

Development Frameworks and Methods

Course: COMP1648

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Introduction

Walk2Live is a fitness company founded by Janet, a fitness enthusiast while opting to run a couple of kilometers a day. She then expanded the business with the help of Ben all around UK spreading fitness awareness and selling supplements to local centers. As the business is expanding, she thought to centralize the whole business procedure into a consolidated system. Ben contacted SudoSoftly and the project manager Scott is acquiring requirements from the members of the company to sort them out and fulfill them.

Section A : Management Summary

A.1 Justification of DSDM Atern as the appropriate solution:

- Janet and Ben the key decision makers of the company felt the need to acquire a solution that would centralize the management of franchises in and carry out business procedures in a systematic manner. They fixed the goal to fuse the scattered procedures and integrate them into a principal system.

DSDM takes on projects that have well defined goals to figure out the business needs at correct moment. The stakeholders already envisioned what they require to support their business needs and how they would proceed. So, DSDM appears to be a suitable solution for this project.

- As cited in the scenario, Janet and Ben were planning to opt for a principal system that would centralize all the business processes fragmented within the company. This included centralizing franchise operations throughout UK within the system. Janet assigned her nephew John to come forward with a solution. Unfortunately the solution that he came up with was not satisfactory because it lacked a certain caliber that Janet was expecting.

DSDM Altern is popular for stressing on the quality of the solutions which they will never compromise. They emphasize on the key requirements that are derived from sorting the requirements after applying MoSCoW prioritization method on them. Early testing conducted for a risk-based approach builds them to tackle challenges. So without any doubt, they aspire to deliver the best solution that satisfies client expectations.

- When Ben took the initiative of appointing SudoSoftly to build the project, he was expecting to receive the full system for implementation by the end of the year. The CFO was also anticipating that the fully functional ecommerce system will be live within 3 months leaving the next 3 months for developing the centralized system. DSDM was founded on the concept of well-timed delivery. DSDM Altern is able to ensure that by concentrating on the business requirements and priorities that Ben had elucidated, and specifying Time boxes that will help to establish delivery time and deliverables which leaves no room for ambiguity. Hence, DSDM may be appropriate for Walk2Live Company's system.

- The CFO Ben, necessitated the requirement for the E-Commerce system to ensure his business is expanded by a huge margin as he predicted. He was expecting the other features to be included into the system later.

This calls for the necessity of building system incrementally that DSDM is capable to render. To derive the early business benefits, incremental development is crucial because it helps to divide the development into small chunks within specified time boxes to get a portion of the solution that is fully functioning. Which is why DSDM is well-suited for the Walk2Live project.

- Few years ago the key members, Janet and Ben envisioned a structured system that would centralize the whole franchise management and their own operations. They put John in charge of the development which eventually wasn't up to the mark because it lacked the functionalities they envisioned.

DSDM has the ability to develop projects iteratively under a specific time frame and satisfy the business requirements by analyzing the high level requirements and develop on the partial solutions that are presented as prototypes which could result into the final emerging consolidated solution (E-Commerce solution stated in scenario) . Continuous feedbacks will help the stakeholders of Walk2Live to be assured that eventually, the evolving solution will function perfectly , making DSDM an appropriate choice for the project.

A2 Advantages of DSDM Atern:

- Embracing changes while developing a solution is one of the solid advantages of DSDM. A slight alteration that suggested from the feedback group could be origin of a robust solution that would meet the business need exceedingly and aid to business growth. Thus leading to a successful deployment of the solution.
- Throughout the development process, all the stakeholders and active key members were present to provide adequate feedback to outline the whole solution. The user involvement radically changes a project outcome and enhances quality.
- Since the stakeholders actively suggests their opinion on building the solution, frequent errors and mistakes are avoided and kept to a minimum with constant review on the solutions. Which indicates the transparency within the key members are crucial to produce a robust solution.
- Continuous thought exchanges with the development team ensures that the end users are well familiar with the operations of the site which will increase their work productivity and reduce time on training, saving company's resources.
- DSDM always focuses on end-user feedbacks which results a smooth delivery and deployment of the solution. Whilst working hand to hand with the developers , the involved end users and stakeholder establish a firm bond with the project team leading to a better understanding and support if required in case of troubleshooting.

