopping cart management - 40 hours 4.2 Design intuitive shopping cart interface - 40 hours 4.3 Develop backend functionality for cart management - 35 hours 4.4 Implement drag-and-drop functionality for item rearrangement - 30 hours 4.5 Integrate with inventory system for real-time updates - 40 hours 4.6 Test cart modification features for usability and accuracy - 30 hours 4.7 Provide user tutorials for cart management - 25 hours | 240 |
| 5 | RQ11 | Allow customers to input separate delivery and invoice addresses to facilitate delivery to alternate locations. | 5.1 Design database tables for address management - 40 hours 5.2 Design address entry fields and validation - 30 hours 5.3 Develop backend logic for storing and managing address data - 40 hours 5.4 Implement option for separate delivery and invoice addresses - 35 hours 5.5 Ensure data encryption and protection for sensitive information - 30 hours 5.6 Test address entry and validation process - 40 hours 5.7 Provide user guidance for address management - 25 hours | 240 |
| 6 | RQ12 | Allow customers the option to choose whether they receive marketing information to prevent excessive junk mail. | 6.1 Design database tables for marketing preference management - 40 hours 6.2 Design preference setting interface - 20 hours 6.3 Develop backend functionality for storing marketing preferences - 35 hours 6.4 Implement opt-in/opt-out feature for marketing communications - 40 hours 6.5 Ensure compliance with data protection regulations - 25 hours 6.6 Test preference settings for accuracy and functionality - 40 hours 6.7 Provide user instructions for managing marketing preferences - 20 hours | 220 |
| 7 | RQ16 | Develop an offers or discount page on the website to inform customers of available promotions, as requested by the Marketing Director. | 7.1 Design database tables for offer management - 40 hours 7.2 Design layout and structure of offers/discount page - 40 hours 7.3 Develop functionality for managing promotional content - 40 hours 7.4 Implement dynamic display of offers based on user preferences - 35 hours 7.5 Integrate with marketing database for offer tracking - 30 hours 7.6 Test offer page functionality and responsiveness - 40 hours 7.7 Provide staff guidance for accessing and redeeming offers - 25 hours | 240 |
| 8 | RQ18 | Accept all forms of payment on the website to capture a larger market share, as desired by the Operations Director. | 8.1 Research and select payment gateway providers - 40 hours 8.2 Integrate chosen payment gateways with the website - 40 hours 8.3 Develop backend logic for processing different payment methods - 30 hours 8.4 Implement secure payment handling and encryption - 40 hours 8.5 Test payment processing for reliability and security - 40 hours 8.6 Provide user support for payment-related queries - 25 hours | 225 |
|  | | | **Total effort** | **1920** |

Table 5 Estimation for each requirement (WBS - Work breakdown structure)

* **The MoSCow estimation**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Requirement ID** | **Requirement** | **MoSCoW** | **Reason for prioritization** | **Effort** | **SUMMARY (man.hour)** | **Scale** |
| RQ05 | Allow the customers with the ability to register an account on the website | Must have | This function is given the highest priority as it is fundamental for creating user profiles to support ordering, payment, delivery, personalization, and promotional activities, aligning with the core functionalities of the online platform. | 240 | 965 | 51% |
| RQ03 | Allow customers to easily update their account details to ensure accurate and up-to-date information is recorded. | Must have | This function is essential for ensuring accurate customer information, which is crucial for the smooth functioning of other features. By allowing customers to update their details, it ensure data accuracy and enable seamless transactions. | 220 |
| RQ16 | Develop an offers or discount page on the website to inform customers of available promotions, as requested by the Marketing Director. | Must have | Offering promotions and discounts is a key marketing strategy to attract and retain customers. Implementing this feature early allows Green Groceries company to capitalize on marketing opportunities and drive customer engagement from the outset. | 240 |
| RQ01 | Allow the order-handling clerks to process telephone purchases via the website, replacing the paper-based system. | Must have | This is a necessary function in an e-commerce system to move from a paper system to an online platform, so I consider it a must have. | 265 |
| RQ18 | Accept all forms of payment on the website to capture a larger market share, as desired by the Operations Director. | Should have | Prioritizing this function ensures a seamless checkout experience and maximizes revenue potential. | 225 | 465 | 25% |
| RQ08 | Allow customers to easily modify their shopping cart contents to accommodate changes in purchasing decisions. | Should have | This function is also quite important in the user's purchasing process so I prioritize this function before the functions below. | 240 |
| RQ11 | Allow customers to input separate delivery and invoice addresses to facilitate delivery to alternate locations. | Could have | This function is a priority in this location because it is quite importance and it creates convenience and flexibility in the delivery process, improving overall customer satisfaction. | 240 | 460 | 24% |
| RQ12 | Allow customers the option to choose whether they receive marketing information to prevent excessive junk mail. | Could have | Because this is a function unrelated to the ordering and purchasing process, it is given last priority. | 220 |
|  | | | **Total** | **1890** | | |

Table 6 The MoSCow estimation

In conclusion, the priority follows the MoSCoW rule (60:20:20) with a Musthave: Should have: Could have a ratio of approximately 51:25:24. As a result, the project may be finished on schedule and with MoSCoW's priority.

