ICT Service Management ICA

UK Bio Energy

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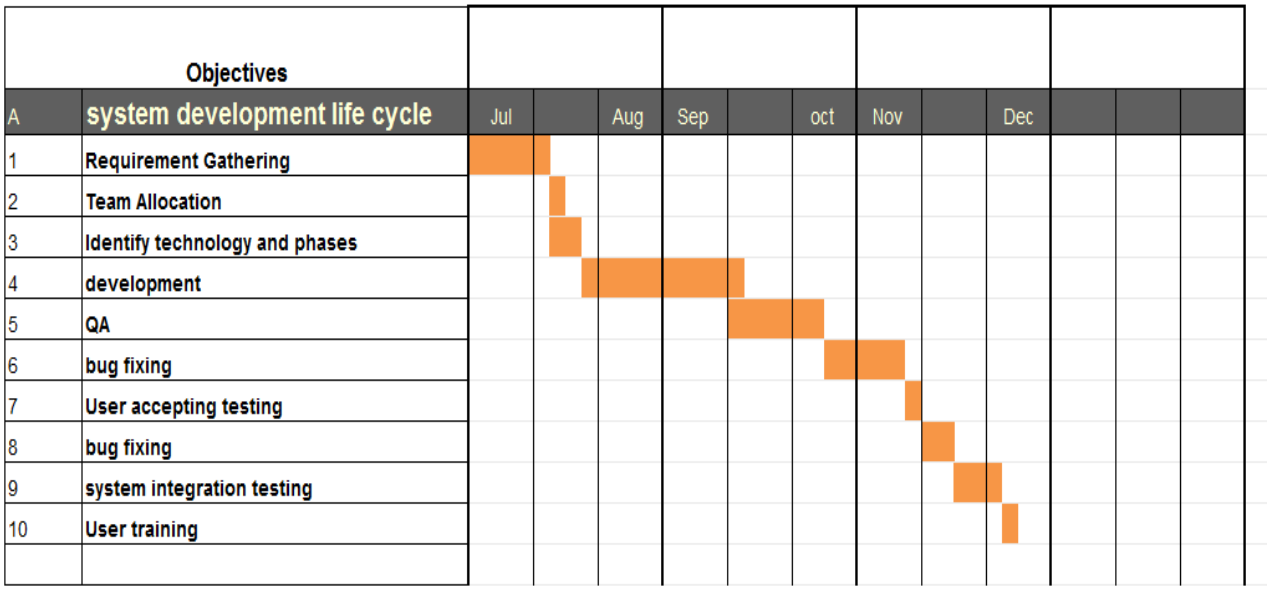

Figure 01 [1]

Task Name	Start	End
Requirement Gathering	7/1/2017	7/14/2017
Team Allocation	7/14/2017	7/17/2017
Identify technology and phases	7/17/2017	7/21/2017
development	7/21/2017	9/21/2017
QA	9/21/2017	10/14/2017
bug fixing	10/14/2017	11/1/2017
User Accepting Testing	11/1/2017	11/8/2017
bug fixing	11/8/2017	11/17/2017
System Integration testing	11/17/2017	11/30/2017
User Training	12/1/2017	12/12/2017

Table 01

1.2.1.1 Members

Member A – Team leader

Member b

Member c

Member d

1.2.2 Role Responsibilities

Team leader have to provide guidance for team members to achieve their goals .According to current target of SET team they have different kind of areas and aspects to cover.

As a team leader have to identify proper geographical areas coverage for electricity supply (requiring a scalable IT solution).team leader has to select proper IT programming team to build up scalable IT solution for that. Software must identify proper geographical solution for requiring answer. So Team leader have to get support from IT specialist consultant to identify programming and IT team provide the correct solution for the requiring answer because this IT solution is very critical one which is interacting with day to day people lives and whole procedure so Team leader have to more consider about It solution provide by the team .