(Tudor, 2010)

A3 Disadvantages of DSDM Atern:

- Continuous Client feedback helps DSDM to produce improved solutions through project life-cycles. If the stakeholders are hesitant to participate into the thought exchange process, there will be damaging impact on the solution.
- If it's difficult to get feedback from the stakeholders due to office bureaucracy, the communication gap can entail project failure because without clear understanding it isn't possible to develop a viable solution. (Tryqa.com, 2018)
- The senior developer of the team is the only one taking important decisions which could be a barrier because brainstorming with team members and taking decisions also improves project quality.
- It isn't possible to get timely delivery of the project if the communication between the stakeholders and development team doesn't take place frequently.

(Vethics, 2018)

Section B: High Level Requirement Analysis and MoSCoW prioritization

This section consists of two parts B1 and B2. In the first part, we go through the analysis of what are the 'High Level Requirements'. In the second part, we take a look into the MoSCoW prioritization of 'High Level Requirements'.

B1: Review of 'High level Requirements'

In this part of the assignment we will take a look at the inappropriate high level requirements and puzzle out the actual high level requirements as directed.

B1.1: Inappropriate High Level requirements

i. The site should be easy to use and quick to load

This is a case when the interface of the system is specified, declaring that the system needs to be user-friendly and easy to navigate and also the performance is anticipated from the system. Usability and performance requirements are non-functional requirements. That's why it's an inappropriate high level requirement.

ii. We probably need to arrange for this site to actually “be” on the internet

The development team must ensure that W2L has their system hosted on the server to make sure it's reachable for the users. As this is a physical need that falls under portability requirements which suggest it's a non-functional requirement which eventually makes it inappropriate high level requirement.

iii. We need to register the web URL Walk2Live.co.uk

This requirement acts as a patent for walk2live to make sure other fitness groups cannot steal this idea. This requirement is inappropriate as this is considered a legal requirement that's also a non-functional requirement as well.

iv. The system should replace the current systems at franchise centers

The requirement specifies robustness of the system which makes it a non-functional operational requirement and also makes it an inappropriate high level requirement as well.

v. The look and feel of the website should resemble the healthy lifestyle we're selling

It indicates an interface requirement that specifies the looks and feels required to be designed for the outlook of the system. This is why it's inappropriate as this is a non-functional requirement too.

vi. For the most part ... the database in MS Access.

John indicated a requirement that specifies how his codes for the old system can be reused rather than rebuilt to promote reusability within maintainability requirements which is non-functional and also inappropriate for high level requirement.

vii. Client can use system like Facebook ... contact those people.

This requirement simply resembles one's opinion on how the clients can communicate among themselves which is an operational non-functional requirement. That's why this requirement is inappropriate.

B1.2 High level requirements

i. Customer Login and Registration

W2L has a wide reach among fitness enthusiasts who are keen on joining the team. To make sure the system recognizes them through a unique ID, the registration and login must be used so that admins can also track their activities once they have joined the system.

ii. Searching and browsing facility

Search and browsing facility helps the users to choose and browse through various ranges of products W2L provides. User login isn't required to avail this facility. This helps to increase web traffic which is why it should be considered as high level requirement.

iii. Responsive customer feedback

This requirement helps the clients to get to know better about the products and increase business. This also helps the customers to get perfect response from the company against all the queries they have, making it a high level requirement.

iv. Product rating functionality

Products rating system helps customers to judge how good the product actually is. The comment section will surely reflect its quality. The fact that it helps to make a better decision when it comes to choosing products makes it a high level requirement.

v. Placing customer orders online

This requirement indicates that customers can choose products, payment methods to order products and checkout as required. This is required to maintain business and fulfilling the requirements of an E-commerce system, which makes it appropriate for high level requirement.

vi. Product Packaging and shipping

This requirement specifies that ordered products should be packaged and customers should be able to choose their packaging and shipping methods of their own choice. This information is crucial as customer satisfaction depends on it, making it a high level requirement.

