

node_id	node_name	node_type	description	inputs	outputs	tools_used	trigger_events	status_reads	status_writes	notes
CRM-BRAIN-NODE-1	Brain Entry Node	System Node	Entry point for any CRM event; routes event to appropriate chain	event_type,payload,timestamp	event_type,payload	None	EmailProcessor(MeetingProcessor EnrichmentEngine FEDDetector CRMEventLog			Must support Event Log + Automation Log monitoring
CRM-BRAIN-NODE-2	Event Router	System Node	Chooses which CRM Brain chain to activate based on event type	event_type,payload	chain_name,action_node	None	Brain Entry Node			Deterministic routing logic
CRM-BRAIN-NODE-3	Context Refiner	Ruleflow Engine	Pulls context from PACING/CRM	company_id,opportunity_id,email_metadata,meeting_metadata	ing_context,ing_context,opportunity_ing_context,ing_record_context	Rule Query Tool; KG Query Tool; Opportunity KG Refiner; CRM Lookups	Event Router	opportunity_stage	crm_record_context	Align with Abacus context architecture
CRM-BRAIN-NODE-4	Email Intent Classifier	LLM Classification	Classifies email intent and required actions	email_text,content_bundle	intent_class,urgency,requires_reply,task_match,keywords	LLM Classifier	Email Chain Entry	opportunity_stage		Supports objection detection and routing
CRM-BRAIN-NODE-5	Response Decision (Email)	Decision	Decides reply/no reply/escalate/fetch context	intent_class,content_bundle,opportunity_stage	action,next_stage,raterule	Response Decision Engine	Email Intent Classifier	opportunity_stage		Acts like MCP; Tools context engine; outputs suggested next_stage
CRM-BRAIN-NODE-6	Meeting Outcome Analyzer	LLM Analyzer	Extracts meeting outcomes and sales signals	meeting_summary,content_bundle	outcome_stage,signals,task_keywords	LLM Summarizer	Meeting Chain Entry	opportunity_stage		Parses stage advancement and task logs
CRM-BRAIN-NODE-7	Stage Advancement Decision	Decision	Determines if opportunity stage should update	email_signals,meeting_signals,opportunity_record	stage_update_decision,recommended_stage,raterule	Stage Advancement Engine	Response Decision (Email Meeting Outcome Analyzer	opportunity_stage	opportunity_stage	Uses HubSpot-like human decision logic
CRM-BRAIN-NODE-8	Interaction Updater	CRM Update Node	Writes interaction record	writeable,like,survey,metadata,timestamp	interaction_id	CRM Writer Tool	Response Decision (Email Meeting Outcome Analyzer	opportunity_stage	last_activity_id	Requires final outcome from Schema/Schemaer
CRM-BRAIN-NODE-9	Opportunity Updater	CRM Update Node	Updates opportunity fields and stage	stage_update_decision,interaction_id,deal_value_update,likelihood_update	opportunity_record_updated	CRM Writer Tool	Stage Advancement Decision Deal Value Estimator	opportunity_stage		Operates after Interaction Updater
CRM-BRAIN-NODE-10	Deal Value Estimator	Computation Node	Computes deal value based on employee count and heuristics	employee_count,industry,baseline_contexts,historical_average	deal_value,quality_flag	Python Compute Tool	Context Refiner	opportunity_stage	deal_value	Parses Pipeline Calculator; returns quality_flag
CRM-BRAIN-NODE-11	Positive Calculator	Computation Node	Computes pipeline value + deal + probability	deal_value,probability	pipeline_value	Python Compute Tool	Deal Value Estimator	opportunity_stage	pipeline_value	Parses Opportunity Updater
CRM-BRAIN-NODE-12	Task Matcher	Matching Node	Matches email/meeting to existing tasks	task_keywords,open_tasks,content_bundle	match_scores,matched_task_id	Embedding Similarity Tool	Email Intent Classifier Meeting Outcome Analyzer	opportunity_stage		Uses CSI RAG logic
CRM-BRAIN-NODE-13	Task Creator	CRM Update Node	Creates new task using templates	intent_class,ing_metadata,timestamp,like	task_id	CRM Writer Tool	Task Matcher	opportunity_stage		Triggered when ready; goes to flow
CRM-BRAIN-NODE-14	Logging Node	System Logging	Writes output to Automation Log and Event Log	node_name,event,payload	log_record	Logging Tool	All Nodes			Critical for event-driven Brain activation
CRM-BRAIN-NODE-15	State Machine Evaluator	Decision Node	Evaluates state entry/exit rules and emits stage updates	company_record,last_activity_log,pipeline_metrics	updated_stage,state_transition_log	State Machine Evaluator Tool	Interaction Updater Deal Value Estimator State Checker	opportunity_stage		Centralizes state-machine logic; authoritative stage writer
CRM-BRAIN-NODE-16	State Checker	Scheduler Node	Periodic check to mark opportunities STALE	company_record,last_activity_id,state_variables	state_flag,next_stage	State Checker Tool	Scheduler	opportunity_stage	is_stale	Triggers ANV-RE-FAIL transition on schedule
CRM-BRAIN-NODE-17	Email Sender Node	Tool Node	Sends email or queues for approval	draft_id,email_response_to,from_to_cc_bcc,subject,body,attachments	email_send_status,email_id	EmailSenderTool	JSON Formatter	opportunity_stage	email_send_status	Handles send/failure telemetry