Not only that team leader have to care about growth in customer numbers, year on year according to their number planning. A reduction in power outages over the year from 1.3% to 0.5% by using introduce capable plan with electrical and electrical engineering solution .and guide for their target 24 hour technical support for all departments, including domestic and commercial electricity customers by using good active and interactive IT customer support team . A reduction in customer complaints from 28 per month average to 1 per week plan also combined with what sis the team will provide electrical and electronic engineering solution.[2]

Member b

identify solution target of A reduction in customer complaints from 28 per month average to 1 per week and A reduction in power outages over the year from 1.3% to 0.5% so member b have to looking for better electric power generate solution for this process In order to that .
According that his/her responsibility is looking for more biomass waste places .and produce for production cycle of electricity And also looking for better chemical ingredient for better result and more production which will help to achieve gal of reduction in customer complaints from 28 per month average to 1 per week and A reduction in power outages over the year from 1.3% to 0.5%

Member c

- Create desktop application by using Microsoft technologies .identify relevant technologies and identify branches technical environment for providing that solution

Member d

- Member e is responsible for marketing strategy for our providing solution .because our solution pending for 10% growth in customer numbers, year on year.so member will use pathway to this
- Begin with a of our company's current situation, called a "situation analysis."
- According to this section defines solution and its services, then identify how the benefits we provide set other apart from our competition. Target customer audience have become extremely specialized and segmented. No matter of this industry, from top to bottom services to or service competitively requires an understanding of our company. Not only do member need to be able to describe what our industry, but you must also have a clear understanding of what your competitors are offering and be able to show how our product or service provides a better value.
- Describe our target audience.
- List our market goals
- develop the marketing communications strategies and tactics what team will use
- Set Market budget
- Need to devote a percentage of projected gross sales to our annual marketing budget. Of course, when starting a solution business solution , this may mean using newly acquired funding, borrowing or self-financing. Just bear this in mind—marketing is absolutely essential to the success result of 10% growth in customer numbers, year on year.

1.1.3. Assumptions made

- Increase energy and power generation by using improve coal and bio waste.
- IT application deployment by using Microsoft environment

1.1.4. Policy Documents

- Provide UK Bio Energy IT service document which including different kind of policies
- Service Strategy – establishes an overall strategy for the organization's planned IT services and IT service management practices.
- Service Design – designs and develops new or changed services for introduction into the live environment.
- Service Transition – transitions new or changed services into the Production Environment while controlling the risks of failure and disruption.

- Service Operation – performs the day-to-day operation of the processes that manage the services. It is also where performance metrics for the services are gathered and reported and value is realized.[3]
- Continual Service Improvement – identifies and implements improvements to the IT services.

1.4.1 Email Usage Policy

- comply with current legislation
- use email in an acceptable way

do not create unnecessary process risk to the company by their misuse of the internet [4]

1.4.1.2 Indicative Content

The Senior Executive Team (SET) work on a new strategy for improving customer service and encouraging business growth. For that target team have provide active restful solution for customers and company to achieve goals .

1.4.2 Password Policy

Password history include with following points ,

- Enforce Password History
- Maximum Password Age
- Minimum Password Age
- Passwords Must Meet Complexity Requirements
- Store Password Using Reversible Encryption For All Users

[5]

1.5. Processes

When development software system application development team have to identify related software development process for that .According to current situation team have to identify time to time system providing customer satisfaction .for that situation we can use Agile software development process for that by using that development team identify system development process .It is identify by using sprint level releases and sprint level meetings.

And also identified decision level problems solved by management level changes.

1.6 Service Level Agreement Initial Headings and Team Assignment

Uptime -This applies to important equipment, software or services that our business needs. Typically, uptime guarantees apply to servers, cloud services (like email or web hosting) or other parts of your IT system that are vital to our service .but because of using desktop application will not face these failures .

Response times. These measure how long it takes your IT supplier to respond when you raise a request for support. Team plan is face to application in 24 hours supporting to customer supporting . Usually, support requests have to be raised in a specific way (often through an online system), so make sure our have a good IT support process in place.

For example, your IT supplier might promise to respond to critical problems within 15 minutes.

1.7 Security Considerations

1.7.1 Risk Assessment Matrix [6]

List All Activities	Associated Risk(s)	Severity	Probability	Risk Score
Identify customer complains	If identified relevant risk system should provide success result	1. Negligible 2. Negligible	1. Low 2. Low	1. Low (1) 2. Low (1)
Provide desktop application for branches	Failures will happen installation	1. Critical	1. Low	1. Medium (6)
Provide same security for every branches equally	Security level problems will occur	1. Catastrophic	1. Low	1. High (10)

Table 02

1.7.2 Software [7]

- Microsoft visual studio 2010
- Microsoft SQL Server 2008
- Windows 7
- Microsoft office
- Microsoft .net framework

1.8 Evaluating Effectiveness of Project Plan

By using Agile software method we can evaluating effectiveness of project plan. And identify how it is going on.

