# Decision Making Process for WebCongress

**Student: Roberto Carlos Gutierrez Constantino**

**Teacher: Dr. Omar Ali Zatarain Durán**

**Software Configuration Management**

To ensure an efficient and structured decision-making process in the WebCongress system, a decision council composed of key stakeholders will be involved. The council will oversee major decisions regarding product development, finance, human resources, and quality assurance.

## Members

| Role | Responsibility in Decision-Making |
|---|---|
| **CEO** | Defines strategic vision, business alignment, and final approvals. |
| **Project Manager** | Ensures project timelines, task prioritization, and risk management. |
| **Software Engineer** | Provides technical expertise and evaluates feasibility of solutions. |
| **Quality Assurance (QA)** | Ensures product quality, testing strategies, and compliance. |
| **Human Resource (HR)** | Manages resource allocation, hiring, and team productivity. |
| **Financial Department** | Oversees budget, financial constraints, and cost optimization. |

**Decisions are categorized based on impac and responsibility**

**Operational Decisions (Handled by the Project Team)**

Made by: Software Engineer, QA, and HR
Examples:

- Task distribution

- Code reviews and bug fixes

- Test case approvals

- Developer assignments

**Tactical Decisions (Handled by the Project Manager)**

Made by: Project Manager, Software Engineer, QA
Examples:

- Feature prioritization

- Development timeline adjustments

- Resource reallocation

- Risk management strategies

**Strategic Decisions (Handled by the Decision Council)**

Made by: CEO, Financial Department, Project Manager
Examples:

- Major budget adjustments

- Change in technology stack

- Hiring additional resources

- Deciding the final launch timeline

# Classification of requirements in the face of changes

- If modifying the requirement does not affect the rest of the system, it will be a "low" risk state.
- If modifying the requirement affects part of the system but it is solvable, it will be a "medium" risk status.
- If changing the requirement affects the entire system, it will be a critical state.

| Code | Description | Type of requirement | Status in case of changes |
|------|-------------|---------------------|---------------------------|
| RFU-001 | Registration and authentication of users. | Functional requirement | Critical |

| Code | Description | Type of requirement | |
|---|---|---|---|
| RFU-002 | Purchase of passes for the congress (free and complete). | Functional requirement | Medium |
| RFU-003 | Registration for workshops or conferences, subject to availability of places. | Functional requirement | Medium |
| RFU-004 | View information on workshops and conferences (name, description, time, place, place and speaker). | Functional requirement | Low |
| RFU-005 | Information on available packages. | Functional requirement | Low |
| RFU-006 | Speaker management: registration, editing and deletion of data. | Functional requirement | Medium |
| RFU-007 | Event management: registration, editing and deletion of workshops and conferences. | Functional requirement | Critical |
| RFU-008 | View registered users, including emails and purchased packages. | Functional requirement | Medium |
| RFU-009 | Top menu with the sections: Event, Packages, Workshops/Conferences and Buy Pass. | Functional requirement | Low |
| Code | Description | Type of requirement | |
| RNF-001 | Intuitive and user-friendly design. | Non-functional requirement | Low |
| RNF-002 | Compatibility with modern browsers. | Non-functional requirement | Low |
| RNF-003 | Ability to manage up to multiple simultaneous users. | Non-functional requirement | Medium |
| RNF-004 | Encryption of passwords and sensitive data. | Non-functional requirement | Critical |

| | | | |
|---|---|---|---|
| RNF-005 | Prevention of attacks such as SQL injection | Non-functional requirement | Critical |
| RNF-006 | 24/7 access to the system. | Non-functional requirement | Medium |

| Code | Description | Type of requirement | |
|---|---|---|---|
| RFU-010 | Creation of new congresses with relevant data | Functional requirement | Critical |
| RFU-011 | Editing and deleting existing congresses | Functional requirement | Critical |
| RFU-012 | Assignment of workshops, conferences, and speakers to specific congresses | Functional requirement | Medium |
| RFU-013 | Consultation of events grouped by congress | Functional requirement | Low |
| RFU-014 | Selection of congress when registering or purchasing passes | Functional requirement | Medium |

| Code | Description | Type | |
|---|---|---|---|
| RNF-008 | Clear interface for congress selection and management | Non-Functional | Low |

# Decision making

To ensure structured decision making regarding changes to the WebCongress system, the following criteria are established based on time, cost and available resources, which will determine whether a change request is approved or rejected.

**Evaluation Criteria for Change Requests**

| Factor | Decision Criterion |
|---|---|
| Impact over time | Changes that extend development by more than 1 week will be rejected. Minor changes affecting 1-4 days require approval from the Project Manager. |
| Impact on Cost | Changes that increase costs by more than 15% ($1,950 USD) will be rejected. If the increase is between 5% and 15% ($650 - $1,950 USD), approval from the Finance Department and the Project Manager will be required. |
| Personnel Resources | If the change requires hiring additional staff, it will be rejected. If the current team can handle the change within their workload, it may proceed. |

# Decision-Making Process According to Severity of Change

**1.- Low Impact Changes (Immediate Approval)**

Approved by: Project Manager & Software Engineer

Accepted if:

- Does not extend delivery time.
- Cost increase is less than 5% ($650 USD).
- Does not require additional staff.

Examples: UI/UX improvements, minor bug fixes, text modifications.

**2.- Medium Impact Changes (Require Approval)**

Approved by: Project Manager, Software Engineer, and Finance Department

Accepted if:

- Extends development by a maximum of 1 week.
- Cost increase is between 5% and 15% ($650 - $1,950 USD).
- Can be handled by current staff.

Examples: Performance optimization, minor API modifications, data structure improvements.

**3.- Critical Changes (Decision Board Review)**

Approved by: CEO, Project Manager, Software Engineer, QA, HR, Finance Department

Only accepted if:

- Extends development by a maximum of 2 weeks AND is strategically important.
- Cost increase is between 15% and 25% ($1,950 - $3,250 USD) and funding is available.
- Long-term benefits are justified as outweighing immediate costs.

Rejected if:

- Extends development by more than 2 weeks.
- Increases costs by more than 25% ($3,250 USD).
- Requires additional hiring outside of budget.

Examples: Database migration, core architecture change, redesign of entire functionality.

## Examples

| Proposed Change | Impact over time | Impact on Cost | Impact on Staff | Decision |
|---|---|---|---|---|
| UI Color Scheme Adjustment | None | $0 | None | Approved (Low Impact) |
| Improved database query efficiency | +3 days | +$500 | None | Approved (Low Impact) |
| Modification in the authentication system | +7 days | +$1,200 | None | Approval Required (Medium Impact) |
| Changing database from MySQL to PostgreSQL | +2 weeks | +$2,500 | None | Requires Board Review (Critical Impact) |
| Integration of a new payment gateway | +3 weeks | +$4,000 | Requires extra staff | Refused |