CRM-BRAIN-NODE-18	JSON Formatter	Parser Node	Converts drafts into CRM-compliant JSON schema	draft_body,draft_subject,draft_attachments	formatted_draft	JSONFormatTool	Response Drafter			Validates field values and
CRM-BRAIN-NODE-19	Response Drafter	LLM Chain	Drafts reply using templates + retrieved context	context_bundle,email_text,template_id	draft_output,draft_body,draft_attachments	ResponseCompressChain	Context Refiner	opportunity_stage		Uses few-shot examples and tone templates
CRM-BRAIN-NODE-20	CRM Lookup	Data Refiner	Fetches company/opportunity records from CRM	company_id,opportunity_id	crm_record_context	CRM Lookup Tool	Context Refiner	opportunity_stage	crm_record_context	Temporary Abacus -> new Database

edge_id	from_node	to_node	condition	description				
CRM-BRAIN-EDGES-1	CRM-BRAIN-NODE-1	CRM-BRAIN-NODE-2	ALWAYS	Route incoming event to appropriate CRM Brain chain				
CRM-BRAIN-EDGES-2	CRM-BRAIN-NODE-2	CRM-BRAIN-NODE-3	ALWAYS	Retrieve all required context before decision-making				
CRM-BRAIN-EDGES-3	CRM-BRAIN-NODE-2	CRM-BRAIN-NODE-4	event_type = "email_processed"	Begin email decision chain				
CRM-BRAIN-EDGES-4	CRM-BRAIN-NODE-2	CRM-BRAIN-NODE-6	event_type = "meeting_processed"	Begin meeting decision chain				
CRM-BRAIN-EDGES-5	CRM-BRAIN-NODE-3	CRM-BRAIN-NODE-4	chain = "email"	Add enriched context to email intent classifier				
CRM-BRAIN-EDGES-6	CRM-BRAIN-NODE-3	CRM-BRAIN-NODE-6	chain = "meeting"	Add enriched context to meeting analyzer				
CRM-BRAIN-EDGES-7	CRM-BRAIN-NODE-4	CRM-BRAIN-NODE-5	ALWAYS	Classified email intent triggers response decision				
CRM-BRAIN-EDGES-8	CRM-BRAIN-NODE-5	CRM-BRAIN-NODE-8	action IN ("draft_reply"	no_reply	escalate)	Record interaction regardless of reply logic		
CRM-BRAIN-EDGES-9	CRM-BRAIN-NODE-5	CRM-BRAIN-NODE-12	requires_reply = true	Check if email matches existing task				
CRM-BRAIN-EDGES-10	CRM-BRAIN-NODE-5	CRM-BRAIN-NODE-7	stage_signal_present = true	Advance stage based on email content				
CRM-BRAIN-EDGES-11	CRM-BRAIN-NODE-6	CRM-BRAIN-NODE-8	ALWAYS	Record meeting interaction				
CRM-BRAIN-EDGES-12	CRM-BRAIN-NODE-6	CRM-BRAIN-NODE-7	stage_signals_present = true	Determine if meeting advances stage				
CRM-BRAIN-EDGES-13	CRM-BRAIN-NODE-6	CRM-BRAIN-NODE-12	task_keywords_present = true	Check if meeting maps to an existing task				
CRM-BRAIN-EDGES-14	CRM-BRAIN-NODE-12	CRM-BRAIN-NODE-13	match_score < threshold	Create new task from template				
CRM-BRAIN-EDGES-15	CRM-BRAIN-NODE-12	CRM-BRAIN-NODE-14	match_score >= threshold	Log matched task and continue				
CRM-BRAIN-EDGES-16	CRM-BRAIN-NODE-8	CRM-BRAIN-NODE-9	ALWAYS	Interaction update triggers opportunity update				
CRM-BRAIN-EDGES-17	CRM-BRAIN-NODE-10	CRM-BRAIN-NODE-11	ALWAYS	Calculate pipeline value after deal value set				
CRM-BRAIN-EDGES-18	CRM-BRAIN-NODE-11	CRM-BRAIN-NODE-9	ALWAYS	Update opportunity with pipeline value				
CRM-BRAIN-EDGES-19	CRM-BRAIN-NODE-7	CRM-BRAIN-NODE-9	stage_update_decision = true	Update stage and close likelihood				
CRM-BRAIN-EDGES-20	CRM-BRAIN-NODE-9	CRM-BRAIN-NODE-14	ALWAYS	Log opportunity updates				
CRM-BRAIN-EDGES-21	CRM-BRAIN-NODE-13	CRM-BRAIN-NODE-14	ALWAYS	Log new task creation				
CRM-BRAIN-EDGES-22	CRM-BRAIN-NODE-14	CRM-BRAIN-NODE-1	log_event = "new_trigger"	Re-enter CRM Brain when logs trigger downstream logic				
CRM-BRAIN-EDGES-23	CRM-BRAIN-NODE-3	CRM-BRAIN-NODE-10	employee_count_available = true	Compute deal value when employee data exists				
CRM-BRAIN-EDGES-24	CRM-BRAIN-NODE-10	CRM-BRAIN-NODE-15	ALWAYS	Deal value outputs feed state machine evaluator				
CRM-BRAIN-EDGES-25	CRM-BRAIN-NODE-8	CRM-BRAIN-NODE-15	ALWAYS	Interactions feed state machine evaluator				
CRM-BRAIN-EDGES-26	CRM-BRAIN-NODE-15	CRM-BRAIN-NODE-9	updated_stage != current_stage	State Machine Evaluator issues authoritative stage update to Opportunity Updater				
CRM-BRAIN-EDGES-27	CRM-BRAIN-NODE-16	CRM-BRAIN-NODE-15	ALWAYS	State Checker triggers state machine evaluation for STALE updates				
CRM-BRAIN-EDGES-28	CRM-BRAIN-NODE-17	CRM-BRAIN-NODE-15	email_send_status = "sent"	Email send confirmation feeds stage evaluator				
CRM-BRAIN-EDGES-29	CRM-BRAIN-NODE-6	CRM-BRAIN-NODE-15	ALWAYS	Meeting outcomes feed state evaluator				
CRM-BRAIN-EDGES-30	CRM-BRAIN-NODE-4	CRM-BRAIN-NODE-12	ALWAYS	Email classifier triggers Task Matcher as part of Task Chain				

edge_condition_id	edge_id	condition_expression	description	true_path	false_path
CRM-BRAIN-EC-1	CRM-BRAIN-EDGES-3	event_type = "email_processed"	Check if the event is an email-processing event	CRM-BRAIN-NODE-4	Skip Email Chain
CRM-BRAIN-EC-2	CRM-BRAIN-EDGES-4	event_type = "meeting_processed"	Check if the event is a meeting-processing event	CRM-BRAIN-NODE-6	Skip Meeting Chain
CRM-BRAIN-EC-3	CRM-BRAIN-EDGES-5	chain = "email"	Ensure context retrieval routes to email intent classifier	CRM-BRAIN-NODE-4	No-Op
CRM-BRAIN-EC-4	CRM-BRAIN-EDGES-6	chain = "meeting"	Ensure context retrieval routes to meeting analyzer	CRM-BRAIN-NODE-6	No-Op
