**Functional Design Document (FDD)**

**Project:** C&C CRM MVP Journey Planning  
**Version:** 1.0  
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**1. Introduction**

This Functional Design Document (FDD) provides a comprehensive specification for the C&C CRM MVP Journey Planning solution. It details business requirements, functional and non-functional specifications, user stories, component mappings, and integration points. The FDD is intended to serve as a blueprint for stakeholders, business analysts, solution architects, and developers, ensuring the delivered solution aligns with business goals and user expectations.

**2. Scope (Section 1.1.2)**

**2.1 In-Scope Business Processes**

* **Journey Planning:** End-to-end management of customer journeys, including creation, tracking, and closure.
* **Customer Onboarding:** Capturing and validating new customer data and initiating onboarding journeys.
* **Interaction Tracking:** Logging all customer interactions (calls, emails, meetings, etc.) related to journey progress.
* **Task & Activity Management:** Assigning, tracking, and completing tasks linked to journeys.
* **Case Management:** Managing escalations or exceptions within journeys.
* **Reporting & Analytics:** Generating reports on journey statuses, SLAs, and user productivity.
* **Integration:** Syncing journey data with external systems (e.g., ERP, marketing tools).
* **Security & Compliance:** Ensuring data privacy, RBAC, and audit trails.

**2.2 Actors/Roles**

* **Journey Planner:** Creates and manages journeys, assigns tasks, reviews progress.
* **Customer Service Agent:** Handles customer onboarding and routine interactions.
* **Supervisor/Manager:** Monitors performance, resolves escalations, oversees reporting.
* **Customer:** Interacts through designated channels (portal, email, phone).
* **System Integrations:** External systems exchanging data (ERP, marketing, etc.).
* **Admin:** Manages users, configuration, and security.

**2.3 Touchpoints**

* **CRM Web UI:** Main interface for users.
* **Customer Portal:** For direct customer input/feedback (if implemented).
* **Email Integration:** Logging and tracking correspondence.
* **Telephony Integration:** For call logs and click-to-dial.
* **APIs:** For integration with third-party systems.

**3. Functional Requirements (Section 1.1.4)**

**3.1 Journey Creation & Management**

* **Requirement:** Users can create new journeys linked to customers or cases.
  + **Business Rationale:** Enables structured tracking of customer interactions.
  + **Preconditions:** User has appropriate permissions; customer exists.
  + **User Interaction:** User selects customer, initiates journey, enters required details (type, expected outcome, timeline).
  + **System Behavior:** System assigns unique journey ID, sets initial status, and associates journey with customer.
  + **Edge Cases:** Duplicate journey detection, missing customer data.
  + **Validation Rules:** Mandatory fields (customer, journey type, start date).

**3.2 Task & Activity Assignment**

* **Requirement:** Assign tasks/activities to users with deadlines and dependencies.
  + **Business Rationale:** Ensures accountability and timely completion.
  + **Preconditions:** Journey exists; user has assignment rights.
  + **User Interaction:** Add task, select assignee, set due date, add notes.
  + **System Behavior:** Notifies assignee, tracks status, escalates overdue tasks.
  + **Edge Cases:** Reassignment, overlapping tasks, conflicting deadlines.
  + **Validation Rules:** Due date cannot precede assignment date.

**3.3 Interaction Logging**

* **Requirement:** Log all customer interactions against a journey.
  + **Business Rationale:** Maintain audit trail and context.
  + **Preconditions:** Journey exists.
  + **User Interaction:** Add interaction (type, date/time, summary, outcome).
  + **System Behavior:** Stores interaction, updates journey progress, triggers workflows (e.g., follow-up).
  + **Edge Cases:** Interaction added to closed journey, duplicate entries.
  + **Validation Rules:** Interaction date <= current date.

**3.4 Journey Status Tracking**

* **Requirement:** Support journey statuses (e.g., Not Started, In Progress, Completed, On Hold, Cancelled).
  + **Business Rationale:** Enables monitoring and reporting.
  + **Preconditions:** Journey exists.
  + **User Interaction:** Change status manually or via workflow.
  + **System Behavior:** Updates status, triggers notifications/workflows as needed.
  + **Edge Cases:** Invalid status transitions.
  + **Validation Rules:** Only authorized users can change status; completed journeys cannot be re-opened without admin override.

**3.5 Escalation & Exception Handling**

* **Requirement:** Escalate journeys with overdue tasks or unresolved issues.
  + **Business Rationale:** Ensures timely resolution and customer satisfaction.
  + **Preconditions:** Task/journey is overdue or exception flagged.
  + **User Interaction:** View escalations, assign to supervisor, add comments.
  + **System Behavior:** Sends escalation notifications, logs actions.
  + **Edge Cases:** Multiple escalations, conflicting ownership.
  + **Validation Rules:** Escalation cannot be closed without resolution note.

**3.6 Integration Points**

* **Requirement:** Integration with ERP, marketing tools, and communication platforms.
  + **Business Rationale:** Data consistency and process automation.
  + **Preconditions:** APIs configured, credentials available.
  + **User Interaction:** Data auto-synced or user-initiated sync.
  + **System Behavior:** Push/pull data, handle failures, audit logs.
  + **Edge Cases:** API timeouts, integration errors.
  + **Validation Rules:** Data mapping validation, error handling.

**3.7 Reporting & Analytics**

* **Requirement:** Generate journey, task, and user performance reports.
  + **Business Rationale:** Performance tracking and decision-making.
  + **Preconditions:** Sufficient data exists.
  + **User Interaction:** Select report type, filters, export options.
  + **System Behavior:** Generates report, supports export (Excel, PDF).
  + **Edge Cases:** Large data sets, report timeouts.
  + **Validation Rules:** Filter validation, data anonymization.

