Quirk BDC Smart Response — Chrome Extension: Technical Outline (Manifest V3)

Purpose

This document specifies a production-ready plan to build a Manifest V3 Chrome extension that overlays the BDC Smart Response Library on VIN Solutions. The extension injects AI-powered email/SMS templates, real-time call prompts, and inventory/incentive data directly into the VIN Solutions lead workflow to accelerate appointment-setting and improve compliance.

Business Goals & KPIs (from project plan)

• Response speed < 5 minutes from lead creation. • +15–20% lift in appointment conversion; +10–15% email engagement; ≥95% task compliance; ≥30% reduction in manual tasks.

High-Level Architecture

1) Content Script: Injects a right-side “Smart Response” panel inside VIN Solutions lead pages; reads DOM fields (lead name, vehicle, email/phone). 2) Background Service Worker: Handles API calls (inventory, incentives, AI response), auth, rate limiting, and message passing. 3) Popup UI: Quick actions, settings, and on-demand responses. 4) Options Page: Configure endpoints/keys (inventory feed, incentives API, AI endpoint), stores values in chrome.storage.sync. 5) AI + Data Layer: Calls the Gen■AI Response Engine with template tokens; pulls /inventory.json and /incentives endpoints; logs activity via VIN API or BCC dropbox fallback.

Core Features (MVP)

• One■click insert: Generate and insert email/SMS from the Smart Response Library (20 scenarios). • Inventory & Incentive merge: Resolve [[stock_count]], [[model_trim]], [[cash_rebate]], [[apr_rate]], [[two_appt_options]], [[vin]], [[stock_number]], [[primary_photo]]. • Objection handling prompts during calls (floating prompt card). • Activity/Task logging into VIN Solutions via API connector or BCC dropbox fallback. • Day■of appointment confirmation + reminder snippets.

Manifest (v3) — minimal example

```
{ "manifest_version": 3, "name": "Quirk BDC Smart Response", "version": "1.0.0",
"action": { "default_popup": "popup.html" }, "options_page": "options.html",
"permissions": ["activeTab", "scripting", "storage"], "host_permissions":
["https://*.vinsolutions.com/*", "https://*.vin*solutions.com/*",
"https://dealer.site/*"], "background": { "service_worker": "background.js" },
"content_scripts": [{ "matches": ["https://*.vinsolutions.com/*"], "js":
["content.js"], "css": ["content.css"], "run_at": "document_idle" }] }
```

Key Modules & Responsibilities

• content.js: - Detect VIN Solutions lead detail pages using URL and DOM markers. - Inject a fixed, resizable sidebar panel with tabs: Templates, Inventory, Incentives, Calls. - Read lead data (customer name, model interest) from DOM (no PII persisted). - Provide “Insert to Email” and “Insert to SMS” buttons that paste generated text into VIN fields. • background.js (service worker): - Listens to messages from content.js; calls Inventory (/inventory.json), Incentives (/incentives?make=&model;=&zip;=), and AI endpoint. - Implements caching (e.g., 15■minute TTL) and fallback logic. • popup.html/js: - Quick generate, last used scenario, and copy-to-clipboard. • options.html/js: - Securely store API base URLs/keys in chrome.storage; test connection buttons.

Security & Privacy

• Least-privilege permissions; restrict host_permissions to VIN Solutions + dealer inventory domains. • Never store raw PII; only transiently read necessary fields in content script; redact logs. • Use HTTPS-only endpoints; short-lived tokens; rotate keys; restrict CORS by origin. • Add ‘stale data’ badge if inventory cache age > 15 minutes. • Graceful degradation: omit incentives if API times out; keep CTA operational.

Data Contracts (from Integration One■Pager)

Inventory: GET /inventory.json → stock_number, vin, year, make, model, trim, status, price, msrp, color(s), photo_url_primary, updated_at. Incentives: GET /incentives?make=Chevrolet&model;=Traverse&zip;=03060 → cash_rebate, apr, lease_cash, term, expiry_date, disclaimer. VIN Touchpoints: Activities/Tasks/Appointments via API connector; fallback BCC to VIN dropbox for message logging.

Template Tokens → Smart Response Library

Tokens: [[stock_count]] [[model_trim]] [[cash_rebate]] [[apr_rate]] [[two_appt_options]] [[primary_photo]] [[vin]] [[stock_number]]. Resolved into email/SMS from the 20 core scenarios (e.g., New Lead, Best Price, Trade■In, Finance, No■Response, Manager Escalation).

Error Handling & SLAs

• Inventory feed unreachable ⇒ serve cache ≤15 min; display “Cached at HH:MM” tag. • Incentives timeout ⇒ omit line; still present appointment CTA. • Price/availability mismatch ⇒ append “subject to prior sale” and suggest closest in■stock alternative. • Target end■to■end compose+send < 5 minutes from lead creation.

Testing Plan

• Unit: message passing, token resolution, cache TTL. • Integration: DOM selectors across common VIN Solutions pages; insertion to email/SMS fields. • E2E: Simulated lead flow; verify activity/task/appointment creation via API or BCC. • Security: permission audit; network intercept to confirm HTTPS and header policies.

Rollout & Governance

• Pilot with 3–5 BDC users; collect baseline metrics (response time, conversion, task compliance). • Train with roleplay scripts; compare VIN vs AI outcomes. • Weekly KPI reviews; iterate prompts and token mappings. • Scale to full BDC after stability & KPI lift proven.

Roadmap (Post■MVP)

• Real■time call assist (floating prompt that adapts to objections). • Multi■store routing and store■specific templates. • Voice logging (meeting notes) with opt■in. • Deeper VIN API integration to create/modify tasks and appointments. • Analytics dashboard (coverage of inventory-based personalization).

References

• BDC Smart Response Project Plan. • Gen■AI Inventory Integration One■Pager (endpoints, tokens, SLAs). • BDC Smart Response Library (20 scenarios). • Training Packet & roleplay comparisons (VIN vs AI).