

AI-Assisted CRM Lead Follow-Up Workflow

Overview

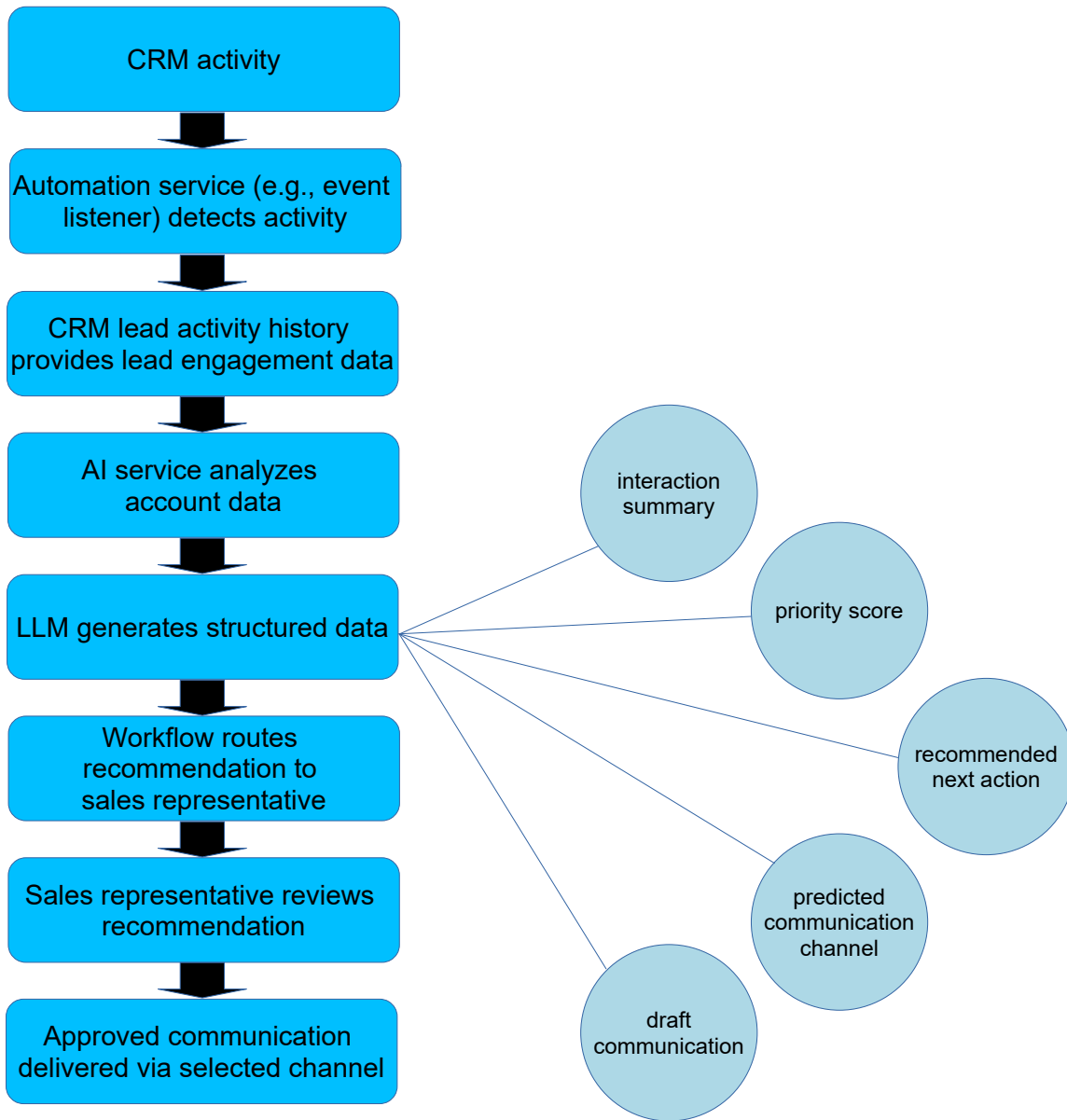
The purpose of this workflow is to optimize lead follow-up activities by using AI to prioritize outreach, recommend next steps, and streamline communication tasks for sales teams.

The system uses a large language model (LLM) to analyze lead activity, summarize customer interactions, recommend follow-up actions, and draft personalized communications. The workflow predicts, based on historical patterns and account data, the communication channel (such as SMS, email, or phone call) most likely to produce a successful outcome.

AI-generated recommendations and communications remain subject to human review and approval before delivery.

Workflow

The diagram and table that follow describe an end-to-end flow for an AI-assisted lead follow-up recommendation. The system records error conditions and rejection events in a standard error log format for analysis, troubleshooting, and resolving issues. In case of an error or rejection event, the workflow state is preserved so that interrupted recommendations can resume or be re-queued without data loss.



Failure Condition	Fallback Action	Logging & Escalation
AI service is unavailable	Route to manual queue	Log error; notify sales manager
Insufficient engagement data	Return low-confidence flag	Prompt sales representative to enter more complete lead data
Sales representative rejects recommendation	Re-queue for analysis	Log rejection reason for model feedback
Communication delivery error	Retry via alternate channel	Log failure; notify sales representative
Potential PII disclosure	Block delivery; raise alert	Escalate to compliance team

Generate AI Follow-Up Recommendation

The following example analyzes lead engagement activity and generates AI-assisted follow-up recommendations, including priority scoring, communication channel prediction, and draft messaging.

