

DBAS2104 – TERM PROJECT PART II  
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**DESIGN OF AN ETL PROCESS FOR  
MANAGEMENT REPORT  
(FIT-WORLD GYM)**

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# DESIGN OF AN ETL PROCESS FOR MANAGEMENT

## REPORT: FIT-WORLD GYM

### Company Background Information

FIT-WORLD GYM INC is a fitness company with ten locations throughout Canada and United States. They have been serving individuals with different fitness levels for over 20 years. There are various fitness-training options available from personal training to group fitness classes. Clients have the option to drop-in and use the facility with or without a membership.

The executives of FIT-WORLD GYM INC are interested in analyzing the data for monthly revenues of the individual stores. Using this screen, the audit team needs to be able to make inquiries with management about sales revenue that occur during the year.

### Problem Statement

As a company (FIT-WORLD GYM), we are having problems analyzing and generating the data for the monthly revenues of the individual stores. The area where this problem is occurring is in all stores. The problem has existed for at least 2 years. The magnitude of the problem is 90% and the expected performance in generating accurate reports <50%. The effect this problem is having on our business is the increased loss of revenue and inability of management to see the overall performance of the stores. It is projected that this is costing as much as \$500K in costs and \$900K in revenue per year.

### Project Solution Scope

As a solution to this problem we decided to have an ETL system where we can track the daily records and transactions and also received the help of a detailed process flow diagram and source to target mapping. It is going to be helpful for us to get an accurate report. It can also generate individual reports on each individual and how much individuals have spent all together, and what facilities that person has used to date.

### Risk Analysis

There may be risks associated with the ETL process which we are going to introduce here:

**Unrealistic Schedule** – When we migrate the data, there may be a lot of work to do, and if the schedule is unrealistic, then the entire ETL system may face a lot of problems to extract, migrate and load the information. So, before we schedule the work, it is important to know if the schedule is achievable or not.

**Untrained Staff** – Handling ETL system is an important task and trained staff are vital in an organization to do the tasks. The ETL system contains different operations that should be handled very carefully. If there is any mistake, then the organization would go in the wrong direction which will affect the entire system.

**Big Database** – If the data is too big, it will be very difficult for the group members to handle. So, it is important in the starting stage itself to have a good strategy to handle big data and how to deal with it.

**Improper Funding** – This is considered a major risk because the people who work on the ETL system must use the funds in a proper way so that it will help them to get a proper flow of information.

**Data loss Risk** – During the data migration process, there is a high possibility that data loss can occur. When the data is migrated to a new system, some of the data may not migrate from the source system which can create problems in the later stage of the ETL process. This can be avoided by conducting data migration testing.

**Data Corruption risk** – On some occasions, unwanted data can be migrated into the system leading to data corruption or potential crashes which may end up in errors for the end-users.

## Stakeholder Analysis

Stakeholder	Impact on Project	Expectation from the stakeholder in the project	Attitudes or risks	Responsibility
CEO	High	Commitment to accept the changes that are implementing in the project	Lack of clarity or understanding about preferred approach	Project Manager
Project Manager	High	Responsible for managing the entire project	Concerns about meeting the deadline	Project Sponsor
Department head	Medium	Implementing the change and get the approval from project sponsor or project manager	Lack of interest in project	Project sponsor
System admin	High	Contribute to the system and process design and testing	Concern about increased workload	Project team
Database admin	High	Contribute to the entire database coding and testing	Concern about how big is the data	Project team
Network team	Medium	Help to connect different gyms across Canada and USA	Lack of external resources	Project team
Security team	High	Ensure that the data remain highly confidential	Concern about outdated software's and operating system	Project team
IT team	Medium	Responsible for giving proper training for the project team	Lack of interest in project	Project team
Chief Financial officers	Medium	Responsible for analysing the monthly revenue reports	Concerns regarding the profit and loss of the organization	Project Team
Fitness Manager	High	Act as an intermediate between front line and the executives	Lack of interest	Project team

## Requirements Elicitation Table

Method	Description
Brainstorming	This ensures the generation of many ideas from which to identify solutions to the problem
Document Analysis	This is an important gathering technique, that not only identifies how the existing system runs, but also identifies the gaps and deficiencies that are a barrier to project success
Focus Group	This type of elicitation is from the customers of the product, to get their view and feedback on the product and how to improve customer satisfaction with it
Interface Analysis	For a software product, the interface analysis between the human/machine and the external devices and systems is vital so that requirements are not overlooked
Interview	Interviewing the stakeholders and users of the software is important for key requirements
Observation	This is the study of the users in their natural environment
Prototyping	This is very helpful at gathering feedback
Requirements Workshop	Also, known as joint application design, these are more focused than brainstorming sessions, and are an important source of requirements elicitation
Reverse Engineering	Could be a starting point or last resort
Survey	Surveys are efficient at gathering information from many people