CRM-BRAIN-EC-5	CRM-BRAIN-EDGES-9	requires_reply = true	If email requires reply → evaluate tasks	CRM-BRAIN-NODE-12	Skip Task Matcher
CRM-BRAIN-EC-6	CRM-BRAIN-EDGES-10	stage_signal_present = true	If email signals stage advancement → evaluate	CRM-BRAIN-NODE-7	No Stage Update
CRM-BRAIN-EC-7	CRM-BRAIN-EDGES-12	stage_signals_present = true	If meeting contains stage advancement signals → Stage Advancement Decision	CRM-BRAIN-NODE-7	Continue Chain
CRM-BRAIN-EC-8	CRM-BRAIN-EDGES-13	task_keywords_present = true	Check if meeting contains task-related signals → Task Matcher	CRM-BRAIN-NODE-12	Skip Task Matcher
CRM-BRAIN-EC-9	CRM-BRAIN-EDGES-14	match_score < threshold	If no task matches → create new task	CRM-BRAIN-NODE-13	CRM-BRAIN-NODE-14
CRM-BRAIN-EC-10	CRM-BRAIN-EDGES-15	match_score >= threshold	If matched task is found → log and continue	CRM-BRAIN-NODE-14	No-Op
CRM-BRAIN-EC-11	CRM-BRAIN-EDGES-23	employee_count_available = true	Compute deal value only when employee count exists	CRM-BRAIN-NODE-10	Skip Deal Value Estimator
CRM-BRAIN-EC-12	CRM-BRAIN-EDGES-19	stage_update_decision = true	Advance stage when decision is positive	CRM-BRAIN-NODE-9	Skip Stage Update
CRM-BRAIN-EC-13	CRM-BRAIN-EDGES-22	log_event = "new_trigger"	Re-enter CRM Brain from logs	CRM-BRAIN-NODE-1	End
CRM-BRAIN-EC-20	CRM-BRAIN-EDGES-24	deal_value > DEAL_THRESHOLD	If deal value exceeds threshold then qualifies	CRM-BRAIN-NODE-15	No-Op
CRM-BRAIN-EC-21	CRM-BRAIN-EDGES-27	no_activity_days >= STALE_WINDOW	Periodic stale detection marks STALE	CRM-BRAIN-NODE-15	No-Op
CRM-BRAIN-EC-22	CRM-BRAIN-EDGES-28	email_send_status = "sent"	Confirm outreach was sent and update state	CRM-BRAIN-NODE-15	Retry or mark failed
CRM-BRAIN-EC-23	CRM-BRAIN-EDGES-29	meeting_event_detected = true	Meeting detected → process meeting outcomes	CRM-BRAIN-NODE-15	No-Op
CRM-BRAIN-EC-24	CRM-BRAIN-EDGES-26	updated_stage != current_stage	Only write to CRM when stage changes	CRM-BRAIN-NODE-9	No-Op

chain_id	chain_name	description	entry_node	exit_node	nodes_in_chain	trigger_source	notes							
CRM-BRAIN-C-1	Email Chain	Processes incoming emails and determines actions	CRM-BRAIN-NODE-3	CRM-BRAIN-NODE-14	CRM-BRAIN-NODE-3 CRM-BRAIN-NODE-4 CRM-BRAIN-NODE-5 CRM-BRAIN-NODE-19 CRM-BRAIN-NODE-18 CRM-BRAIN-NODE-17 CRM-BRAIN-NODE-8 CRM-BRAIN-NODE-15	Email Processor	Primary email workflow (ingest → classify → decide → draft → send → update → stage evaluate)							
CRM-BRAIN-C-2	Meeting Chain	Processes meeting transcripts and updates opportunity	CRM-BRAIN-NODE-3	CRM-BRAIN-NODE-14	CRM-BRAIN-NODE-3 CRM-BRAIN-NODE-8 CRM-BRAIN-NODE-7 CRM-BRAIN-NODE-8 CRM-BRAIN-NODE-9 CRM-BRAIN-NODE-15	Meeting Processor	Feeds sales stage advancement							
CRM-BRAIN-C-3	Enrichment Chain	Triggered by enrichment updates or PEO detection	CRM-BRAIN-NODE-3	CRM-BRAIN-NODE-14	CRM-BRAIN-NODE-3 CRM-BRAIN-NODE-10 CRM-BRAIN-NODE-11 CRM-BRAIN-NODE-9 CRM-BRAIN-NODE-15	Enrichment Engine	Run when context/data changes							
CRM-BRAIN-C-4	Task Chain	Creates or matches tasks based on signals	CRM-BRAIN-NODE-12	CRM-BRAIN-NODE-14	CRM-BRAIN-NODE-12 CRM-BRAIN-NODE-13	Email Chain Meeting Chain	Uses task templates + embedding similarity							
CRM-BRAIN-C-5	Pipeline Update Chain	Recomputes pipeline values after any opportunity change	CRM-BRAIN-NODE-10	CRM-BRAIN-NODE-14	CRM-BRAIN-NODE-10 CRM-BRAIN-NODE-11 CRM-BRAIN-NODE-9	Opportunity Updater	Updates core CRM metrics							
CRM-BRAIN-C-6	Brain Re-Entry Chain	Handles log-triggered reactivation of CRM Brain	CRM-BRAIN-NODE-1	CRM-BRAIN-NODE-14	CRM-BRAIN-NODE-1 CRM-BRAIN-NODE-2	Event Log	Supports reactive/loop behavior							
CRM-BRAIN-C-7	Outbound Outreach Chain	Prepare templates send outreach and evaluate	CRM-BRAIN-NODE-19	CRM-BRAIN-NODE-15	CRM-BRAIN-NODE-19 CRM-BRAIN-NODE-18 CRM-BRAIN-NODE-17 CRM-BRAIN-NODE-8 CRM-BRAIN-NODE-15	Email Pipeline	Used for automated outbound sequences							
CRM-BRAIN-C-8	Inbound Response Chain	Process inbound responses and update state	CRM-BRAIN-NODE-4	CRM-BRAIN-NODE-15	CRM-BRAIN-NODE-4 CRM-BRAIN-NODE-5 CRM-BRAIN-NODE-8 CRM-BRAIN-NODE-15	Email Processor	Handles replies and escalations							
CRM-BRAIN-C-9	Meeting Processing Chain	Calendar to transcript to outcomes to state	CRM-BRAIN-NODE-6	CRM-BRAIN-NODE-15	CRM-BRAIN-NODE-6 CRM-BRAIN-NODE-8 CRM-BRAIN-NODE-7 CRM-BRAIN-NODE-15	Calendar Meeting Processor	Processes meetings and stage signals							
CRM-BRAIN-C-10	State Checker Chain	Run state check on opportunities and mark STALE	CRM-BRAIN-NODE-16	CRM-BRAIN-NODE-15	CRM-BRAIN-NODE-16 CRM-BRAIN-NODE-15	Scheduler	Daily/periodic state evaluation; configurable window							

tool_id	tool_name	tool_type	description	inputs	outputs	called_by_nodes	dependencies	notes
CRM-BRAIN-T-1	RAG Query Tool	Retrieval	Retrieves embeddings-based context from historical emails and documents	query,filters,opportunity_id	rag_content	CRM-BRAIN-NODE-3	Vector DB (Pinecone/Weaviate)	Must support 1-year email embedding dataset; uses sentence-transformers or OpenAI embeddings