1.9 Points Allocation

1.9.1 Personal Evaluation

By using Agile software method we can evaluating effectiveness of project plan. And identify how it is going on. Daily sprint meetings will tracking all the details.

2 Policy Document

2.1 Introduction

The purpose of policy document is to describe the requirements for developing and/or implementing new software and systems at UK Bio Energy and to ensure that all development work is compliant as it relates to any and all regulatory, statutory, federal, and /or state guidelines. And also providing required facilities.

2.2 Key details

End user of this required system is our company staff who interacting customers and involving with company energy generation system .IT team have to responsible for developing, maintaining, and participating in a Systems Development Life Cycle (SDLC) for system development projects. All entities at the company, engaged in systems or software development activities, must follow the UK bio energy SDLC.

Following pointers provide key point for this

1. Requirements Analysis – Developers should determine whether application requirements area inherently insecure. Business analysis play main role here who are providing relevant details for project development.
2. Design – Application components shall be planned in a manner consistent with data and network security. Software architectures and system analysis provide support ofr this .
3. Development – Developers shall consider all application vulnerabilities (i.e., memory-bound issues, privilege and access bypass, etc.).
4. Code Review – A second developer shall conduct code reviews of all new and changed software, specifically in an attempt to identify security issues. This will be do by lead software engineers .
5. Quality Assurance (QA) Implementation – Implementation shall not compromise security controls already in place, or introduce new vulnerabilities.QA process will interact with different level as ex ; stress testing ,load testing user accepting testing ,system integration testing .
6. QA Testing – In addition to functional and efficiency testing, all security features of the application shall be tested. ex ; stress testing ,load testing user accepting testing ,system integration testing .
7. Documentation – All application feature and implementation documentation shall include direction on proper security configurations.
8. Production Implementation – Implementation shall not compromise security controls already in place or introduce new vulnerabilities.
9. Production Testing – In addition to functional and efficiency testing, all security features of the application shall be tested.
10. Maintenance – All future application maintenance should not compromise security controls already in place or introduce new vulnerabilities. Any new code shall be reviewed and tested as detailed above.[8]

2.3 About

IT team of company responsible for developing, maintaining, and participating in a System Development Life Cycle ("SDLC") for company desktop applications. All software developed in-house which runs on production systems must be developed according to the SDLC. At a minimum, this Policy addresses the areas of preliminary analysis or feasibility study; risk identification and mitigation; systems analysis; design specification; development; quality assurance and acceptance testing; implementation; and post-implementation maintenance and review. This methodology ensures that the software will be adequately documented and tested before it is used for sensitive company information.

All company -level centrally-managed mission critical applications developed at or for company must adhere to development standards and procedures documented in the Application Development Standards guide. And also all the authentication and authorization process have to respect for company rules also. These standards include: coding techniques, testing strategies, documentation requirements and software release processes that align with industry standards and regulatory requirements.

2.4 Scope

There must be a separation between the production, development and test environments. This will ensure that security is maintained for the production system, while the development and test environments can maximize productivity with fewer security restrictions. Where these all accessing have been established, development and test staff must not be permitted to have access to production systems.

This Polices is under the jurisdiction of application development. The interpretation and application of this Policy is the responsibility of the Application Architect. Final decisions related to this Policy will be made by Lead engineer of Application Development, where required.

- Authorization—Any changes to the production environment should be subject to review by a responsible party within the company. The depth of the review performed should align with the magnitude of the proposed change.
- Auditability— system should establish procedures for communicating requirements, changes and functionality related to their proprietary software and technical infrastructure. Trading firms should also maintain a historical audit trail of material changes made to their proprietary software, allowing them to accurately determine:
  • When a change was made
  • Who made the change?
  • The nature of the change
- Deployment—Deployment is the act of releasing a change into the production environment. That means deployment must put into branches environment. Depending on

the nature of the change, it may be appropriate to deploy to the entire production environment at once or to deploy the change in phases to further mitigate risk and ease the reversion of the change if necessary. Deployment may be thought of as containing four phases:

(1)Preparation— The change is prepared for release and the current production environment is backed up in order to allow for reversion of the change.

(2) Execution—The change is released to the production environment.