Endpoint

POST /api/v1/ai/followup/recommendation

Headers

Header	Value
Authorization	Bearer <token>
Content-Type	application/json
Accept	application/json

Request

HTTP

```
POST /api/v1/ai/followup/recommendation HTTP/1.1
Host: api.example-crm.com
Authorization: Bearer <your-token>
Content-Type: application/json
Accept: application/json
```

JSON Body

```
{
  "lead_id": "LD-2048",
  "account_tier": "mid-market",
  "last_engagement_date": "2026-04-20",
  "engagement_history": [
    {
      "type": "email",
      "outcome": "opened"
    },
    {
      "type": "phone_call",
      "outcome": "no_response"
    },
    {
      "type": "sms",
      "outcome": "replied"
    }
  ],
  "recent_activity_summary": "Requested pricing information during product demo."
}
```

Note: last_engagement_date is maintained by the CRM as communications are logged. The AI service uses last_engagement_date when calculating priority score.

Success Response

HTTP 200 OK

```
{
  "priority_score": 92,
  "recommended_action": "follow_up",
  "recommended_channel": "sms",
  "reasoning_summary": "Lead responded most consistently to SMS communication and recently requested pricing details.",
  "draft_message": "Hi Sarah, I wanted to follow up on your pricing questions from the demo. Let me know if you'd like a customized quote.",
  "requires_human_approval": true
}
```

Note: `requires_human_approval` is set to `true`; this field is included to support future configurations in which low-risk, pre-approved templates can bypass manual review.

Error Responses

All errors return a consistent JSON body with the following structure:

```
{
  "error": {
    "code": "<ERROR_CODE>",
    "message": "<Human-readable description>",
    "details": {} // Optional. Provides additional context, where applicable.
  }
}
```

HTTP Status Codes

HTTP Status	Status Text	Error Code	Description
400	Bad Request	INVALID_REQUEST	One or more required fields are missing or malformed.
401	Unauthorized	INVALID_TOKEN	The bearer token is missing, expired, or invalid.
404	Not Found	LEAD_NOT_FOUND	No lead record exists for the provided <code>lead_id</code> .
422	Unprocessable Content	INSUFFICIENT_DATA	The lead record lacks sufficient engagement history for a recommendation.
429	Too Many Requests	RATE_LIMIT_EXCEEDED	Request volume has exceeded the specified rate. Retry after the indicated interval.
500	Internal Server Error	AI_SERVICE_UNAVAILABLE	The AI recommendation service encountered an unexpected error.
503	Service Unavailable	SERVICE_UNAVAILABLE	The service is temporarily unavailable. Retry after a few minutes.

Example Error Responses

400 Bad Request (missing required field):

```
{
  "error": {
    "code": "INVALID_REQUEST",
    "message": "Required field lead_id is missing.",
    "details": { "missing_fields": ["lead_id"] }
  }
}
```

422 Unprocessable Content (insufficient engagement data):

```
{
  "error": {
    "code": "INSUFFICIENT_DATA",
    "message": "The lead record does not contain enough engagement history to generate a reliable recommendation.",
    "details": { "minimum_events_required": 2, "events_found": 0 }
  }
}
```

429 Too Many Requests (rate limit exceeded):

```
{
  "error": {
    "code": "RATE_LIMIT_EXCEEDED",
    "message": "Request rate limit exceeded. Retry after 30 seconds.",
    "details": { "retry_after_seconds": 30 }
  }
}
```

Retry Guidance

429 responses: Retry after the indicated interval.

503 responses: Wait a few minutes before retrying; allow more time if the error persists.

500 responses: Retry once, after a short wait. If the error persists, contact support with the request ID from the response headers.

400, 401, 404, and 422 responses: Do not retry without correcting the underlying request or data issue.

AI Governance and Limitations

AI governance ensures that AI-assisted workflows operate with appropriate visibility, accountability, and oversight. Governance practices include managing data access, monitoring AI-generated outputs, maintaining compliance, and protecting customer privacy to support accuracy, transparency, safety, and responsible system behavior.

The following guardrails define baseline requirements for AI-generated interactions and related workflow activities. These guidelines will evolve as AI capabilities, regulatory requirements, and customer engagement practices continue to change.

- AI-generated recommendations are advisory; they must be reviewed by a human before delivery.
- Communication drafts must be reviewed for accuracy, tone, and regulatory compliance.
- AI outputs vary based on available engagement history and account data quality. Leads with fewer than two engagement history events will return an error rather than a low-confidence recommendation.
- Personally identifiable information (PII), including lead names, contact details, and communication content, must be handled in accordance with organizational security, privacy, and data governance policies. PII that appears in AI-generated draft messages must not be written to error logs.
- Workflow activity, AI-generated recommendations, and all error conditions must be logged for auditability and troubleshooting. Logs should capture the request payload (excluding PII where possible), the AI output, the actions of the sales representative, and any error codes.
- The AI service version used to generate each recommendation must be recorded in an audit log to support reproduction of reviews if recommendations are later disputed.