CRM-BRAIN-T-2	KG Query Tool	Graph Retrieval	Retrieves structured data from global company knowledge graph	entity_id,relationship_filters,depth	kg_content	CRM-BRAIN-NODE-3	Neo4j/Knowledge Graph DB	Part of Ahsan's KG infra; supports multi-hop traversal
CRM-BRAIN-T-3	Opportunity KG Retriever	Graph Retrieval	Retrieves opportunity-specific subgraph and relationship context	opportunity_id,depth	opportunity_kg_context	CRM-BRAIN-NODE-3	Neo4j/Knowledge Graph DB	Matches Ahsan's opportunity-level KG nodes; includes deal history and stakeholder relationships
CRM-BRAIN-T-4	CRM Lookup Tool	Data Retrieval	Fetches company/opportunity records from CRM with field filtering	company_id,opportunity_id,fields	crm_record_context	CRM-BRAIN-NODE-3 CRM-BRAIN-NODE-20	Airtable API / Supabase	Temporary Airtable → later Supabase; supports batch lookups
CRM-BRAIN-T-5	CRM Writer Tool	Data Write	Writes interactions tasks and opportunity updates to CRM	payload,label_name,record_id	record_id,write_status	CRM-BRAIN-NODE-8 CRM-BRAIN-NODE-9 CRM-BRAIN-NODE-13	Airtable API / Supabase	Supports runtime writes with idempotency; handles upserts (Airtable → Supabase)
CRM-BRAIN-T-6	LLM Classifier	LLM	Classifies email intent into actionable categories with confidence scores	email_text,context,classification_schema	intent_class,urgency,requires_reply,keywords,confidence_score	CRM-BRAIN-NODE-4	OpenAI API / Claude API	Align with email pipeline's classifier style; supports custom taxonomy; few-shot prompting
CRM-BRAIN-T-7	LLM Summarizer	LLM	Summarizes meeting transcripts and extracts actionable sales signals	meeting_text,context,template_id	summary,key_signals,action_items	CRM-BRAIN-NODE-6	OpenAI API / Claude API	Modeled after MCP Meeting Summarizer; outputs structured JSON
CRM-BRAIN-T-8	Embedding Similarity Tool	IR / Matching	Finds cosine similarity scores between content and task templates	keywords,open_tasks,threshold	match_score,matched_task_id,similarity_details	CRM-BRAIN-NODE-12	Vector DB / Sentence Transformers	Same method as Customer Success RAG; configurable similarity threshold (default 0.75)
CRM-BRAIN-T-9	Python Compute Tool	Computation	Performs numeric calculations for deal value and pipeline metrics	inputs,formula_type	computed_value,metadata	CRM-BRAIN-NODE-10 CRM-BRAIN-NODE-11	Python Runtime	Standard LangGraph compute utility; supports custom formulas and validation
CRM-BRAIN-T-10	EmailSenderTool	API Tool	Sends or queues email with retry logic and approval workflow	draft_id,in_response_to,from,to,cc,bcc,subject,body,attachments,requires_approval	email_status,email_id,timestamp	CRM-BRAIN-NODE-17	SendGrid API / Gmail API	Supports SendGrid/Gmail; approval queue for sensitive emails; bounce handling
CRM-BRAIN-T-11	JSONParserTool	Parser	Formats and validates output as CRM-compliant JSON schema	draft_body,draft_subject,draft_attachments,schema_version	formatted_draft,validation_errors	CRM-BRAIN-NODE-18	JSON Schema Validator	Validates required fields; supports schema versioning; returns validation errors
CRM-BRAIN-T-12	Logging Tool	System Logging	Write structured logs to Event and Automation logs with metadata	node_name,event,payload,timestamp,severity	log_record,log_id	CRM-BRAIN-NODE-14	Logging Service / Database	Stores logs for Brain Re-Entry chain; supports log levels (INFO WARN ERROR); enables audit trail
CRM-BRAIN-T-13	State Machine Evaluator Tool	Decision	Executes state machine rules and suggests stage transitions	company_record,interaction_record,activity_log,pipeline_metrics,current_stage	updated_stage,state_transition_log,transition_rationale,confidence	CRM-BRAIN-NODE-15	State Machine Config / Rules Engine	Authoritative state decision engine; deterministic rules with override capability; logs all transitions
CRM-BRAIN-T-14	State Checker Tool	Scheduler	Computes inactivity windows and returns state flags with recommendations	last_activity_at,threshold_days,opportunity_stage	state_flag,no_activity_days,recommended_action	CRM-BRAIN-NODE-16	Scheduler Service / Cron	Run periodic job (daily/weekly); configurable window by stage; suggests re-engagement actions
CRM-BRAIN-T-15	Response Decision Engine	Decision Logic	Determines appropriate action based on intent and context	intent_class,context_bundle,opportunity_stage,business_rules	action,next_stage,rationale,confidence	CRM-BRAIN-NODE-5	Rules Engine	Acts like MCP Tools context engine; supports configurable decision trees
CRM-BRAIN-T-16	Stage Advancement Engine	Decision Logic	Evaluates stage progression rules based on sales signals	email_signals,meeting_signals,opportunity_record,stage_rules	stage_update,decision,recommended_stage,rationale,required_actions	CRM-BRAIN-NODE-7	Rules Engine / CRM Config	Uses HubSpot-like human decision logic; supports custom stage gates and validation