(3) Validation—The change and the state of the production environment should be verified for correctness. The scope of a firm's validation process should be appropriate and proportionate to the change being made.

(4) Completion/Reversion—A successful validation should result in completion of the change. If the change cannot be validated, the environment should be reverted to its prior stable state.

Post Deployment—Special consideration should be given to how certain changes to trading systems may impact trading in the production environment. Where reasonable, substantive changes to trading systems should be activated initially with appropriately restricted risk limits and access to markets.

3. Service Level Agreement

3.1 Service Desk Operation

24 hour technical support for all departments, including domestic and commercial electricity customers is main target of our software application .So team has to provide excellent customer provide service better than now .if there any break down of system team has to control and provide relevant support for company . Consolidate core IT processes (incident, problem, change, request, and knowledge management) into a powerful, single interface that improves support and delivery across the IT service lifecycle. And also proactively improve service quality and efficiency with embedded, actionable intelligence that automates ticket classification and assignment and provides relevant knowledge. For this system will able to by using better data management process .Not only that but also Improve efficiency and reduce help desk load with a self-service portal that offers global search across the IT service catalog, support catalog, and knowledge base and supports social collaboration among end users. Automated services are exemplary use for this .But better database support also want this large area of geographic are cover this system so large content of data accessing here ..All the software development life cycle include with agile process so agile automated change management procedure .Use codeless configuration to streamline customization and simplify future upgrades. Automated, intelligent change management improves compliance, minimizes service disruptions, and delivers higher service quality.

Not only desktop application support furthermore system will make improve as a web application or mobile application mobile phone and tablet support service operation can be begin .as a result of that Give users and help desk agents efficient, anytime, anywhere access to key service desk functions such as knowledge search, self-ticketing, and collaboration.

3.2 Security

At the pre-development stage, our team emphasizes careful planning and architecture design to advise on better technological options with respect to the Customer's challenge and industry, as well as to suggest how to reduce development costs and improve the solution's performance. In desktop application security with verified experience in information security, we place a high value on multilayer protection of delivered offline apps.And also system must include with following key points.

- Authentication: UK Bio Energy system must include with success authentication process .Authentication is the process by which the system validates a user's login information. A user's name and password are compared to an authorized list, and if the system detects a match, access is granted to the extent specified in the permission list for that user.datebase role maintain also will support that we can define roles from super user administration to low level will implement it .
- Authorization: relevant roles will have different authorization facilities this will implement here . UK Bio Energy system must include with success authentication process . Authorization is the right granted an individual to use the system and the data stored on it. Authorization is typically set up by a system administrator and verified by the computer

based on some form of user identification, such as a code number or password. Provides best practices for developing more secure applications.

- Cryptography is the use of codes to convert data so that only a specific recipient will be able to read it, using a key. CryptoAPI enables users to create and exchange documents and other data in a secure environment, especially over no secure media such as the Internet.
- Directory, identity, and access services
- Parental controls
- Network Security: Network Access Protection (NAP) is a set of operating system components that provide a platform for protected access to private networks. The NAP platform provides an integrated way of evaluating the system health state of a network client that is attempting to connect to or communicate on a network and restricting the access of the network client until health policy requirements have been met. Microsoft Security Development Lifecycle (SDL) is an industry-leading software security assurance process. A Microsoft-wide initiative and a mandatory policy since 2004, the SDL has played a critical role in embedding security and privacy in Microsoft software and culture. Combining a holistic and practical approach, the SDL introduces security and privacy early and throughout all phases of the development process. The security management technologies can be used to manage Local Security Authority (LSA) policy and password filter policy, query the ability of programs from external sources, and service attachments that extend the functionality of the Security Configuration tool.
- OS security for system : ensures high usability of delivered desktop applications by enabling them to support tight integration with operating system functions, such as rebooting the computer, timely blocking access to the Internet, auto-updating applications, incorporating the app's icons in the taskbar or their functionality into the OS context menu.