## SWOT Analysis

Analysis of Strengths, Weaknesses, Opportunities, and Threats for Fit-World Gym and their two major competitors:

	Fit-World Gym		
<b>Strengths</b>	Affordable Personable Atmosphere strong understanding of equipment Classes offered at a variety of times	<b>Weaknesses</b>	Small and unknown Hours are less convenient Out of date website Smaller staff
<b>Opportunities</b>	There is room to grow and increase the company and it's reputation To expand the number of facilities Appeals to beginners- may bring in new customers	<b>Threats</b>	Appeals to beginners- may bring in new customers There are a lot of strong competitors Current advertising is not sufficient

## Requirement Management Plan

### Requirements Prioritization Process

The Fit-World Gym project manager will facilitate stakeholder meetings to establish priorities for all project requirements. This project will use a three-level scale to prioritize requirements. The chart below illustrates these levels and defines how requirements will be grouped:

Priority Level	Definition
High	These requirements are mission critical. They are required for project/product success or for progression to next project phase
Medium	These requirements support product/process operations but can be completed under the next product release
Low	These requirements are quality and/or functional enhancements and are not desirable if time and resources permit

As the project moves forward and additional constraints are identified or there are issues with resources, it may be necessary for the project team and stakeholders to meet in order to determine what requirements must be achieved, which can be re-baselined, or which can be omitted. These determinations will be made in a collaborative effort based on the priorities of the requirements and which level they are assigned in accordance with the chart above. As any changes in requirements are made, all project documentation must be updated in the CMDB and communicated to all project stakeholders.

### Risk Management Plan

The main aim of the risk management plan is to prioritize the risks and to discuss different ways to eliminate and mitigate risks. Our risk management will have

**Risk and consequences** – to brainstorm the risks and continue adding the risks to the risk management plan as the project moves on.

**Probability** – It's the probability of the occurring risks and it can be either a number or percentage.

**Impact** – this is the impact to the project if the risk happen. It can be categorized as low, medium or large.

**Priority** – Higher priority risks should be mitigated before the lower priority risks.

**Mitigation** – this is a brief description how we are eliminating different risks

No	Risks	Probability (%)	Impact (1 –3)	Priority (p*I)	Mitigation
1	Unrealistic schedule	5%	1	5	We will discuss with the team to meet the deadlines or not before we getting into the project
2	Untrained staffs	10%	2	20	We will be having a training team to ensure that all our

					members have got enough training to do the assigned work
3	Big database	25%	2	50	Our group will discuss and partition the work based on expertise
4	Data loss risk	50%	3	150	We will be having a backup for our database
5	Data corruption	60%	3	180	Whenever we are getting the data. Our data specialists will do the cleansing during the extraction phase before loading the data.

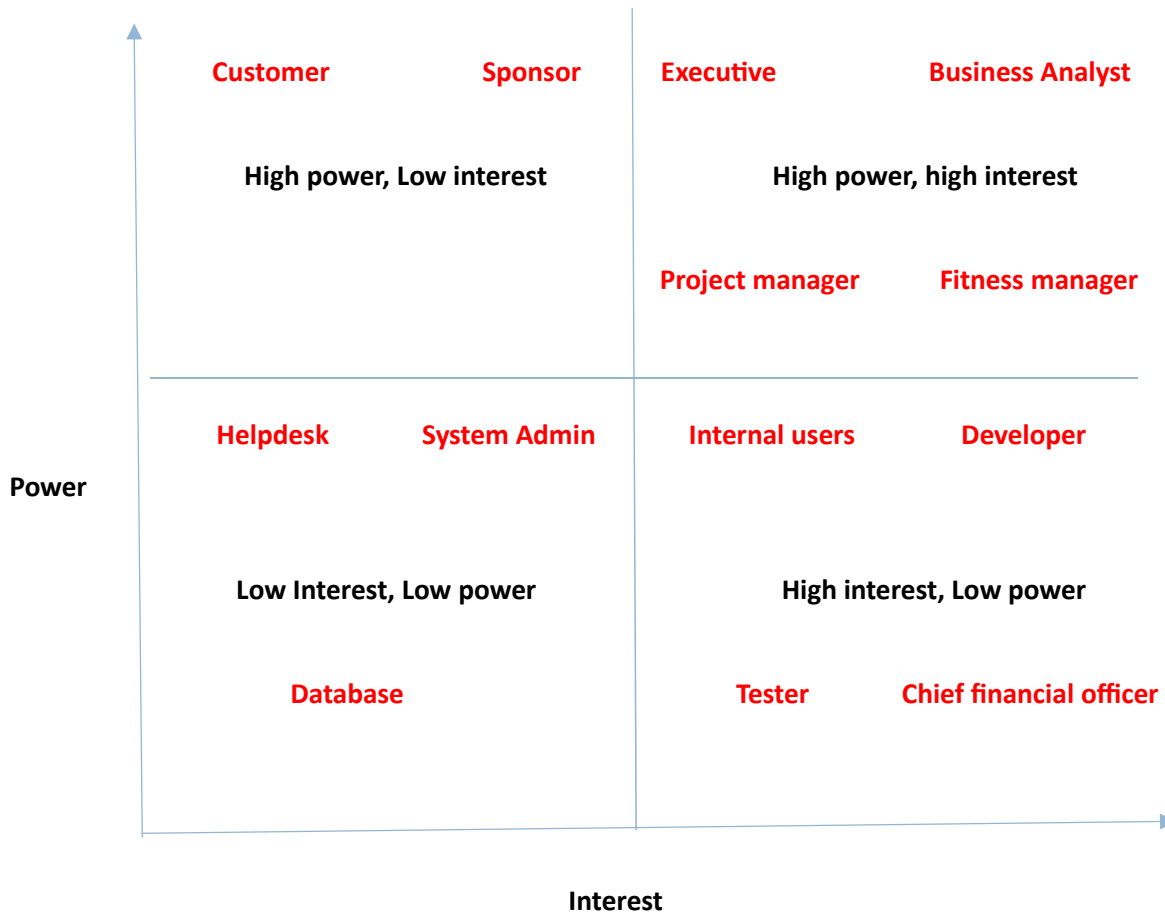
Note – Impact 3 means high impact on project

