Learning Journal
Software Project Management

Student Name: Snehil Sharma
Course: SOEN-6841 (Software Project Management)
Journal URL: https://github.com/SnehilSharma0308/SOEN-6841-SPM
Week4: Feb 04 – Feb 10

Key Concepts Learnt:

Chapter 5 (Configuration Management):

1. Configuration management is a way with which we can **store, organise, retrieve** various **artifacts** produced during software development lifecycle of a product.
2. As code is developed daily during software development, configuration management becomes important as code will be getting merged on a daily basis and at times user might want to retrieve **previous versions** as well.
3. A configuration management system becomes even more important when teams are working on a single project, but they are located at **different locations** across the world.
4. Configuration management system should be configured in a way such that only required people (**role-based access**) have access to specific artifacts so that everyone cannot make changes to the artifacts because in such cases one can create issues in the management of the artifacts.
5. Configuration management systems should have features of **logging and tracking** such that organisation can figure out who made the change, why this change was important and when this change was made.
6. Importance of testing increases in the case of such systems because organisations never want a code to be merged if it is breaking some existing functionality of the system and the new code should also be working as per the expectation **thus smoke testing** becomes very crucial.
7. Configuration management systems provided ability of branching and working on individual features and after that merging capabilities so that developers can work on their individual functionalities and can develop the system in parallel.
8. It becomes important that configuration management systems are reliable, secure and always available as organisation cannot afford downtime in such systems on which they have huge dependency because the **downtime** of such systems can cause loss of resources and time for an organisation.
9. It can store a variety of different artifacts like **code, documents, reports** and much more.

Chapter 6 (Project Planning):

1. Project planning involves a lot of different aspects like **risk** planning, planning of **resources**, planning of estimation of **cost** and **efforts**.
2. Project manager needs to think which **trade-off**s to make like increase efforts for a better product but with increased cost or reducing budget and delivering product with less resources and less reliability.
3. **Work breakdown structure** helps to organize the projects into different **millstones** so that project can be completed in phases.
4. Quality assurance teams play a significant role after every phase or milestone to make sure that none of the existing functionalities are broken and the new features are working as expected.
5. **Goldratt's Critical chain method** focuses on issues with traditional planning methods and promotes buffers between or after tasks.
6. It is very important to understand fundamentals, make **effective communication** and utilize resources efficiently for a better project planning and eventual success of the project.
7. Project planning is equally important in **iterative and agile methodologies** as in traditional ways of development.
8. Project planning even involves considering usage of programming languages for development, usage of necessary tools for the effective resource utilization.

Application in Real Projects:

1. Configuration management systems makes sure that developers are always working on the **latest updated version** of the software with the best reliability.
2. Configuration management tools provide ability to merge the changes and helps developers to make informed decisions in case of any conflict.
3. Moreover, these tools are helping to improve **traceability** which is very critical for any organisation for software comprehension.
4. Proper project planning helps the organisations to analyze the risks which might occur and also a way of their mitigation.
5. In real world projects, making trade-offs between efforts, cost and time goes in parallel and all of these impacts the product in a negative or positive way based on the decisions made.

Reflections on Case Study/Course Work:

1. The case study on developing and managing our project "**Virtual Wedding Planning Concierge**" has helped to explore a different domain and how technology can make a significant impact in this area from a business perspective.

2. Exploring the project **charter, scope, objectives**, stakeholders involved helped to identify that what all challenges consumers and product stakeholders face while adapting/launching a new product in the market.
3. The detailed thinking in the usage of software solution to capture the **untapped market** helped to figure out that how software requirements come into picture based on a detailed market analysis.
4. Market analysis plays a significant role in helping us understand our competition, what mistakes they did, and we should be avoiding making our product more successful.
5. Importance of gaining the **past experiences of customers** is even more important while building a product because they will be our actual target audience and we want to satisfy them with our upcoming product.

Collaborative Learning:

1. Interaction with teammates on the key **stakeholders** of the product helped to understand that it is not only the businesspersons who are the key stakeholder rather consumers are as important stakeholders.
2. The expertise of team members helped us to identify the importance of different domains of **technology** and how we will be able to use them to develop our product.
3. Collaborative **decision-making** helped us make decisions like inclusion of Virtual Reality in our product as well as reduce language barrier by language localisation.
4. Working together on project charter, scope and objectives brought us together as a team on our aligned goal.
5. Interacting with actual customers as a team for market analysis helped us identify the problems of the customer which helped us as a team to come to the potential features of our software solution.

Challenges Faced:

1. How to balance out all the different requirements of the customers into a software solution which is useful for most of the customers?
2. How to leverage new technologies like **AR and VR** to improve customer experience since it will require significant learning?
3. **Building trust** is a long process between a product and its customers but what steps can we take (probably inclusion of some features like chat history) for transparency?
4. Integrating features like **weather alerts** requires some third-party integration with APIs but will they make an impact on the reliability of our product?
5. Figuring out that what features will make us standout in the tech market in the domain of our product?

Further Research/Readings:

1. Read about user-experience research papers for virtual assistants and how we can create interactive virtual assistants which learns by themselves.
2. Investigate about the **potential challenges** when integrating AR and VR in the product.
3. Read chapters in the books about stakeholder analysis to make a positive impact on customer experience.
4. How configuration management can be **automated** and how useful insights can be taken from that data which will help the organisation to grow.
5. How and on what basis we will make compensations in case vendors don't meet customers' expectations.

Adjustments to Goals:

1. Reassess the communication history feature as per government compliances so that we are not storing any user sensitive data.
2. Evaluate the integration process of social media handles and how the expected target audience can be reached using the hashtags assigned for the weddings.
3. Exploring the timelines required for the development of AR feature and making sure the artifacts provided by the vendors can be applied on the venues.
4. Read articles of how **dynamic budget tracking** feature can be used based on fluctuating market conditions and vendors' price changes.
5. Inclusion of metrics and conduct surveys related to the satisfaction of virtual assistant.

References:

1. Ahmed, A. (2012). *Software project management: a process-driven approach*. CRC Press. Retrieved January 22, 2024, from https://concordiauniversity.on.worldcat.org/oclc/774289078