Due to applying Scrum, this tasks are allocated into sprints as shown in the following table:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 175 man.hours/ week | **Sprint 1** | | **Sprint 2** | | **Sprint 3** | | **Sprint 4** | | **Sprint 5** | | **Sprint 6** | |
| week 1 | week 2 | week 3 | week 4 | week 5 | week 6 | week 7 | week 8 | week 9 | week 10 | week 11 | week 12 |
| Must have | RQ05 |  |  |  |  |  |  |  |  |  |  |  |  |
| RQ03 |  |  |  |  |  |  |  |  |  |  |  |  |
| RQ16 |  |  |  |  |  |  |  |  |  |  |  |  |
| RQ01 |  |  |  |  |  |  |  |  |  |  |  |  |
| Should have | RQ18 |  |  |  |  |  |  |  |  |  |  |  |  |
| RQ08 |  |  |  |  |  |  |  |  |  |  |  |  |
| Could have | RQ11 |  |  |  |  |  |  |  |  |  |  |  |  |
| RQ12 |  |  |  |  |  |  |  |  |  |  |  |  |

Table 7 The quirements are allocated into sprints

# **Legal, Social, Ethical and Professional issues**

## Data Controller

The Data Protection Act (DPA) is law aimed at protecting individuals' personal data and governing how it is processed by organizations. It provides rules and regulations for the collection, storage, use, and sharing of personal information, ensuring that individuals keep control over their data and that organizations manage it effectively and securely.

Data privacy refers to the protection of individuals' personal information and their right to control how their data is collected, used, and shared by organizations. It includes a variety of characteristics like as the secrecy, integrity, and accessibility of personal data, as well as people's the right to control their own information.

The data controller at Green Groceries is the essential individual with the responsibility of monitoring the collection, processing, sharing, and management of personal data via the company's online platform in compliance with data protection laws and regulations.

 Below are the ways that the data controller must do to take to oversee the collection, processing, sharing, and management of personal data:

Collecting data - The data controller will oversee the collection of various types of personal data from customers, such as names, contact information, delivery addresses, payment details, and preferences related to purchases.

Storing data - The data controller will implement secure storage mechanisms, such as encrypted databases or secure servers, to store personal data in compliance with data protection laws. They will also establish access controls and authentication measures to restrict unauthorized access to the data.

Transfer data - If personal data needs to be transferred to third parties, such as delivery partners or payment processors, the data controller will ensure that appropriate safeguards are in place to protect the data during transmission. This may include using encrypted communication channels or establishing data processing agreements with third-party providers.

Data Usage - The data controller will ensure that personal data is only used for legitimate purposes that have been clearly communicated to customers. This may include purposes such as processing orders, improving services, personalizing user experiences, and complying with legal obligations.

In general, the data controller plays a crucial role in ensuring that personal data collected by Green Groceries is handled responsibly, ethically, and in compliance with data protection laws in UK and European Union. By implementing robust data protection measures and adopting privacy-by-design principles, the data controller helps to build trust with customers and protect their privacy rights.

## Legal, Social, Ethical and Professional issues

* **Legal Issues:**

Data Protection and Privacy Laws: This entails ensuring that user data collected by the Green Groceries Online Platform is handled securely and in compliance with relevant data protection laws, such as GDPR or CCPA.

For example, If Green Groceries mishandles user data collected by its online platform, such as failing to obtain proper consent or neglecting encryption measures, it may face lawsuits from affected users and investigations from regulatory authorities.

Consumer Protection: Green Groceries must comply with consumer protection laws and regulations to safeguard consumers' rights and interests. This includes providing accurate product information, fair pricing, reliable customer service, and honoring warranties and refund policies.

For example, If Green Groceries provides inaccurate product information, engages in deceptive pricing practices, or fails to honor consumer rights regarding refunds and warranties, it may face legal action from disgruntled customers and damage to its brand reputation.

Compliance with Financial Regulation: Green Groceries must comply with financial regulations governing online transactions and payment processing. This includes ensuring secure payment gateways, fraud prevention measures, and adherence to regulations such as PCI DSS.

For example, If Green Groceries fails to implement secure payment gateways, fraud prevention measures, and compliance with regulations such as PCI DSS, it may expose customers to financial risks and face regulatory scrutiny from authorities overseeing financial transactions.

Intellectual Property and Licensing: Green Grocery must respect intellectual property rights, such as patents, trademarks, and copyrights, and to make sure that any software or material used on the platform is properly licensed.

For instance, If Green Groceries uses images, logos, or branding without proper licensing or violates patents and trademarks belonging to other entities, it may face legal actions for copyright infringement and reputational harm.

Advertising and Marketing Laws: Green Groceries is required by law to abide by advertising and marketing rules in order to guarantee that its promotional endeavors are truthful, open, and permissible. This entails abstaining from spam and misleading advertising techniques while also honoring consumers' privacy choices.