vii. Facility to return products

If the customers are unhappy with the ordered product, they can return product in a systematic way to make sure the relation between the customers and vendors remains unharmed. Hence it is a high level requirement.

viii. Incorporating a bookkeeping system

The Franchise owners need to keep a record of all the financial transactions to conduct business with ease. This is a crucial aspect of the business because it can lead to many important decisions. Thus making it a high level requirement.

ix. Order Management for franchise owners

This requirement Paige narrated that franchise owners must be able to order merchandises from head office for their local stores whenever shortage of inventory is created which makes it a high level requirement.

x. Class management with payment options

Franchise owners of Walk2Live hold classes at their premises which begs for a robust booking system that allows customers to book classes as well as pay their membership fee online. They also require to track classes and pay their staffs through the system. This makes it a high level requirement.

xi. Online community for liaison

An online community platform should be created within the system to make sure franchise owners are always connected with the charities and aware of their activities in a site where only the permitted personnel can join, track and communicate.

xii. Featuring Reports and infographic forecasts

It's required to view business analytics such as sales charts, reports, the cost and Return on Investment (ROI) forecasts. The system should present these forecasts and reports in an infographic manner to help the decision makers of Walk2Live make decisions that will aid to business. Thus making it a high-level-requirement.

B2: MoSCoW Prioritization

B2.1: Prioritizing updated high level requirement list using Moscow Prioritization

MoSCoW prioritization is method that is used to rank the requirements in a much simpler terms than using numerical formats. Each of the words are meaningful and helps to discuss on the important requirements one by one. (Haughey, 2018)

Acronym of MoSCow

MoSCow is broken down to four types of requirement:

M = Must Have

S = Should Have

C = Could Have

W = Won't Have

Must Have: The non-negotiable requirements without which there's no point in creating the solution is considered a must have requirement. (Kukhnavets, 2016)

Should Have: The solutions are very useful to the organization but wouldn't halt process even if the requirements are absent. (www.agilebusiness.org, 2014)

Could have: These requirements are important but when compared with a should have, they don't hold the same level of value.

Won't Have: Won't have are those requirements which are decided by the project team that they won't be present in this timeframe but will be added later into another timeframe.

A High Level Requirement List has been produced below.

Serial	High Level Requirement	MoSCoW Prioritization
1	Searching and browsing facility	Must Have
2	Placing customer orders online	
3	Product Packaging and shipping	
4	Order Management for franchise owners	
5	Responsive customer feedback.	Should Have
6	Class management with payment options	
7	Featuring Reports and infographic forecasts.	
8	Customer Login and Registration.	
9	Online community for liaison.	Could Have
10	Product rating functionality	
11	Facility to return products.	Won't Have
12	Incorporating a bookkeeping system.	

B2.2 Justifications of prioritizing high level requirements

Must Have

- Searching and browsing facility Justification:

An E-commerce website requires the customers to view different range of products even without login in. Customers won't be attracted to the website if they require to login to browse desired products. This reduces process and permits users to roam freely around the site.

- Placing customer orders online.

Justification:

Walk2Live concluded that Customers must be able order online to buy products from the system which is a main target. After the confirmation of orders, customers must be able to pay online and checkout as required. Hence it's a must have criteria.

- Product Packaging and shipping

Justification:

Walk2Live must manufacture, pack and ship the product to the respected customer as ordered. It's important to figure out which products must be manufactured and the company must be able to ship products to correct location to maintain business.

- Order Management for franchise owners

Justification:

Franchise owner must be able to meet the demands of their stores by ordering the supplements and marketing materials from head office as required to sustain business. That's why it's a must have criteria.

Should Have

- Responsive customer feedback.

Justification:

This refers to should have criteria because Walk2Live will be able to operate smoothly without this option but the addition of this option will make the communication between the parties smoother and effective.

- Class management with payment options

Justification:

This will specify the should have criteria because customers can still book and pay for classes through the centers even without online facilities and Walk2Live can still maintain business.

- Featuring Reports and infographic forecasts.

Justification:

The stated requirement is significant to the Walk2Live Company. Even though the option will assist the decision makers to aim for better decisions, the absence of this option won't put the business at risk as they will still be in business. Hence it's belongs to should have.