Impact 2 means medium impact on project

Impact 1 means high impact on project

We analyze the risk based on the impact and probability and we get the priority based on that and we always take the highest priority risk first and mitigate that because it will be the risk that can cause high impact on the project.

## Stakeholder Map



## Change Management Plan

### **Change Request Processing and Approval**

The change request and approval will follow the standard change control procedures. The standard change control procedure in would be usage of project change control process. In this database, any team member shall be able to submit change requests against the project requirement, defect against the project or any process improvement against adoption project.

### **Project Baselines**

The baselining of requirements documents should be established at the end of Inception, Elaboration, Construction and Transition.



## RACI Table

**Responsible** – Person who performs an activity

**Accountable** – Person who is ultimately accountable

**Consulted** – Person that needs to get feedback and contribute to the activity

**Informed** – Person that needs to know the decision or action

Tasks	Planning team	System administrator	Database administrator	Network team	Security team	Development team	IT team	Chief financial officer
Server administration and server maintenance	I	R/A			C			
Storage management	I	A	R		C			
Network installation and monitor the usage	I	C		R	A			
Implementation of IT solutions	A	A	A		C	R	I	
Providing IT knowledge and training	I					R/A	C	
Prepare project plans	R/A	C	C	I	A	I	I	
IT assets and resource management	A	C	C				R	
Generating monthly reports	I							R/A

## Requirements Package

We will pull the records of different gyms across Canada and the USA. Therefore, the developer needs to know what are all the places where he/she can extract the data. So, the data extraction will be done by our system. This will help us to put all the relevant data and give us a data file.

## Communication Plan

<b>Communication type</b>	<b>Objectives</b>	<b>Medium</b>	<b>Frequency</b>	<b>Audience</b>	<b>Owner</b>	<b>Deliverable</b>
Kickoff meeting	Introducing the project team and the project. Also, review the project goals and ensure the project is on right track	Face to face	Every day	Sponsor Project team Stakeholders	Project Manager	Agenda Team minutes
Project team meetings	Review the status of the project with the project team and also evaluating the last week's performance	Face to face	Weekly	Project team Stakeholders	Project manager	Agenda Team minutes Project schedule
Design meetings	Discussing and developing the design solution with the team	Face to face	As needed	Planning team Development team	Technical lead	Agenda Team minutes
Status meetings	Discussing the status of the project with the project team	Face to face	Monthly	Planning team Stakeholders	Project Manager	Project updates Project schedule
Status reports	Reporting project status including the activities, progress, budget and issues that are facing to the senior management	Face to face	Monthly	Project Sponsor Stakeholders Project team	Project manager	Project status report Project schedule

## Glossary

**Problem statement** – It is a description of the that needs to be solved by the problem-solving team.

**Risk Analysis** – It is a description of possible risks which we need to address when we do our project.

**RACI table** – It is a table which is used to clarify the roles and responsibilities of the stakeholders in our project.

**Stakeholder map** – Stakeholder mapping is a method where we can understand the key stakeholders, where they come from, what they are looking for in this project.

**Communication plan** – It is a tale showing that how often and how we are going to communicate with the stakeholders in our project.