



Universidad de Guadalajara
Centro Universitario de los Valles

Process Decision

Subject: Software Configuration Management

Teacher: Dr. Omar Ali Zatarain Gurán

Author: Patricia Guadalupe Gutiérrez Constantino

Decision-Making Process for Project Changes

1. Introduction

This document sets out the criteria and process for evaluating and approving changes to the development of the access management system for the gym. Key factors such as impact on development time, costs and availability of human resources will be considered.

2. Classification of requirements according to their impact of change

<i>functional requirement</i>	<i>Description</i>	Risk Level
RF-01	Allow the administrator to add clients.	Medium (Only affects the client module)
RF-02	Allow the administrator to modify clients	Medium (Only affects the client module)
RF-03	Allow the administrator to delete clients	Medium (Only affects the client module)
RF-04	Assign a membership to the client (day, week or month).	Medium (Only affects the membership module)
RF-05	Display the remaining days of the membership at the time of access registration.	Low (Only affects the user interface)
RF-06	Allow the renewal of memberships when they expire.	Medium (Only affects the membership module)
RF-07	Authenticate clients using a fingerprint reader.	High (Only affects the access system)
RF-08	Record the date and time of the client's entry.	Medium (Only affects the registration module)
RF-09	Allow the main administrator to add administrators.	Medium (Only affects the administration module)
RF-10	Allow the main administrator to modify administrators.	Medium (Only affects the administration module)
RF-11	Allow the main administrator to delete administrators.	Medium (Only affects the administration module)

RF-12	Create access reports by client.	Low (Does not impact critical functionality)
RF-13	Create access reports filtered by day.	Low (Does not impact critical functionality)
RF-14	Generate comparative reports between branches.	Low (Does not impact critical functionality)
RF-15	Filter data by age range and gender.	Low (Does not impact critical functionality)
RF-16	Display statistical graphs on peak hours and days with the highest influx.	Low (Does not impact critical functionality)
RF-17	Allow the user to export data in PDF and CSV format.	Low (Does not impact critical functionality)

Requirements	Description	Level of risk
RNF-01	Usability (Friendly interface)	Low (Only affects user experience)
RNF-02	Fingerprint reader support	High (Impacts overall system performance)
RNF-03	Data security	High (Affects the integrity of the information)
RNF-04	Cloud database connection	High (Impacts the functioning of the entire system)
RNF-05	Scalability for future growth	Medium (Only affects future updates)

3. Criteria for Approving or Rejecting Changes

Proposed changes will be evaluated based on the following criteria:

3.1 Impact on Time

one week.	more than one week	more than three weeks
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- Acceptable: If the change can be implemented without delaying the overall project schedule by more than **one week**.

- Requires Evaluation: If the change affects **more than one week**, it will be reviewed whether it can be compensated by adjusting other tasks or increasing resources.
- Not Acceptable: If the change delays the project by **more than three weeks** and there is no way to compensate for it without affecting the final delivery.

3.2 Impact on Costs

less than 5%	between 5% and 15%	exceeds 15%
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- Acceptable: If the change does **not increase** the total cost of the project by **more than 5%** of the allocated budget.
- Requires Evaluation: If the cost increase **is between 5% and 15%**, the benefit of the change must be justified.
- Not Acceptable: If the change **exceeds 15%** of the total cost without an additional source of financing.

3.3 Human Resources Availability

with the current team	reassigning tasks	additional staff or overloading work
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- Acceptable: If the change can be made with the current team without requiring overtime or additional hiring.
- Requires Evaluation: If the change requires reassigning tasks, its impact on other areas must be reviewed.
- Not Acceptable: If it requires hiring additional staff or overloading work teams.

4. Change Evaluation Process

1. Change Request: Any team member or client can propose a change using a standard form.
2. Impact Analysis: The team evaluates the criteria mentioned above.

3. Decision:

- If the impact is acceptable in terms of time, costs and resources, the change is approved.
- If the impact requires evaluation, it is presented to management for approval.
- If the impact is not acceptable, the change is rejected or a viable alternative is proposed.

4. Implementation: If approved, the change is integrated into the project planning.

Strengths

- Access control automation using fingerprints, reducing human error and improving security.
- Efficient membership management, allowing for real-time renewal and expiration control.
- Well-defined development team, with specific roles.

Weaknesses

- Dependency on fingerprint reader, which could cause problems if the hardware fails or is not compatible with certain devices.
- Learning curve for administrators, who need training to use the system effectively.

Opportunities

- Expansion to other industries, such as offices, universities or companies that require access control.

Threats

- Data privacy regulations, which could affect the collection of biometric information.
- Resistance to change by traditional gyms, who prefer manual or less technological systems.