CRM-BRAIN-T-17	Response Composer Chain	LLM Chain	Drafts contextual email replies using templates and tone guidelines	context_bundle,email_text,template_id,tone_profile	draft_subject,draft_body,draft_attachments	CRM-BRAIN-NODE-19	OpenAI API / Claude API	Uses few-shot examples and tone templates; supports multiple writing styles; personalization variables

prompt_id	node_id	node_name	prompt_type	description	prompt_template	inputs	outputs	model_config	notes
					<p>You are the CRM Email Intent Classifier. Given the email text and context, classify intent, required reply urgency, etc.</p> <p>EMAIL TEXT: {email_text}</p> <p>CONTEXT: {context_bundle}</p> <p>Return ONLY valid JSON with this exact structure:</p> <pre>{ "intent_class": "sample_intent_confirmation_request proposal_response meeting_request other", "urgency_reply": "immediate", "urgency_mail": "normal urgent critical", "objection_signals": "List of detected objections", "task_keywords": "List of keywords for task matching" }</pre> <p>You are the CRM Email Response Decision Engine. Based on the email intent, opportunity stage, and context, decide</p> <p>INTENT CLASSIFICATION: {intent_class}</p> <p>CONTEXT: {context_bundle}</p> <p>OPPORTUNITY STAGE: {opportunity_stage}</p> <p>Analyze the situation and return ONLY valid JSON:</p> <pre>{ "action": "draft_reply skip escalate task_new_context create_task", "recommended_reply_stage": "reply_name or null", "rationale": "brief explanation of decision" }</pre>	<p>email_text,context_bundle</p>	<p>intent_class,required_reply_urgency_level,objection_signals,task_keywords</p>	<p>temperature=0.3,max_tokens=500,response_format=json</p>	<p>Matches tone and behavior of MCP Tools classifiers, few-shot examples should be added in production</p>
CRM-BRAIN-P-1	CRM-BRAIN-NODE-4	Email Intent Classifier	LLM Classification	Classify email intent and determine required actions					
					<p>You are the CRM Meeting Outcome Analyzer. Extract key information from the meeting transcript.</p> <p>MEETING SUMMARY: {meeting_summary}</p> <p>CONTEXT: {context_bundle}</p> <p>Extract and return ONLY valid JSON:</p> <pre>{ "outcome": "[Set of decisions made]", "stage_signals": "[Signals indicating stage progression or regression]", "task_keywords": "[Extractable items and keywords]", "objections_raised": "[Any concerns or objections mentioned]", "next_steps_agreed": "[Commitments made by either party]" }</pre>	<p>intent_class,context_bundle,opportunity_stage</p>	<p>action,recommended_reply_stage,rationale</p>	<p>temperature=0.2,max_tokens=400,response_format=json</p>	<p>Implements 'act like I would in HubSpot' rule; decision tree should align with business rules</p>
CRM-BRAIN-P-2	CRM-BRAIN-NODE-5	Response Decision (Email)	LLM Decision	Decide if system should draft a reply or take another action					
					<p>You are the CRM Meeting Outcome Analyzer. Determine if the sales stage should change based on signals.</p> <p>MEETING SUMMARY: {meeting_summary}</p> <p>CONTEXT: {context_bundle}</p> <p>Evaluate and return ONLY valid JSON:</p> <pre>{ "stage_update_decision": "[Advance regress maintain mark_stale]", "recommended_stage": "specific stage name or null", "rationale": "[Justified reasoning for decision]", "confidence": "0.0-1.0", "required_actions": "[List of actions needed before stage change]" }</pre>	<p>meeting_summary,context_bundle</p>	<p>outcomes,stage_signals,task_keywords,objections_raised,next_steps_agreed</p>	<p>temperature=0.3,max_tokens=600,response_format=json</p>	<p>Structured output ensures deterministic stage decisions, should extract sentiment and engagement level</p>
CRM-BRAIN-P-3	CRM-BRAIN-NODE-6	Meeting Outcome Analyzer	LLM Summarization	Summarize meeting transcript and extract actionable outcomes					
					<p>You are the CRM Stage Advancement Engine. Determine if the sales stage should change based on signals.</p> <p>EMAIL SIGNALS: {email_signals}</p> <p>MEETING SIGNALS: {meeting_signals}</p> <p>CURRENT OPPORTUNITY: {opportunity_record}</p> <p>Evaluate and return ONLY valid JSON:</p> <pre>{ "stage_update_decision": "[Advance regress maintain mark_stale]", "recommended_stage": "specific stage name or null", "rationale": "[Justified reasoning for decision]", "confidence": "0.0-1.0", "required_actions": "[List of actions needed before stage change]" }</pre>	<p>email_signals,meeting_signals,opportunity_record</p>	<p>stage_update_decision,recommended_stage,rationale,confidence,required_actions</p>	<p>temperature=0.2,max_tokens=600,response_format=json</p>	<p>Mimics human decision-making; should reference stage gate requirements</p>
CRM-BRAIN-P-4	CRM-BRAIN-NODE-7	Stage Advancement Decision	LLM Decision	Decide whether opportunity stage should be updated					
					<p>You are the Interaction Record Formatter. Create a clean summary for CRM storage.</p> <p>CONTEXT: {context}</p> <p>METADATA: {metadata}</p> <p>Produce ONLY valid JSON matching the Interactions table schema:</p> <pre>{ "interaction": "email or phone", "date": "YYYY-MM-DD HH:MM", "summary": "2-3 sentence summary", "interaction_type": "email meeting call other", "sentiment": "positive neutral negative", "timestamp": "ISO 8601 format" }</pre>	<p>content,metadata</p>	<p>interaction_payload</p>	<p>temperature=0.3,max_tokens=500,response_format=json</p>	<p>Optional summarization depending on node logic; should preserve key details without verbatim quotes</p>