- Customer Login and Registration.

Justification:

Login and registration is should have criteria because even without this requirement, the customer would still be able to choose and order products and pay for the products at checkout. To complete the process they don't necessarily have to login which is why it belongs to should have.

- Online community for liaison.

Justification:

Maintaining communication through online community such as a forum falls under should have criteria because the charities themselves communicate with various companies to attend to their events. Nonetheless, the absence of this forum doesn't mean that contact with the charities are ceased. Hence it's a should have requirement.

Could Have

- Product rating functionality

Justification:

Walk2Live can pursue this requirement after ensuring the customers get proper feedback and service. At current status this isn't crucial nor will it be effective which makes it a could have requirement.

- Facility to return products.

Justification:

It's very unlikely that customers will request to make sure the defective products are returnable if they are not satisfied with it. This secures the relationship between the company and customer. Hence it's a could have requirement.

Won't Have

- Incorporating a bookkeeping system.

Justification:

This is a requirement that is out of the current scope of developing "Alive" solution. The system doesn't need to include this service as it will consume more resources and time. The service can be offered by an accountant so there's no need to integrate this service into the system at this point but can be included at later increments.

Section C – Legal, Social, Ethical and Professional Issues:

C1 Management Summary on Data Controller

C1 a) The role of the data controller within the organization:

Walk2Live is a fitness company established to spread consciousness on fitness. Now they hold various classes and conduct events to numerous charities. They supply their own range of supplements and health products to the franchise owners and now trying to sell them on an E-Commerce platform. This indicates that there are vast data always being transacted from one part of the system to another. This begs for a data controller who will prevent any infringement on Data Protection Act and user data is kept safe and private. Any violation of DPA could cause reputational damage to the company and also the users. Some of his roles are described below:

- Data controller will make sure any sorts of vulnerability regarding personal data by hackers or malicious users will be secured to ensure data integrity.
- Data controller must make sure that all of the data of Walk2Live is processed in accordance with the principles of DPA.
- Data controller of Walk2Live will impose strict rules on data processing to judge the types of data categories considered as sensitive, personal, industrial etc. This will indicate where each categories of data should be used while agreeing with DPA.

(Dataprotection.ie, 2018)

- Walk2Live handles multiple streams of data within the system. Data controller must ensure that any sorts of violation of DPA is prevented by increasing restrictions and regulating policies on sensitive data. A failure could result in company's reputational damage.
- After sorting out every types of data, the data controller must ensure that every types of data are being processed according to the DPA and the purpose of those data is fully served. After serving their purpose, the data need to be archived.

(l-scoop.eu, 2018)

C 1 b) Practical example of LSEPI

Example 1: Larceny of Customer's Credit card information

Walk2Live will upgrade the system and incorporate E-commerce into the system to sell supplements and health products online. Once, customers order and move to checkout and pay with their credit card, the information is stored within the system. If the information is not retained in a secure place, it can lead to Walk2Live's downfall with regard to legal, social, professional and ethical aspects.

Legal Issue:

Hackers could impose a man-in-middle attack while the customer is checking out with credit card causing violation of customer's privacy which could invoke a legal action against Walk2Live for being insensitive protecting customer rights.

Professional Issue:

Revelation of credit card information through company employees will indicate how ineffective company authority is in terms of protecting customer data and practicing policies over employees which could lead to company's downfall.

Ethical Issue:

If employees could discover an intrusion of data and don't report to the authority immediately they will be held responsible in terms of moral conducts.

So user access should be configured beforehand to avoid these situations to prevent misuse of client information.

Social Issues:

Unsolicited activities done by cyber criminals through misusing customer's credit card information without their consent can harm customer's social image along with company's reputation.

Roles data controller could play to resolve this issue:

Data controller should impose strict limitations when it comes to accessing customer's credit card information to reduce unnecessary access and accidental revelation of data in accordance with DPA 1998. Data controller must play an active role dealing with security issues, data processing and enforcing limitations for data security.

