**ISP Project Manager: Detailed Workflow and User Roles**

**User Roles Overview**

| **Role** | **Description** | **Primary Responsibilities** |
| --- | --- | --- |
| **SALES** | Sales representatives who initiate projects | Create projects, submit P&Ls, initiate billing |
| **PROJECTS\_ADMIN** | Project administrators who oversee all projects | Assign PMs, update project status, submit acceptance forms |
| **PROJECTS\_SURVEY** | Technical staff who conduct site surveys | Create BOQs, update technical specifications |
| **PROJECTS\_INSTALL** | Installation team members | Update installation progress |
| **PROJECTS\_COMMISSIONING** | Commissioning team members | Update commissioning status |
| **FINANCE** | Finance team members | Complete billing process |
| **ADMIN** | System administrators with full access | All actions, user management, system configuration |
| **READ\_ONLY** | Users who can only view information | View-only access to projects |

**Detailed Project Lifecycle Workflow**

**1. Project Creation Phase**

* **Initiator**: SALES, ADMIN
* **Actions**:
  + Create new project with customer details
  + Submit Customer Requirements Document (CRD)
* **Status Flow**: Draft → CRD Submitted
* **Access**:
  + SALES: Can create projects and view their own projects
  + ADMIN: Can create and view all projects
  + Others: Can view projects based on their role

**2. Feasibility & BOQ Phase**

* **Initiator**: PROJECTS\_SURVEY, PROJECTS\_ADMIN, ADMIN
* **Actions**:
  + Review CRD
  + Conduct site survey (if needed)
  + Create Bill of Quantities (BOQ)
* **Status Flow**: CRD Submitted → Feasibility → BOQ Ready
* **Access**:
  + PROJECTS\_SURVEY: Can create BOQs
  + PROJECTS\_ADMIN: Can create BOQs and update status
  + ADMIN: Full access

**3. P&L Approval Phase**

* **Initiator**: SALES (submit), ADMIN (approve)
* **Actions**:
  + SALES submits P&L based on BOQ
  + ADMIN reviews and approves/rejects P&L
  + If rejected, SALES can review and resubmit
* **Status Flow**: BOQ Ready → Pending Approval → P&L Under Review (if rejected) → Approved
* **Access**:
  + SALES: Can submit P&L and review rejections
  + ADMIN: Can approve/reject P&Ls
  + Others: View-only access

**4. Installation Phase**

* **Initiator**: SALES or ADMIN (initiate), PROJECTS\_ADMIN (assign PM)
* **Actions**:
  + Initiate installation after P&L approval
  + Assign Project Manager
  + Update installation progress
* **Status Flow**: Approved → Installation Pending → In Progress → Provisioning Complete → Physical Installation Complete
* **Access**:
  + SALES: Can initiate installation for their projects
  + PROJECTS\_ADMIN: Can assign PMs and update status
  + PROJECTS\_INSTALL: Can update installation status
  + ADMIN: Full access

**5. Commissioning Phase**

* **Initiator**: PROJECTS\_COMMISSIONING, PROJECTS\_ADMIN, ADMIN
* **Actions**:
  + Update commissioning status
  + Conduct testing
* **Status Flow**: Physical Installation Complete → Commissioning Complete → UAT Pending → Soak Period
* **Access**:
  + PROJECTS\_COMMISSIONING: Can update commissioning status
  + PROJECTS\_ADMIN: Can update all project statuses
  + ADMIN: Full access

**6. Acceptance Phase**

* **Initiator**: PROJECTS\_ADMIN, ADMIN
* **Actions**:
  + Submit customer acceptance form
  + Mark project as completed
* **Status Flow**: Soak Period → Completed
* **Access**:
  + PROJECTS\_ADMIN: Can submit acceptance forms
  + ADMIN: Full access

**7. Billing Phase**

* **Initiator**: SALES or ADMIN (initiate), FINANCE or ADMIN (complete)
* **Actions**:
  + Initiate billing for completed project
  + Finance completes billing process
* **Billing Status Flow**: Not Ready → Pending → Initiated → Billed
* **Access**:
  + SALES: Can initiate billing for their completed projects
  + FINANCE: Can mark billing as completed
  + ADMIN: Full access