CRM-BRAIN-P-5	CRM-BRAIN-NODE-8	Interaction Updater	LLM Formatting	Summarize interaction and prepare interaction payload					
					<p>You are the Opportunity Update Engine. Merge multiple update signals into a unified payload.</p> <p>STAGE DECISION: {stage_update_decision}</p> <p>DEAL VALUE UPDATE: {deal_value_update}</p> <p>LIKELIHOOD UPDATE: {likelihood_update}</p> <p>INTERACTION ID: {interaction_id}</p> <p>Return ONLY valid JSON with fields to update:</p> <pre>{ "stage": "New stage or null", "deal_value": "numeric or null", "value_probability": "0.0-1.0 or null", "pipeline_value": "computed value", "last_interaction_at": "ISO", "updated_at": "timestamp", "update_reason": "brief explanation" }</pre>	<p>stage_update_decision,deal_value_update,likelihood_update,interaction_id</p>	<p>opportunity_update_payload</p>	<p>temperature=0.1,max_tokens=400,response_format=json</p>	<p>Works before CRM Writer Tool execution; ensures data consistency and validation</p>
CRM-BRAIN-P-6	CRM-BRAIN-NODE-9	Opportunity Updater	LLM Logic	Resolve opportunity updates based on decisions					
					<p>You are the Deal Value Estimator. Calculate expected deal value using available data.</p> <p>COMPANY PROFILE: {company_profile}</p> <p>HISTORICAL DATA: {historical_data}</p> <p>PRICING CONSTANTS: {pricing_constants}</p> <p>Return ONLY valid JSON:</p> <pre>{ "deal_value": "numeric estimate", "confidence": "0.0-1.0", "calculation_method": "description of approach used", "assumptions": "List of key assumptions", "value_range": "[min-max] number: 'max' = number" }</pre>	<p>employee_count,industry,contacts,history</p>	<p>deal_value,confidence,calculation_method,assumptions,value_range</p>	<p>temperature=0.2,max_tokens=500,response_format=json</p>	<p>Can run hybrid programmatically + LLM; should use industry benchmarks and company size bands</p>
CRM-BRAIN-P-7	CRM-BRAIN-NODE-10	Deal Value Estimator	LLM Reasoning	Estimate deal value based on heuristics and historical data					
					<p>You are the Pipeline Calculator. Explain the pipeline value computation clearly.</p> <p>DEAL VALUE: {deal_value}</p> <p>CLOSE PROBABILITY: {probability}</p> <p>Calculate pipeline_value = deal_value * probability and return ONLY valid JSON:</p> <pre>{ "pipeline_value": "computed result", "explanation": "step-by-step calculation", "timestamp": "ISO 8601 format" }</pre>	<p>deal_value,probability</p>	<p>pipeline_value,explanation,timestamp</p>	<p>temperature=0.1,max_tokens=300,response_format=json</p>	<p>Used only for human-readable logs and audit trail; deterministic calculation</p>
CRM-BRAIN-P-8	CRM-BRAIN-NODE-11	Pipeline Calculator	LLM Explanation	Explain pipeline value calculation for audit trail					
					<p>You are the Task Matcher. Determine if this interaction relates to an existing task.</p> <p>TASK KEYWORDS FROM INTERACTION: {task_keywords}</p> <p>OPEN TASKS: {open_tasks}</p> <p>CONTEXT: {context_bundle}</p> <p>Analyze semantic similarity and return ONLY valid JSON:</p> <pre>{ "match_score": "0.0-1.0", "matched_task_id": "task_id or null", "reasoning": "brief explanation of match reasoning", "alternative_matches": "[Task_id, 'score': 0.0-1.0]" }</pre>	<p>task_keywords,open_tasks,context_bundle</p>	<p>match_score,matched_task_id,similarity_details,alternative_matches</p>	<p>temperature=0.2,max_tokens=400,response_format=json</p>	<p>Uses same logic as Customer Success RAG matcher; threshold typically 0.75 for positive match</p>
CRM-BRAIN-P-9	CRM-BRAIN-NODE-12	Task Matcher	LLM Classification	Identify if interaction matches existing open task					
					<p>You are the CRM Task Template Filter. Generate a new task using the appropriate template.</p> <p>INTENT CLASSIFICATION: {intent_class}</p> <p>TASK TEMPLATE LIBRARY: {task_template_library}</p> <p>ENTITY IDs: {entity_ids}</p> <p>Select the best template and fill it with context. Return ONLY valid JSON:</p> <pre>{ "id": "task_id", "description": "detailed task description", "instructions": "step-by-step process proposal other", "due_date": "ISO 8601 or null", "assigned_to": "user_id or null", "status": "open in_progress closed", "priority": "low medium high", "tags": "array of tags" }</pre>	<p>intent_class,task_template_library_entity_ids</p>	<p>task_payload</p>	<p>temperature=0.3,max_tokens=500,response_format=json</p>	<p>Ensures standard task structure; templates should include best practices and SLAs</p>
CRM-BRAIN-P-10	CRM-BRAIN-NODE-13	Task Creator	LLM Template	Create a new task from template library when no match exists					

					You are the CRM Brain Logger. Create a structured log entry for audit and re-entry.							