Example 2: Personal information of Customer (Name, age, height, gender, email address, phone number, blood group)

Walk2Live is planning to launch their E-Commerce site to increase their profit margin and then focus on centralizing the business procedures. To successfully conduct

E-commerce business, they would have to know customer's personal data to properly pack and ship the products to their residence. As these data are very sensitive, they need to be treated with utmost caution so that LSEP issues can't arise.

Legal issue:

If wrongful use of customer data is occurred by the employees of Walk2Live for their personal gain without their permission, then that could pose a threat to identity which calls for legal actions against Walk2Live for exposing their credentials.

Professional Issue:

If the employees of Walk2Live prove any incompetence by accessing or misusing customers data for own gain which conduces to hassling customers, then severance of professional conducts could aid to customer loss.

Ethical Issue:

Unethical issues could arise when a customer is suspected for committing a crime and the federal agencies are inquiring about that customer to Walk2Live which could result in the revelation of customer data even though it's completely legal.

Social Issue:

Loss of credibility and social reputation could occur if a customer's personal information is exposed wrongfully by Walk2Live which brings the consequences of losing corporate reliance.

Roles data controller could play to resolve this issue:

Data controller must be active to assure that any wrongful use of customer data won't occur under his supervision. He will distinguish the data necessary to conduct business and store them by enforcing strict regulations agreeing with DPA. Vulnerability of these information should be extinguished by executing tests and trial to uphold data security.

C 2 Purpose of BCS Code of Conduct :

As the IT industry is expanding day by day, there are numerous rules and regulations that ought to be imposed on this sector to maintain the balance and protecting rights on both the user side and on the company side. The most valuable part of each business in this digital era is data manipulation and processing which can be infiltrated by hackers at various times and can be used to commit vicious crimes.

To put a barrier on that, BCS code of conduct establishes a set of rules that must be maintained by all IT professionals to make sure such incidents don't occur or can be neutralized. If such violations of conducts are occurred, the code specifies how to counter them and take actions as required to maintain harmony in the industry.

The four BCS Code of Conducts are described along with practical examples below:

- **Public Interest:**

The Walk2llve company deals with various customers all over UK. With so many data always being transacted, they felt the need to appoint a Data Controller to make sure every data that is being processed according to Data Protection Act. He also needs to make sure data is not affected by any sorts of malicious threats and every vulnerability is neutralized. According to the rules cited in the section a and c of this code, it suggests that developer must act professionally to protect data safety and never disclose or discriminate any confidential data.

- **Professional Competence and Integrity:**

The new system of Walk2Live is going to centralize business management system with E-Commerce feature built into it. They will be developed incrementally to make sure everything is fully functional and meeting the business needs as required. With regards to the rules stated in a, b and c,

The developer must be able to produce the solution, the developer must be well-experienced with the aim to learn continuously and be able to provide optimum solution for E-Commerce related and also security issues. So the developer who don't possess the skillset, cannot claim to develop the system required by Walk2Live.

- **Duty to Relevant Authority:**

When the project team of Walk2Live will take the initiative to develop the system, the developers of that team will have all the resources and related data of the organization. The rules cited in section a, b and d propose that, same business must have multiple competitors who are eager to acquire business strategies or confidential information. The developer of Walk2Live by any means shouldn't disclose any of this to a third party for personal gain without any authorization from the relevant authority nor should he develop similar system for other companies where the confidential information needs to be disclosed.

- **Duty to the Profession:**

Walk2Live Company is well-reputed among the fitness enthusiasts. They are willing to increase their reach via E-Commerce site and create a centralized structured system for better management. According to the rules a and d , the developers of this project must make sure to uphold the reputation of Walk2Live. They should work in this project with integrity which means any sorts of incentives offered by competitors must be avoided and notified to the authority. They must also improvement their capability by getting involved in the development with high spirit.

(www.bcs.org, 2018)

Conclusion

Walk2Live is searching for a methodology to ensue project development that would be sustainable and meet all of their requirements focusing on the advantages, disadvantages, requirement gathering and requirement prioritization. DSDM Atern has the capability to deliver all of their requirements with functioning solutions as well as delivering in time which is crucial to maintain business.

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