**Detailed Permission Matrix**

| **Action** | **SALES** | **PROJECTS\_ADMIN** | **PROJECTS\_SURVEY** | **PROJECTS\_INSTALL** | **PROJECTS\_COMMISSIONING** | **FINANCE** | **ADMIN** | **READ\_ONLY** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **View Projects** | Own | All | All | All | All | All | All | All |
| **Create Project** | Yes | No | No | No | No | No | Yes | No |
| **Create BOQ** | No | Yes | Yes | No | No | No | Yes | No |
| **Submit P&L** | Yes | No | No | No | No | No | Yes | No |
| **Approve/Reject P&L** | No | No | No | No | No | No | Yes | No |
| **Review Rejected P&L** | Own | No | No | No | No | No | Yes | No |
| **Initiate Installation** | Own | No | No | No | No | No | Yes | No |
| **Assign Project Manager** | No | Yes | No | No | No | No | Yes | No |
| **Update Project Status** | No | Yes | No | No | No | No | Yes | No |
| **Submit Acceptance Form** | No | Yes | No | No | No | No | Yes | No |
| **Initiate Billing** | Own | No | No | No | No | No | Yes | No |
| **Complete Billing** | No | No | No | No | No | Yes | Yes | No |
| **Request Project Deletion** | Own | No | No | No | No | No | Yes | No |
| **Approve/Reject Deletion** | No | No | No | No | No | No | Yes | No |
| **Delete Project** | No | No | No | No | No | No | Yes | No |

**Notification System**

| **Event** | **Recipients** | **Notification Type** |
| --- | --- | --- |
| Project Created | PROJECTS\_ADMIN, PROJECTS\_SURVEY | Info |
| BOQ Created | Project's SALES | Info |
| P&L Submitted | ADMIN | Info |
| P&L Approved/Rejected | Project's SALES | Success/Warning |
| Installation Initiated | PROJECTS\_ADMIN | Info |
| PM Assigned | Assigned PM, Project's SALES | Info |
| Status Updated | Project's SALES, Project's PM | Info |
| Project Completed | Project's SALES, Project's PM | Success |
| Billing Initiated | FINANCE | Info |
| Billing Completed | Project's SALES | Success |
| Deletion Requested | ADMIN | Warning |
| Deletion Approved/Rejected | Requester | Info |

**Potential Additional Roles to Consider**

1. **CLIENT\_REPRESENTATIVE**
   * View their company's projects only
   * Receive notifications about project progress
   * Submit UAT feedback
2. **PROCUREMENT**
   * View BOQs
   * Manage equipment procurement
   * Update equipment availability status
3. **BILLING\_ADMIN**
   * Specialized role for billing management
   * Generate invoices
   * Track payment status
4. **TECHNICAL\_MANAGER**
   * Oversee technical aspects across projects
   * Approve technical designs
   * Review commissioning results
5. **OPERATIONS**
   * Monitor active services
   * Handle post-implementation support
   * Track service performance
6. **COMPLIANCE\_OFFICER**
   * Ensure regulatory compliance
   * Manage required documentation
   * Conduct compliance audits
7. **REPORTING\_ANALYST**
   * Generate custom reports
   * Track KPIs
   * Provide business intelligence

**Dashboard Access by Role**

| **Dashboard View** | **SALES** | **PROJECTS\_ADMIN** | **PROJECTS\_SURVEY** | **PROJECTS\_INSTALL** | **PROJECTS\_COMMISSIONING** | **FINANCE** | **ADMIN** | **READ\_ONLY** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Projects Overview | Own | All | All | All | All | All | All | All |
| Financial Metrics | Limited | No | No | No | No | Full | Full | Limited |
| Installation Progress | Own | All | No | All | No | No | All | All |
| Commissioning Status | Own | All | No | No | All | No | All | All |
| Billing Status | Own | No | No | No | No | All | All | Limited |
| Team Performance | No | Team | No | No | No | No | All | No |
| System Analytics | No | No | No | No | No | No | Yes | No |

**Workflow Automation Points**

1. **Status Transitions**:
   * Automatic notifications when project status changes
   * Required fields validation before status changes
2. **Deadline Monitoring**:
   * Alerts for approaching target delivery dates
   * Escalation for overdue milestones
3. **Approval Workflows**:
   * P&L approval process
   * Deletion request approval
4. **Billing Triggers**:
   * Automatic billing status update when project completes
   * Notifications to finance when billing is initiated

This comprehensive breakdown of roles, permissions, and workflows should help you evaluate if additional roles are needed for your specific organizational structure. The current system provides good separation of concerns while maintaining a streamlined workflow, but the suggested additional roles could provide more granular control if your organization requires it.