					NODE NAME: {node_name} EVENT TYPE: {event} PAYLOAD: {payload} Return ONLY valid JSON: { "node_name": "name", "event_type": "classification(decision update error)", "timestamp": 0, "metadata": "100 byte string", "severity": "following none", "next_id": "unique identifier for this chain execution" }							
CRM-BRAIN-P-11	CRM-BRAIN-NODE-14	Logging Node	LLM Formatter	Format structured logs for Event and Automation logs	You are the CRM Response Composer. Draft a professional email reply. CONTEXT: (context_bundle) ORIGINAL EMAIL: (email_text) TEMPLATE ID: {template_id} TONE PROFILE: {tone_profile} Draft a response that: - Addresses the sender's needs directly - Maintains appropriate tone and professionalism - Includes relevant context and next steps - Follows the template structure Return ONLY valid JSON: { "subject": "email subject line", "body": "full email body with proper formatting", "attachments": "[list of attachment resources if any]", "tone_used": "description of applied tone", "personalization_applied": "[list of personalization elements used]" }	node_name,event,payload	log_record	temperature=0.1,max_tokens=400,response_format=json	Critical for Brain Re-Entry chain; enables debugging and audit compliance			
CRM-BRAIN-P-12	CRM-BRAIN-NODE-19	Response Drafter	LLM Generation	Draft contextual email reply using templates and tone guidelines	You are the CRM State Machine Evaluator. Apply deterministic rules to determine the correct opportunity stage. COMPANY RECORD: (company_record) INTERACTION RECORD: (interaction_record) ACTIVITY LOG: (activity_log) PIPELINE METRICS: (pipeline_metrics) CURRENT STAGE: (current_stage) Consult the canonical state machine rules and return ONLY valid JSON: { "next_stage": "stage_name", "transition_type": "auto/manual/checkpoint", "reason": "rule-based explanation", "required_actions": "Actions needed before or after transition", "confidence": 0.0-1.0, "override_allowed": true/false }	context_bundle,email_text,template_id,tone_profile	draft_subject,draft_body,draft_attachments,tone_used,personalization_applied	temperature=0.7,max_tokens=1000,response_format=json	Uses few-shot examples and tone templates; supports multiple writing styles; should use personalization variables			
CRM-BRAIN-P-20	CRM-BRAIN-NODE-15	State Machine Evaluator	Decision Logic	Evaluate state machine rules and determine next stage	You are the State Status Evaluator. Determine if an opportunity should be marked as stale. COMPANY RECORD: (company_record) LAST ACTIVITY (last_activity_at) THRESHOLD (days) (threshold_days) OPPORTUNITY STAGE: (opportunity_stage) Evaluate inactivity and return ONLY valid JSON: { "state_flag": true/false, "inactivity_reason": "reasons", "explanation": "Clear reasoning for state determination", "recommended_action": "the strategic next steps/actions", "urgency": "low/medium/high?" }	company_record,interaction_record,activity_log,pipeline_metrics,current_stage	next_stage,transition_type,reason,required_actions,confidence,override_allowed	temperature=0.0,max_tokens=500,response_format=json	Authoritative stage decision engine; must be deterministic (no ambiguous outputs); logs all transitions			
CRM-BRAIN-P-21	CRM-BRAIN-NODE-18	State Checker	Explanation Logic	Explain state evaluation results for audit logging		company_record,last_activity_at,threshold_days,opportunity_stage	state_flag,inactivity_reason,explanation,recommended_action,urgency	temperature=0.1,max_tokens=400,response_format=json	Used for audit logging; thresholds vary by stage; should suggest re-engagement tactics			

state_id	state_name	description	entry_rules	exit_rules	field_name	field_key	field_type	notes
S-0001	NEW_PROSPECT	Company entered system, no evaluation started	Created record OR ingested from 5500 or VC portal; {opportunity_stage} blank or = 'New Prospect'	Enrichment completes AND required fields present OR first outreach sent OR intro received	Opportunity Stage	opportunity_stage	single_select	Default starting state
S-0002	ENRICHING	Enrichment pipeline gathering data (scrapers, enrichment)	Enrichment event triggered OR required outreach fields missing	All enrichment fields updated AND deal value computed	Opportunity Stage	opportunity_stage	single_select	Runs scraper & enrichment jobs
S-0003	QUALIFIED	Prospect meets qualification thresholds	employee_count > threshold AND industry in target list AND benefit_score >= threshold	Outreach initiated (auto/manual)	Opportunity Stage	opportunity_stage	single_select	Requires deal_value > X
S-0004	UNQUALIFIED	Prospect deemed not fit	Employee count < min OR industry not target OR low score OR manual disqualify	Manual override or new data triggers re-eval	Opportunity Stage	opportunity_stage	single_select	Usually terminal until manual override
S-0005	INTRO_RECEIVED	A VC or partner introduction arrived	Email Intent Classifier returns intent=introduction OR introduction record created	Intro email processed and interaction logged; Response decision executed	Opportunity Stage	opportunity_stage	single_select	High-priority path
S-0006	NEEDS_OUTREACH	Ready for outreach but no email sent	Qualified OR Intro received OR enrichment complete AND contact exists	Outreach email sent OR task created for owner	Opportunity Stage	opportunity_stage	single_select	Holds until outreach
S-0007	OUTREACH_SENT	Outreach email delivered, waiting for response	Email Sender confirms send	Inbound reply detected OR follow-up triggers OR timeout window exceeded	Opportunity Stage	opportunity_stage	single_select	Track send status & delivery
S-0008	ACTIVE_CONVO	Two-way communication in progress	Inbound reply detected OR meeting scheduled OR salesperson engages	Meeting scheduled OR qualification call OR follow-up required	Opportunity Stage	opportunity_stage	single_select	Main active selling state
S-0009	MEETING_SCHEDULED	Meeting on the calendar	Calendar event detected OR meeting created via portal	Meeting transcript processed and outcomes extracted	Opportunity Stage	opportunity_stage	single_select	Requires calendar metadata
S-0010	QUALIFICATION_CALL	Qualification call completed	Meeting Outcome Analyzer returns qualification signals	Proposal required OR follow-up OR disqualify	Opportunity Stage	opportunity_stage	single_select	Signal-driven decision
S-0011	PROPOSAL_SENT	Proposal has been sent to prospect	Proposal document uploaded AND email sent	Prospect responds OR negotiation begins	Opportunity Stage	opportunity_stage	single_select	Requires proposal metadata
S-0012	FOLLOW_UP_NEEDED	Follow-up required after outreach/call/proposal	Meeting or email outcome flags follow-up	Follow-up email sent OR task completed	Opportunity Stage	opportunity_stage	single_select	Task-driven state