For example, the platform must obtain consent before sending marketing emails to customers and ensure that its advertising claims are accurate and substantiated otherwise Green Groceries could face legal action. penalties from regulators and loss of consumer confidence.

* **Social Issues:**

Accessibility: Green Groceries should ensure that its online platform is accessible to users with disabilities, including those with visual, auditory, or mobility impairments. This involves designing the website with accessibility features such as alternative text for images, keyboard navigation options, and captioning for audio content.

For example, the platform could provide adjustable font sizes and high-contrast color options to improve readability for users with visual impairments.

Security Awareness: The platform should prioritize security awareness among its users by educating them about online security best practices, such as creating strong passwords, avoiding phishing scams, and using secure payment methods.

For instance, Green Groceries provides tips on its website or through email newsletters to help users recognize and avoid common security threats when shopping online.

Transparency and Trust: To build trust and credibility with users, Green Groceries should be transparent about its business practices, pricing policies, and product sourcing. This can be achieved by providing detailed information about the company's values, sourcing practices, and environmental initiatives on its website.

For example, the platform could feature profiles of its partner farmers and suppliers, along with information about their farming practices and commitment to sustainability.

Community Engagement: The platform should foster a sense of community among its users through interactive features, user-generated content, and social media integration.

For example, Green Groceries could create online forums or discussion boards where customers can share recipes, gardening tips, and sustainable living practices, encouraging community interaction and collaboration.

* **Ethical Issues:**

Fairness: Green Groceries must ensure fairness in its operations, including pricing, promotions, and access to products and services.

For example, If Green Groceries offers discounts and promotions that unfairly favor certain customer segments over others, it may face accusations of discrimination and backlash from marginalized groups. Ensuring fairness in pricing, promotions, and access to products and services is crucial to maintaining ethical standards and fostering trust among customers.

Protecting Consumers: Green Groceries has an ethical obligation to protect consumers by providing accurate product information, fair pricing, and reliable customer service.

For instance, If Green Groceries provides inaccurate product information, engages in deceptive pricing practices, or delivers subpar customer service, it may lose credibility and face legal actions from disgruntled customers. Upholding ethical standards by transparently labeling products, offering fair pricing, and delivering reliable customer service is essential for building long-term relationships with consumers.

Protecting Business Data and Information: It is essential for Green Groceries to safeguard sensitive business data and information, such as customer records and financial transactions, to prevent unauthorized access and misuse.

For example, If Green Groceries neglects cybersecurity measures and exposes customer records or financial transactions to unauthorized access, it may face lawsuits, regulatory fines, and loss of trust from stakeholders. Ethically protecting business data through robust security protocols, such as encryption and access controls, demonstrates a commitment to integrity and responsibility in handling sensitive information.

* **Professional:**

Compliance with Standards and Regulations: Failure to comply with industry standards and regulations may result in legal penalties, reputational damage, and loss of customer trust.

For instance, if Green Groceries fails to adhere to food safety regulations, it may face fines, lawsuits, and public backlash if contaminated products are sold through its platform.

Test for Quality Assurance (QA): Neglecting quality assurance testing can lead to a poor user experience, decreased customer satisfaction, and loss of credibility.

For example, If Green Groceries launches its online platform without adequate testing, it may encounter issues such as broken links, slow loading times, and checkout errors, resulting in frustrated customers and lost sales.

Security and Data Protection: Inadequate security measures may expose Green Groceries to data breaches, hacking incidents, and compromised customer information.

For instance, Without having suitable encryption and data protection methods, the platform might be vulnerable to cyberattacks, resulting in financial losses, legal liabilities, and a tarnished brand owing to a breach of consumer confidence.

The BCS Code of Conduct: Violating professional codes of conduct can erode trust with stakeholders, tarnish the company's reputation, and lead to legal consequences.

For example, If Green Groceries fails to uphold ethical standards outlined in the BCS Code of Conduct, such as honesty and integrity in business dealings, it may face accusations of unethical behavior, loss of customer loyalty, and difficulty attracting and retaining talent.

# **Conclusion**

In conclusion, the successful completion of the Green Groceries Online Platform project highlights the effective utilization of Agile methodologies, particularly DSDM (Dynamic Systems Development Method) and Scrum approach. Through the active involvement of stakeholders, adherence to development frameworks, and close collaboration between internal and external teams, the project achieved its goals within the specified timeframe. The prioritization of key functionalities, such as enabling customer registration, updating account details, processing telephone purchases, and facilitating online transactions, ensured that the platform met both business objectives and user needs.

Another thing to remember, I would like to express my gratitude to the instructor for their unwavering dedication and invaluable assistance throughout the completion of my assignment. Their patient guidance and thorough explanations have been instrumental in clarifying my questions and facilitating my understanding of the subject matter. I am truly grateful for their commitment to ensuring my success, and I deeply appreciate the time and effort they have invested in supporting my academic endeavors.

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