3.3 Disaster Recovery

- Generate that detailed recovery plan, system will need to perform a risk assessment (RA) and/or business impact analysis (BIA) to identify the IT services that support the organization's critical business activities. Then, system will need to establish recovery time objectives (RTOs) and recovery point objectives (RPOs).When using Microsoft technology system will use able to database backup using sql server management studio .it has very simple process for doing that .Visual studio provide set file for desktop application because of that if there any disaster for application aspect by using visual studio developer can build code again and publish setup up files and recover latest version of the system .Not only that team must use proper version controller for code handling .by using of that tem will able to handle versions of soured code and I will mange the editing of source code .[9]

3.4 Change Management

3.4.1 Software installation /updates

first of all software installation have to software development team is install visual studio install ,Microsoft sql server installation in deployment environment developer has to install .net framework in end-user desktop application .And also team has to install sql server as desktop application database .

when we think about software update of the required system may be happen management team will require software upgrading because off that situations team will able to use higher versions of visual studio 2013, visual studio 2015,visual studio 2017 .And when database changes or upgrading team will able to use sql server management studio 2016 ,2014 will able to use .May be team have to database architecture use that kind of situations team able to use oracle database architecture .which is including oracle 12g or oracle 11g software will able to use .

3.4.2 Hardware installation /updates

- CPU Speed - 2.2 GHz or higher ,Hyper-threading (HTT) or Multi-core recommended
- Processor - Intel Pentium 4, Intel Core Duo, or Xeon Processors
- SSE2 minimum , Run this Microsoft utility from your Windows command prompt to check your processor
- Disk Space - 1.5 GB available disk space
- Memory / RAM - 2 GB or higher
- Swap Space - Determined by the operating system; 500 MB minimum
- ArcGIS Runtime will create cache files when used; additional disk space may be required
-

3.4.3 Change request

- Software and hardware requirement will be change according to system change because of that team have to get correct and quick decisions for that situations.
- At the situations like that team may have to move proper software update with hardware components .And also if any change in software or hardware it must be compatible with other.

3.4.4 Operational hours

- System must be capable usage of 24x7 hours .and also all the desktop application must use with 24 hours customer support service also .that kind of system must have proper database architecture for 24 hours access and proper data transferring .So system should be have relevant fast tracking data access layer in coding side also .

3.4.5 Performance Metrics

Performance of the system must based on testing process .Load testing have to use because it is a part of a more general process known as performance testing. Examples of load testing include:

- Downloading a series of large files from the Internet.
- Running multiple applications on a computer or server simultaneously.
- Assigning many jobs to a printer in a queue.
- Subjecting a server to a large amount of e-mail traffic.
- Writing and reading data to and from a hard disk continuously.

  Load testing can be conducted in two ways. Longevity testing, also called endurance testing, evaluates a system's ability to handle a constant, moderate work load for a long time. Volume testing, on the other hand, subjects a system to a heavy work load for a limited time.

For performance testing we can use Stress testing also , Stress testing is used to test the stability & reliability of the system. This test mainly determines the system on its robustness and error handling under extremely heavy load conditions.

It even tests beyond the normal operating point and evaluates how the system works under those extreme conditions. Stress Testing is done to make sure that the system would not crash under crunch situations.

We have to all the devices and software components integrated each other because of that there some performance failures will happen o after system developing and over it team have to do system integration testing .which is performed to verify the interactions between the modules of a software system. It deals with the verification of the high and low-level software requirements specified in the Software Requirements Specification/Data and the Software Design Document.

3.4.6 Staff Responsibilities

3.4.6.1 Both HQ IT Dept. and branch officers

Both parties have to maintain system properly. in database and application level handling must be looking for two parties .branch officers have to response every customer supporting in 24x7 manner .because we have following target according to plan .

- 24 hour technical support for all departments, including domestic and commercial electricity customers
- A reduction in customer complaints from 28 per month average to 1 per week
- A new standardized desktop service that will provide an equivalent service to all users
- 25% expansion in geographical coverage for electricity supply (requiring a scalable IT solution)
- 25% expansion in geographical coverage for electricity supply (requiring a scalable IT solution)

3.4.6.1 Users

Administrator of head office - who act as the super user of the entire system and has all the authentication and authorization responsibilities .he able to manage any application solution level problem and database administration problems .

Office branches: he is the second level user of the system who has secondary access of the system and he has to solve branch level problem solving .

Office end user :who working as 24x7 application operator of the system

3.4.6.2 Role and reporting structures

Reporting process going from bottom level to up level of company architecture .

Is there are any problem happen in operation level system operator have to first try solve or interact with customer other wise he /she has to inform branch office who has more responsibilities of the system .And also he or she has more accesses that operation level user .

If there are any problem occur due to main databases or solution level main branch administrator or lead engineer get report .

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