# Change Request (CR)

## 🔹 Definition

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

A **Change Request** is a formal proposal to modify any aspect of a project or product.  
 It can relate to:

* **Requirements** (new features, modifications, or removal)
* **Design / Architecture**
* **Code / Implementation**
* **Test cases / Plans**
* **Documentation**
* **Configuration or infrastructure**

It ensures that **all changes are reviewed, assessed, and approved** before implementation.

## 🔹 Why Change Requests are Needed

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* To adapt to **new business needs** (e.g., add new payment option).
* To fix **gaps in requirements** discovered later.
* To **improve performance, security, or usability**.
* To comply with **new regulations or standards**.
* To handle **defects that require significant rework**.

## 🔹 Change Request Process (Typical Steps)

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

1. **Submission** – A stakeholder, tester, developer, or customer raises a CR.
2. **Documentation** – Details of the requested change (reason, scope, expected impact).
3. **Impact Analysis** – Assess effect on cost, schedule, resources, risks, and quality.
4. **Review & Approval** – Change Control Board (CCB) or Project Manager decides.
5. **Implementation** – Approved change is developed, tested, and deployed.
6. **Verification & Closure** – Ensure the change meets requirements and is logged as completed.

Perfect 👌 Let’s go deeper into the **Change Request (CR) Process** because it’s a key concept in **project management, configuration management, and defect management**.

### **1. Submission / Initiation**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* A change request can be raised by:  
  + **Customer / Business Stakeholder** → new feature, regulatory update.
  + **Tester** → defect requiring design-level changes.
  + **Developer** → better implementation approach.
  + **Project Manager** → scope adjustment.
* The CR is documented in a **Change Request Form (CRF)** or tool (like JIRA, ServiceNow).
* Key fields: ID, requester, description, reason, priority, date.

📌 *Example:* A tester requests a change to add "Forgot Password" functionality during UAT.

### **2. Documentation**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* Detailed information is recorded, such as:  
  + **Change description** → What needs to be changed?
  + **Justification** → Why is this change necessary?
  + **Affected components** → Modules, test cases, documents, configurations.
  + **Business value / benefit** → Improved security, compliance, usability.
  + **Urgency & priority** → Critical, high, medium, low.

📌 *Example:* CR states: “Add 2-Factor Authentication for login to comply with banking security regulation.”

### **3. Impact Analysis (Assessment)**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* Conducted by **Project Manager + Change Control Board (CCB)** with input from devs, testers, architects.
* Analysis considers:  
  + **Scope impact** → Will it change requirements or add features?
  + **Cost impact** → Additional budget needed?
  + **Schedule impact** → Delay in delivery?
  + **Risk impact** → New risks introduced?
  + **Quality impact** → Will testing effort increase?
  + **Resources impact** → More developers/testers needed?

📌 *Example:* Adding 2FA may require:

* New UI design,
* API updates,
* Extra 2 weeks of development + 1 week of security testing.

### **4. Review & Approval / Rejection**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* The **Change Control Board (CCB)** reviews the impact analysis.
* Possible decisions:  
  + **Approve** → If it adds value and is feasible.
  + **Reject** → If too costly, risky, or not aligned with scope.
  + **Defer / Postpone** → If not urgent, may be considered in future release.
  + **Request for Clarification** → If details are insufficient.

📌 *Example:* CCB approves 2FA CR because it is legally required for compliance.

### **5. Planning & Implementation**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* Once approved, the CR becomes part of the **project plan or release backlog**.
* Updates required in:  
  + **Design documents** (architecture, data flows).
  + **Code base** (development changes).
  + **Test artifacts** (test cases, test data, automation scripts).
* Assigned to responsible **developers/testers**.
* Work is tracked as a task or user story.

📌 *Example:* Dev team adds OTP functionality + Test team prepares new test cases for login flow.

### **6. Verification (Testing)**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* The implemented change undergoes:  
  + **Unit testing** (by developers).
  + **System/Regression testing** (by testers).
  + **User acceptance testing (UAT)** (by business users).
* Ensures that:  
  + The change works as expected.
  + No new defects are introduced.

📌 *Example:* Tester verifies that OTP login works, invalid OTP fails, resend OTP works, etc.

### **7. Closure**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* After successful testing and acceptance:  
  + The CR is marked as **Closed / Implemented**.
  + Documentation is updated (requirements, test cases, release notes).
  + Final status is communicated to stakeholders.

📌 *Example:* CR #2025-07 “Add 2FA Login” is marked **Closed** in JIRA after UAT approval.

### 🔹 Summary Workflow

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

1. **Submit** (Raise CR)
2. **Document** (Details recorded)
3. **Analyze** (Impact analysis)
4. **Review & Approve/Reject** (CCB decision)
5. **Plan & Implement** (Development + Testing)
6. **Verify** (Testing & UAT)
7. **Close** (Update status & docs)

✅ In short: The **Change Request Process** ensures that *any modifications* are **evaluated, approved, and implemented in a controlled way** without disrupting project stability.

## 🔹 Example

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* During testing, a tester finds that the login system requires only a username.
* The client requests adding **2-Factor Authentication (2FA)**.
* A **Change Request** is raised → assessed → approved → implemented → retested.

## 🔹 Relation to Testing & Defect Management

**# Source**: **Chatgpt (GPT-5-Standard) at [8/19/2025]**

* Some defects may require **major design/code changes** → handled as CRs.
* Testers often **validate CRs after implementation** (retesting & regression testing).
* CRs are tracked in the **same system as defects** in many organizations.

✅ **In short**: A **Change Request** is a controlled way to handle modifications in a project, ensuring they are **analyzed, approved, implemented, and tested** without disrupting stability.