**3.8 Security & Audit**

* **Requirement:** Role-based access, action logging, data privacy.
  + **Business Rationale:** Compliance and data protection.
  + **Preconditions:** User authenticated.
  + **User Interaction:** Access restricted to permitted data/actions.
  + **System Behavior:** Logs all sensitive actions, enforces RBAC.
  + **Edge Cases:** Privilege escalation, unauthorized access attempts.
  + **Validation Rules:** Access reviewed periodically, audit logs immutable.

**4. Non-Functional Requirements**

* **Performance:** System must support 100 concurrent users with <2s response time.
* **Scalability:** Ability to add new journey types, actors, and integrations with minimal rework.
* **Availability:** 99.5% uptime, with scheduled maintenance windows.
* **Security:** GDPR compliance, encryption at rest and transit.
* **Usability:** Intuitive UI, accessible per WCAG 2.1 AA.
* **Auditability:** All critical actions logged and traceable.

**5. User Stories**

**5.1 User Story Summary Table**

| **User Story ID** | **Summary/Title** | **Primary Actor** | **Goal** | **Acceptance Criteria** |
| --- | --- | --- | --- | --- |
| US-01 | Create new journey | Journey Planner | Capture and initiate customer journey | Journey created, status set, notifications sent |
| US-02 | Assign task | Journey Planner | Assign a task to a user | Task appears in assignee's queue, due date set |
| US-03 | Log interaction | Customer Agent | Record customer interaction | Interaction linked, visible in journey history |
| US-04 | Change journey status | Journey Planner | Progress journey to next stage | Status updated, rules enforced |
| US-05 | Escalate journey | Supervisor | Handle overdue or exception journeys | Escalation logged, supervisor notified |
| US-06 | Sync with ERP | System Integration | Maintain data consistency | Data matched, errors handled |
| US-07 | Generate report | Manager | Review journey metrics and KPIs | Report generated, export options work |
| US-08 | Enforce RBAC | Admin | Restrict access per role | Unauthorized actions blocked, audit logs updated |

**6. Design Inventory Table**

| **Feature** | **User Story** | **Components to be Generated or Extended** | **Type of Component** | **Description** |
| --- | --- | --- | --- | --- |
| Journey Management | US-01, US-04 | Journey Entity, Main Form, Workflows | Entity, Form, Workflow | Entity for journeys, UI for entry, lifecycle flows |
| Task Assignment | US-02 | Task Entity, Subgrid on Journey, Plugin | Entity, Plugin | Entity for tasks, automated assignment plugin |
| Interaction Logging | US-03 | Interaction Entity, Timeline View | Entity, View | Entity for interactions, timeline on journey form |
| Escalation Handling | US-05 | Escalation Workflow, Notification Plugin | Workflow, Plugin | Workflow for overdue, plugin for notifications |
| Integration with ERP | US-06 | Integration Plugin, API Endpoints | Plugin, Integration | Plugins for sync, endpoints for data exchange |
| Reporting & Analytics | US-07 | SSRS/Power BI Reports, Dashboard Components | Report, Dashboard | Pre-built reports and dashboards |
| Security & RBAC | US-08 | Security Roles, Access Teams, Audit Logs | Security, Audit | Role definitions, access policies, audit trail |

**7. Integration Points**

* **ERP Integration:** Two-way sync of journey and customer data.
* **Marketing Tool Integration:** Push journey outcomes for campaign automation.
* **Communication Platform:** Log emails/calls via Exchange/Telephony APIs.
* **Assumptions:** Integration endpoints are available and stable.

**8. Reporting**

* **Standard Reports:**
  + Journey Pipeline (by status, type, owner)
  + Task Completion (by agent, overdue, SLA breaches)
  + Interaction Volume (by channel, customer)
  + Escalation and Exception Logs
  + User Productivity dashboards
* **Custom Reports:** Users can define and export ad hoc reports.

**9. Security**

* **Role-Based Access:** Separate roles for planners, agents, supervisors, admins.
* **Field & Record Level Security:** Restrict sensitive data.
* **Audit Logging:** All creates, updates, deletes tracked.
* **Data Privacy:** Compliance with GDPR and internal policies.
* **Assumptions:** SSO and MFA are enabled.

**10. Glossary**

* **Journey:** The process of guiding a customer from onboarding through resolution.
* **Interaction:** Any touchpoint with the customer (call, email, meeting).
* **Task:** An action item assigned to a user as part of a journey.
* **Escalation:** Raising attention to issues not resolved within SLAs.

**11. Assumptions & Inferred Requirements**

* All users are trained and familiar with CRM navigation.
* Integration endpoints are available, documented, and secured.
* System will support future expansion to additional journey types and integrations.
* User notifications will be delivered via email and CRM alerts.
* Data retention and archiving policies are defined externally.
* Implied need for mobile/responsive access.

**12. Traceability Matrix**

| **Requirement/Feature** | **Solution Component(s)** | **User Story Reference** |
| --- | --- | --- |
| Journey Creation | Journey Entity, Form, Workflow | US-01 |
| Task Assignment | Task Entity, Plugin | US-02 |
| Interaction Logging | Interaction Entity, Timeline | US-03 |
| Status Tracking | Journey Entity, Workflows | US-04 |
| Escalation | Escalation Workflow, Notifications | US-05 |
| ERP Integration | Integration Plugin, API | US-06 |
| Reporting | Reports, Dashboards | US-07 |
| Security | Roles, Audit Logs | US-08 |

**End of Document**