S-0013	STALE	Prospect inactive / cold	No response for X days AND no activity	Manual restart OR inbound event OR new VC intro	Opportunity Stage	opportunity_stage	single_select	X configurable (e.g., 30 days)
S-0014	CLOSING	Contract being finalized	Proposal accepted OR negotiation stage entered	Signed contract received	Opportunity Stage	opportunity_stage	single_select	Precedes won/lost
S-0015	CLOSED_WON	Deal converted - won	Signed contract recorded	(Terminal)	Opportunity Stage	opportunity_stage	single_select	Terminal: customer now onboarded
S-0016	CLOSED_LOST	Deal lost	Loss reason logged OR prospect declines	Manual revival only	Opportunity Stage	opportunity_stage	single_select	Can be revived to NEW_PROSPECT with manual action

transition_id	from_state	to_state	condition	allowed_by	notes
T-0001	NEW_PROSPECT	ENRICHING	enrichment_event = true	System (Enrichment Chain)	Default path after ingest
T-0002	NEW_PROSPECT	NEEDS_OUTREACH	quick_qualification = true AND contact_email != NULL	CRM Brain Decision	Skip enrichment when minimal data passes threshold
T-0003	ENRICHING	QUALIFIED	deal_value > DEAL_THRESHOLD AND benefit_score >= MIN_SCORE	Deal Value Estimator	Automated qualification
T-0004	ENRICHING	UNQUALIFIED	deal_value < MIN_THRESHOLD OR industry_exclusion = true	System	Auto-disqualify
T-0005	QUALIFIED	NEEDS_OUTREACH	owner_assigned = true OR auto_outreach_rule = true	Response Decision / Email Pipeline	Ready for outreach
T-0006	NEEDS_OUTREACH	OUTREACH_SENT	email_send_status = 'sent'	Email Sender Tool	Occurs on successful send
T-0007	OUTREACH_SENT	ACTIVE_CONVO	inbound_reply_detected = true	Email Intent Classifier	Reply moves to active conversation
T-0008	OUTREACH_SENT	FOLLOW_UP_NEEDED	no_reply_days >= follow_up_window	Scheduler / Email Pipeline	Automated follow-up
T-0009	ACTIVE_CONVO	MEETING_SCHEDULED	calendar_event_created = true	Meeting Processor	Triggered when meeting booked
T-0010	MEETING_SCHEDULED	QUALIFICATION_CALL	meeting_outcomes.contains('qualified') = true	Meeting Outcome Analyzer	Qualification detected in meeting
T-0011	QUALIFICATION_CALL	PROPOSAL_SENT	sales_action = 'send_proposal'	Opportunity Updater	Proposal generation
T-0012	PROPOSAL_SENT	CLOSING	proposal_accepted = true	Sales Rep / System	Move to negotiation / closing
T-0013	CLOSING	CLOSED_WON	contract_signed = true	Sales Ops	Terminal - won
T-0014	CLOSING	CLOSED_LOST	contract_rejected = true	Sales Ops	Terminal - lost
T-0015	ANY	STALE	no_activity_days >= STALE_WINDOW	Scheduler	Applies from many states (configurable)
T-0016	UNQUALIFIED	NEW_PROSPECT	manual_override = true	Sales Manager	Allow re-evaluation
T-0017	CLOSED_LOST	NEW_PROSPECT	revival_manual = true	Sales Manager	Revive lost opportunities manually
T-0018	INTRO_RECEIVED	NEEDS_OUTREACH	intro_valid = true AND contact_email != NULL	Response Decision	High-priority outreach after intro
T-0019	NEEDS_OUTREACH	ACTIVE_CONVO	inbound_reply_before_send = true	Email Intent Classifier	Edge case: inbound starts before outreach

condition_id	related_state	condition_description	false_path	remediation
B-0001	NEW_PROSPECT	Missing company_id or domain	Remain NEW_PROSPECT; do not auto-enrich	Flag for manual enrichment; create enrichment task
B-0002	ENRICHING	Scraper error or rate-limited	Remain ENRICHING; enrichment incomplete	Retry with backoff; surface error in Enrichment Log; notify owner
B-0003	QUALIFIED	Missing contact_email OR contact role unknown	Cannot move to NEEDS_OUTREACH	Run contact enrichment; create manual research task
B-0004	UNQUALIFIED	Hard disqualification flag (blacklist)	Remain UNQUALIFIED	Allow only manual override by Admin
B-0005	INTRO_RECEIVED	Missing intro metadata (vc_id or source)	Hold in INTRO_RECEIVED; do not auto-outreach	Request missing metadata from partner or mark for manual review
B-0006	NEEDS_OUTREACH	Email template required fields missing	Do not send outreach; block transition to OUTREACH_SENT	Use template fallback values; notify owner; require manual send
B-0007	OUTREACH_SENT	Email bounced or delivery failed	Transition to NEEDS_OUTREACH or create task	Verify contact email; attempt resend; mark as invalid if permanent bounce
B-0008	MEETING_SCHEDULED	Missing calendar metadata (start_time, attendees)	Do not process meeting transcript	Request corrected calendar entry; manual attach transcript
B-0009	PROPOSAL_SENT	Missing proposal attachment or pricing	Block transition to CLOSING	Require upload of proposal doc; notify owner
B-0010	STALE	Hard 'Do Not Contact' or compliance hold	Remain STALE	Respect compliance; mark permanent if required
B-0011	CLOSING	Missing legal documents or required approvals	Block finalization	Pause closing; notify Legal/Finance owners
B-0012	CLOSED_LOST	Missing loss reason	Cannot archive properly	Require loss_reason field before finalization; prompt owner

logical_concept	field_name	field_key	table	field_type	notes
Opportunity Stage	Opportunity Stage	opportunity_stage	CRM - Opportunities	single_select	Primary state field (holds values from StateMachine)
Deal Value	Deal Value	deal_value	CRM - Opportunities	currency	Computed by Deal Value Estimator (python)
Close Probability	Close Probability	close_probability	CRM - Opportunities	percent	Updated by Stage Advancement Decision / Pipeline Calculator
Last Activity	Last Activity	last_activity_at	CRM - Opportunities	datetime	Updated on any interaction or event
Owner	Owner	owner_id	CRM - Opportunities	linked_record (Users)	Assigned salesperson / owner
Contact Email	Contact Email	primary_contact_email	CRM - Contacts	email	Used for outreach sends
Intro Status	Intro Status	intro_status	CRM - Introductions	single_select	Tracks intro lifecycle (Needs Outreach / Processed)
Enrichment Status	Enrichment Status	enrichment_status	CRM - Companies	single_select	Values: pending/complete/error
Employee Count	Employee Count	employee_count	CRM - Companies	number	Used in Deal Value Estimator
Benefit Score	Benefit Score	benefit_score	CRM - Companies	number	Derived from Glassdoor/scorecard
VC Signal	VC Signal	vc_signal	CRM - Companies	boolean	True if company is in a VC portfolio or introduction exists
Email Send Status	Email Send Status	email_send_status	CRM - Communications	single_select	Values: queued/sent/failed/bounced
Interaction ID	Interaction ID	interaction_id	CRM - Interactions	text	Created by Interaction Updater
Proposal Document	Proposal Document	proposal_doc	CRM - Opportunities	attachment	Proposal file reference
Stale Flag	Stale Flag	is_stale	CRM - Opportunities	boolean	Set by scheduler when no_activity_days >= STALE_WINDOW
Loss Reason	Loss Reason	lost_reason	CRM - Opportunities	multi_line_text	Required for CLOSED_LOST